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No. 1.

SECONDARY SCHOOL MATHEMATICS AND THE MATHEMATICS TEACHERS.*

I chose for the subject of my address "Secondary School Mathematics and the Mathematics Teachers," because I thought, that a discourse on the Secondary School Mathematics as it was and as it ought to be, and on the equipment of the Mathematics Teachers would be a fitting introduction to our activities in connection with your Association.

I, therefore, first propose to briefly indicate the more salient features in the Secondary School Mathematics as it was a few years ago and then put in a specified form some of the features of the modern agitation as regards the teaching of Mathematics and thus compare the old with the new so that we may clearly grasp the spirit of the new methods and thus be in a position to adopt them in actual practice.

In former years, the traditional method of mathematical instruction in our schools required that Geometry should be taught in a purely abstract manner; the idea being that Euclid, which was regarded as a model of purely

deductive logic, should be studied entirely with a view to the development of the logical faculty. And the result was that the subject began with a set of abstract definitions, postulates and axioms on which the superstructure was to be built; the practical side of the subject was altogether neglected; no appeal was made to the spatial intuition of the child; and any knowledge of space relations which might have been imparted by such a study was reduced to a minimum on account of the excessive insistence upon all the details of the syllogistic form, the attention being engrossed by the effort to commit to memory a long series of propositions of which the geometrical content was exceedingly small. On the other hand, Algebra, and to a great extent, Arithmetic was taught without any reference to the logical aspects, but purely with a view to give a discipline in the formal manipulation of abstract symbols according to certain prescribed rules without ever attempting to understand what those symbols represented or how those rules were arrived at.

That the average boy is not by nature appreciative of formal logic or of the purpose and meaning of abstract symbols was itself considered a reason why the subjects so treated should be specially insisted upon. It was claimed that these subjects would call forth the use of faculties which were very rare in the average boy and were, therefore,

* An address delivered by P. V. Seshu Aiyar, A. L. T., Professor of Mathematical Physics, Presidency College, Madras, before the Mathematics Section of the Teachers' Association, Teachers' College, Saidapet.

thought to be in special need of development. That the subjects were found to be hard and repulsive by the majority was not thought to be, by any means, a disadvantage. It was thought, on the other hand, that the hard discipline involved in their study developed a mental grit and involved a kind of moral training which were in themselves considered valuable, even granting that the intellectual results attained were comparatively small. At the present time, there is a widespread dissatisfaction with the traditional methods both in their aims and in their results. The results obtained under the old system were deplorable. Many rejected the material which was for them wholly indigestible mental food and the system failed to attain even its own narrow ideals except in the case of a very few who were gifted with a special aptitude for the subjects. And even these fortunate few suffered from the effects of the narrow conception of education which lay at the base of the methods of instruction. For, the purely abstract treatment of the subjects failed to disclose the intimate relations of the mathematical ideas with the physical experience in which these abstractions took their origin. That Euclid had any relation with the problems of space, was seen by the majority of those who suffered under the old system, only at a later stage, if at all. That the abstract symbols used in Algebra were closely related to the concrete objects and that the use of those symbols involved an economy of thought, remained for the most part unappreciated. And even the very few who had acquired a good facility in the manipulation of these symbols came to appreciate these relations only after mature reflection in later life.

As a result of this growing discontent

with the old methods, and owing to the exertions of Associations like the London Mathematical Association, all these have changed in England and in America and new methods are being introduced. And as a consequence in India too, it is satisfactory to note that there is a gradual change though the change could be a little more rapid.

The methods of teaching advocated at present largely conform to the dictates of psychology and appeal to those interests which are strongest in the average boy.

His interests are rather practical than theoretical, therefore, it is thought that he must be interested with the space relations on their practical side. He is not interested in formal logic, therefore it is thought that he should not be made to learn a series of propositions of which the object is not apparent to him. Anything abstract and altogether new will be repulsive to him, therefore it is thought that Geometry should not begin with a series of abstract definitions and axioms but that they should be introduced only as they are wanted and that the subject should be built upon the previously existing spatial intuition of the child. Consequently, instead of riding against the most undeveloped sides of his mind, as was done under the old system, Geometry, the science of spatial relations, is introduced by an observational and experimental study of the simplest spatial relations, verification by actual measurements playing an important part, and the formal deductive treatment of the subject is postponed to a later stage.

Again, the average boy does not readily move in the region of abstract symbolism. Therefore it is thought that Arithmetic should begin with the handling of concrete objects,

models and the like, and that Algebra should be introduced as generalised Arithmetic with suitable geometrical and graphical illustrations and even this only at a stage when he feels the need for generalised symbols.

The average boy will be too impatient to know whether his results are correct as can be seen from his readiness to refer to the answers in a book. Hence books containing answers should not be put into his hands and this impatience on his part must be availed of in instilling in him the need for verifying and checking his results. The average boy is averse to laborious exercises in manipulation and therefore, it is thought that he should not be bored with tiresome exercises such as the multiplication and division of very long numbers, the simplification of complicated fractions, factorization of long algebraic expressions and solution of ingeniously manufactured equations. The average boy would like to know why on earth he is made to study these subjects and hence, it is thought that, as far as possible, problems occurring in real life, specially those that occur in his life should be set so as to make him realise the close relation of Mathematics with the physical universe and the life around him. He has got much of spontaneous physical activity and likes to be doing something or other. Therefore, it is thought, that he must be given exercises in paper-folding and card-board modelling in illustration of the theoretical principles he has learnt and that he should be made to take measurements and manufacture his own data for problems in mensuration and heights and distances.

In short, the modern tendency may well be expressed, as has been happily done by Professor Hobson, by the one word "*Demo-*

cratisation of Mathematical teaching," i.e., "the transformation of the methods of teaching and the matter of instruction so as to meet the needs of those who are lacking in exceptional capacity for Mathematics," in other words, the concentration of the attention of the educator, in a much greater degree than formerly, on the work of developing the minds of the average many, and not solely of those of the exceptionally gifted few.

If that be the sum and substance of the modern tendency then, there naturally arises the criticism that justice will not be done to this minority who, by natural aptitude, are capable of making much more rapid progress than the rank and file. That is certainly a pertinent criticism and there is such a danger under the new system; but then we can avert this by making a special provision in our schools for the more rapid advance of the specially gifted pupils by way of giving them some special exercises; and there is no fear at any rate in our country, that any such special provision would be regarded as undemocratic in principle.

Thus far I have simply indicated on broad lines, some of the undesirable features of the old system and some of the salutary changes advocated by the new school. But the working out of these principles in detail is not an easy task. The acceptance of a theory is one thing and the translation of it into actual practice is altogether a different thing. The latter is beset with many difficulties and gives room to much difference of opinion. In England, for example, it is nearly a decade since the new principles were universally accepted by all bodies and yet the introduction of the reform methods into actual practice cannot be said to have come to a condition of equilibrium in that

country. As judged from the text-books on Elementary Mathematics and from the current literature on the subject, one can see that there are some directions in which the reform movement has not gone far enough, while there are others in respect of which the over-enthusiastic reformers have shown a tendency to go too far. Also there seem to be many points which have given rise to much difference of opinion and which are still at the discussion stage.

I shall herein draw your attention to some of the points which in my opinion have not yet been satisfactorily solved and which may well engage the attention of the Mathematics teachers of this country.

We have accepted the principle that Arithmetic must begin with the handling of concrete objects, models and the like and that it must be well correlated with space work. Yet in the beginners' Arithmetics that are recently published, for instance, Longman's Practical Arithmetics, you find that the first exercises in space work that are provided in the books relate to lines straight or curved and not to solids as one would expect under the new system. Lines themselves are abstractions from solid objects and hence observation and handling of solid objects must certainly precede the exercises on lines. Again in the curriculum of studies laid down for our Elementary schools you will find the item "space and number work." I have asked several Elementary schoolmasters and Supervisors of Elementary schools as to what they are doing under the item "space work." Many of them candidly confessed to me that they did not know what exactly was meant by space work and that they were doing little or nothing under that item. I should think that, in the elementary schools, the pupils

should be given suitable exercises in paper-folding, paper-cutting, drawing of objects, construction of solids with card-board, etc. And a suitable supply of such exercises is a field of work for you, my friends, both, when you are here and after you leave this college. Secondly, one of the principles advocated under the new system is that we must interest the pupils in the study of mathematics by giving them problems occurring in their own life and in the life around them. In the manufacture of problems from real life so as to interest the pupils, much has to be done by the Indian teachers. There lies upon them a heavy responsibility in respect of this point as there is a special danger in this connection. For, most of the text-books used in India are English publications and they naturally contain only problems taken from English life, which problems will have an air of unreality when set to Indian students. In the hands of a teacher who is not sufficiently active and enthusiastic in his work, there is a likelihood of those text-books being too closely followed and hence arises the special danger I have mentioned. I do not object to the use of English publications in our schools. Far from it, for we derive our inspiration and guidance only from Englishmen and English books; but my contention is that the text-books should not be too closely followed. In teaching principles we may well follow the English text-books but in setting problems, we must take them from Indian life. Further even in England and America the reform school is not quite satisfied with the kind of problems to be found in the modern text-books. There the contention is that there should be more of real applied problems taken from actual life than are to be found in the modern books. In America some

three years ago, a regular movement was set on foot for a collection of such real applied problems taken from actual life, such as the life of the engineer, the architect, the agriculturist, the surveyor, the artisan, &c., and a few pages of the journal called "The School Science and Mathematics" were set apart for the publication of such problems. Some such thing will have to be done in India too, if we want that real problems should be set to our students so as to interest them in the study of Mathematics.

A third point I would like to refer to is the correlation of the several subjects of Mathematics. The old system of treating the several subjects of Elementary Mathematics in water-tight compartments is considered artificial and mischievous. The reform school wants that the subjects should be well correlated with one another so as to enable the students to realise that all Mathematics is one and that it is only the different methods of treatment that give rise to the different subjects. Such a correlation will also lead to the better understanding of the several subjects. In the modern books, this correlation is well effected as regards Arithmetic and Algebra and Arithmetic and Geometry; but as regards Geometry and Algebra, though some correlation is attempted, the extent of such correlation cannot be said to be satisfactory. If you take any modern book on Geometry you find only practical, graphical and numerical questions given in abundance but only very few questions involving the use of Algebra except in connection with the matter corresponding to old Euclid Book II.

The use of algebraic forms of expression and solution in the Geometry courses is of

advantage to both Geometry and Algebra and this may be done without encroaching upon the field of analytical Geometry which belongs to a later stage. For instance the notation may be more algebraic than at present. Small letters may be used to represent numerical values and capital letters to denote points. This will enable the students to recognise the relations of equality and inequality more readily. He will also be able to see which propositions are metric and which are descriptive.

Again many propositions may be stated to advantage in algebraic form thus giving definiteness and perspicuity and specially emphasising the notion of functionality. Algebraic statements are superior in point of brevity and conciseness and they also prepare for the idea of functionality which is little understood by our High school students at present. That is to say, some appreciation of the influence of changing one part of a configuration on the other parts of the configuration can be gained readily by the algebraic statement. As illustrations of such statements we have (1) $\Delta = \frac{1}{2}bh$, (2) in a right-angled Δ , $c^2 = a^2 + b^2$, (3) in any Δ , $c^2 = a^2 + b^2 \pm 2ap$ where p is the projection of b on a , (4) in a $\odot$ Euclid III, 35 and 36 may be written $ab = r^2 - d^2$, (5) $t^2 = sx$, where t is the tangent s , the whole secant and x the part outside. It is not to be understood that the usual statement of propositions should be replaced by algebraic statements but it is only meant that one form should be translated into the other.

Further geometrical exercises for algebraic solution may be largely given. I mean exercises like the following:—(1) area of rectangle is 480 sq. in. If each side is one inch longer the area is increased by 47 sq. in.

Find the sides; (2) a secant which passes through the centre of a circle of radius 12 in. meets a tangent 15 in. long. Find the length of the external part of the secant, &c., &c.

Thus, gentlemen, a greater correlation of Algebra with Geometry is a subject which may well engage the attention of our teachers.

Fourthly I should like to refer to a point in respect of which the over-enthusiastic reformers show a tendency to go to the other extreme. It is true we have accepted the principle that in the teaching of Mathematics, we must proceed from the practical, concrete and experimental side of the subject to the more abstract and theoretical side of it. But the actual translation of this principle into practice appears to have gone to an undesirable extent. In England, it is feared at present, and the recent text-books give room for such a fear, that the purely practical side of Mathematics is unduly emphasised. Though the teaching should commence with this side and should never lose touch with it, yet the study of Mathematics must be pronounced to be a relative failure as an educational instrument, i.e., as an instrument for training boys and girls to think accurately and independently, if it fails to rise beyond the purely practical aspect of the subject to the domain of principle. In this country also, I am afraid, there is a notion obtaining in some quarters that under Elementary Mathematics of the School Leaving Certificate scheme, we have to teach only practical Mathematics pure and simple and that it would be enough if the students are able to perform the processes, no matter whether they understand or not the principles involved in those processes. This, I beg to submit, is an erroneous notion. Practical Mathematics may provide a set of practical rules for dealing with practical problems of

special types; but they can never give the students the culture claimed for Mathematics nor the power to effectively attack problems of various kinds that may arise in their future life in connection with professional work. Such a power can be found only in persons who possess a real grasp of mathematical principles as distinct from a mere knowledge of certain prescribed rules and methods.

I have thus noted down in detail four of the points which have either not been satisfactorily solved or in respect of which there is still some difference of opinion. Many more such points can be enumerated such as:

(1) the desirability of the inclusion in our High School curriculum of some rudimentary and informal treatment of the properties of simple figures in Solid Geometry, similarly the inclusion of (a) Elements of Trigonometry, (b) Elements of Mechanics, (c) Elements of Calculus;

(2) the desirability of having one and only one sequence in respect of geometrical theorems;

(3) the introduction of limits and incommensurables in the school;

(4) the judicious use of graphs;

(5) a satisfactory introduction to parallel straight lines;

(6) provision of some field-work in Elementary Geometry in connection with problems on heights and distances;

(7) the treatment of contracted methods and approximation;

(8) introduction of logarithms, etc., etc.

Gentlemen, I have thus indicated to you the spirit of the reformed methods and drawn your attention to some of the points which have not yet been satisfactorily solved and which may well engage the attention of the Mathematics teachers of our country.

Now I pass on to the questions; what should be the equipment of the teacher and how should the educational system of the country be organised so that the reform methods may be worked out in detail in the right direction.

First of all it must be understood that the better the theory underlying the methods of instruction, the more exacting will be the demands made upon the skill, the knowledge and the energy of the teacher. Therefore, hereafter, it will not do if the teaching of Mathematics be entrusted to a teacher who has not made a special study of the subject. The old method of making the pupils repeat by rote propositions of Euclid, or of setting a long row of sums in Algebra and lounging in the chair must go. If the results hoped for under the new methods should be attained, a high degree of proficiency on the part of the teacher is very essential. He must have a broad knowledge of the subject reaching much beyond the range which he has directly to teach. I should think that to be an efficient Secondary school teacher, one should have gone through a thorough course in Arithmetic, Algebra, Geometry and Elements of Trigonometry, College Algebra, Analytical Geometry and the Elements of Calculus. Also a course in the History of Mathematics and some work in Theoretical and Practical Physics may profitably be included in the programme. Not only should he have gone through such a general course in Mathematics but he should also be clever and alert in handling a class and he must possess a high degree of skill in presenting his material, that skill having been developed by training in a training college where the programme should include (1) a course in child-psychology and theory of knowledge,

(2) observation of the teaching of the subjects by specialists, and (3) actual teaching under the supervision of such specialists. In this connection, it is gratifying to see that your College as organised at present and being manned by specialists does satisfactorily provide all these courses. It is only such a teacher as has gone through a general course and a pedagogical course in Mathematics that can feel confident to speak with authority on the subject and it is only such a one that will be bold enough to come forward with suggestions in the detailed development of the reform methods. In England and Germany none but Mathematics graduates are entrusted with the teaching of Secondary School Mathematics and those countries consequently show a great proficiency in Mathematics. But here in India it is only of late that we have begun to entrust the teaching of Mathematics to Mathematics graduates and that too only in the upper forms of our Secondary Schools. Unless and until all the teachers of our Secondary schools including those in the lower forms engaged in the teaching of Mathematics are Mathematics graduates we cannot hope to have the reform methods satisfactorily introduced into our country. In this connection we should be glad to note that in the proposed model schools, the salaries to be paid to teachers will, as judged from a recent pronouncement of Mr. Montagu be such as to make it possible to secure the services of graduates as teachers in those schools. However well-equipped the teacher may initially be, he cannot hope to do justice to his work unless he manages not to forget the Mathematics he has learnt while at college and unless he keeps himself constantly in touch with the current literature on Elementary Mathe-

matics as found in the journals and magazines. Further and after all, the proper equipment of the teacher is only one part of the organization necessary for the purpose. We have seen that the actual translation into practice of the reformed methods leads to much difference of opinion and involves many difficulties. Consequently, continued discussion of the details, comparison of notes and exchange of ideas among the teachers are very essential and will be of inestimable value in directing aright the detailed development of the reformed methods of teaching. And this work can and ought to be done in connection with the Teachers' Association of the Presidency and it is exactly here that I have a melancholy tale to tell you. I am sorry to have to remark that the Mathematics teachers of our Secondary Schools do not seem to be very enthusiastic in the matter of this exchange of ideas and comparison of notes as regards the detailed development of the reformed methods. It is seldom that you meet with a teacher coming forward with his experiences in the introduction of the reformed methods; not that he is too self-sufficient and thinks that he has nothing to learn or nothing to teach. On the other hand he simply looks up to other people to work out even the details for him and he wishes to be told definitely as to what exactly he should do. So long as the teachers continue to be merely passive workers, i.e., not taking the initiative themselves but merely willing to do what they are asked to do, we cannot expect the reformed methods to be satisfactorily introduced. I make this observation about the teachers from personal experience. As the Secretary of the Mathematics-Science Section of the Madras Teachers' Guild I wanted that the section

should do some work in the direction of the detailed working out of the reformed methods, but the teachers of this town do not come forward with any experiences of their own nor are they very anxious to take part in any of the discussions that may be led by some individual teachers.

Further, the detailed development of the reform methods requires that teachers should be given a good latitude and a free hand in the teaching of the several subjects and fortunately such a latitude and freedom is made possible under the present School Final scheme. The S. S. L. C. Board, while drawing up the syllabuses in the several subjects, seem to have had this point prominently before them, viz., that there should be left some scope for individuality and freedom for the teacher, and they therefore purposely gave only the main headings in the several syllabuses leaving it to the teacher to fill in the details. Also in the papers set for the Public Examination a good choice is being given to the students so that if a teacher has developed the subjects in his own way and emphasised certain parts of the subjects more than others, students taught by him may not suffer in the examination. And, gentlemen, would you believe me when I say, from actual personal experience, that our teachers instead of thanking the authorities for giving them this freedom and this scope for individuality, do blame them for these very things and say that the syllabuses are vague and indefinite and they are left in the dark as to what to omit and what not to omit in the several subjects. In short, they cry "Take away from us this freedom and this scope for individuality; give us cut and dried definite syllabuses worked out in detail and if possible give us one book

where we can find all that we have to do." This, gentlemen, is a deplorable state of affairs and I have given you this little bit of my personal experience with the teachers not with a view to find fault with them, but for the purpose of appealing to you, young teachers, to devote some attention to the reformed methods when you are in this college and to go forth to the ranks of the teaching profession with a love and enthusiasm for the reformed methods so that the introduction of those methods into our country may ere long become an accomplished fact. The present set of teachers were hitherto unduly influenced by examinations and were working in dread of them, their aim being chiefly to make their students pass those examinations and they were also accustomed to follow too closely certain prescribed text-books. But now the rigour of the examination is removed, and instead of text-books you have general outlines of syllabuses and the teachers instead of feeling themselves more free and happy, want to be confined to prescribed text-books and enveloped in detailed syllabuses. It looks just like a man who, having spent a pretty long life in confinement, feels unhappy when released and wishes to be sent back to his prison. Fortunately you, my young friends, will be beginning your work as teachers under very favourable conditions. You are to be trained here under specialists for the teaching of your subject and when you enter life as teachers, you are allowed a great deal of freedom in the detailed development of the reformed methods. Only you must guard yourselves against extremes. For that you must place your experiences before your brother-teachers, compare notes and exchange ideas with them. Also you must be constantly looking

into the modern up-to-date books and reading the current literature on the subject as found in the journals and magazines of an elementary character. And then there can be no doubt that you will all be successful teachers. Your boys will have no reason to hate the subject of Mathematics as did the boys of old. The knowledge of Mathematics they get will no longer be bookish. The average boy will be able to apply his Mathematics to problems that may arise in his professional work and the gifted one will have had a good grounding for him to develop into a great mathematician,

THE SIMPLIFIED SPELING SOSIETI.

"For Tiem iz the graitest Inovaitor: and if Tiem, ov cors, aulter Thingz tu the wurs, and Wizdum and Counsel shal not aulter them tu the beter, whot shall be the end?"

THE Editor ov the *Pioneer*, the organ ov the Simplified Speling Sosiety, revyn- ing the wurc ov the paast yeer riets in the Desember number thus:—"We ar satisfied becauz we are begining tu see rezults. The ideoa ov speling reform haz been brant tu the noetis ov thoez interested in the Eaglish langwij in a wai which haz comaanded thair urnest atenshon. Among thoez hu hav joind us ar men and wimen in the frunt ranc ov our nashonal lief. The list ov memberz, which wil shortli be isyud, will be welcumd az convinsing evidens ov the wai in which our cauz apeelz not oenli tu the edyncaishonist, but tu the scolar, the sientist, the biznes man—indeed, tu intelijent men and wimen in everi caulng."

This iz indeed veri welcum nyuz. The wurc ov the South Indian Braanch has, in

men's respects, been equally encouraging. The head of the Brahm, it is well to remember, is not an educationist, but a brilliant orator, clear-headed and full of enthusiasm for the cause. The subject of Spelling reform has been prominent before the public through the medium of the press and by means of lectures and discussions. The membership has steadily increased. And what is most important of all, Indian schoolmasters have actively engaged in the teaching of English, have welcomed the movement with great eagerness.

The new year is therefore full of promise for the cause of rational spelling. Much earnest and sustained effort will be necessary, of course, before the work of ignorance and prejudice is finally broken down. But the noise and enthusiasm of those who are leading the attack, and the steady advances in the army of reform give ground for much hope.

I feel convinced that the rationalising of English spelling would be of incalculable benefit to India, because it would greatly facilitate the spread of English in this land. The progress of English has been extremely slow in the past. For, think for a moment.

After nearly a century of English education, out of the 300 millions of people in this country, not more than 1½ millions are literate in English! At that rate of progress, it will take fully a thousand years for half the present population to be able to read and write English! And yet it is undeniable that never since the Indian field needed the fertilising rains of the monsoon more than we need a noise of the English tongue.

The English language has played and is destined yet to play a most important part in the renaissance of modern India. It is the most powerful force working among us at

the present day for social and national unity. It is the key which not only unlocks for us the noble treasures of its own rich literature, but also admits us to all the scientific knowledge of the West. The stream of world culture flows to us mainly through the channel of that language. It stands, in a word, for progress and enlightenment. How needful is it then that a knowledge of English should spread, and spread quickly in our land! We need of the things that will most certainly help to do that is the simplification of English spelling.

The time wasted in learning the current spelling is simply appalling. It is notorious that Indian boys even after ten years of the study of English in the secondary schools are not able to speak and write English correctly.

This is largely due to the fact that a great disproportioned amount of their time is spent in mastering a chaotic and irrational spelling. Should we not save them from this cruel tyranny of the letter which clogs?

A rational spelling would enable Indian students to learn to read English much sooner than they do at present. It would greatly improve their pronunciation of English. It would, lastly, be making the language easier to learn, lead to the rapid spread of English in this country. I can conceive of no more truly patriotic work which an Indian could do, than the helping forward of this great movement for the simplification of English spelling.

S. E. RENGANADHAN.

ENGLISH LITERATURE IN INDIA.*

I

The introduction of English literature into India is among the most striking consequences of her contact with the civilisation of the West. Its influence on the national consciousness has been profound and it has generated the impulses for progress which have shaped the course of Indian history during the last one century. The people of the land have opened their eyes to political ideals, lofty in their spirit and abundant in their capacity for advancement; the structure of Indian society has been subjected to the searchlight of a new reason, full of humanity, and the injuries of ages are being righted; the superstitious beliefs of the past no longer command reverence from at least those who have any pretensions to culture; efforts for increasing the material prosperity of the country are being made in all directions,—there has been in short a general awakening, which can be compared in its intensity and comprehensiveness only to the great Renaissance of Europe.

While these beneficent consequences of its introduction into this country have often met with adequate recognition, it has very rarely been considered as a literary movement in itself. Though those aspects must be of the most absorbing interest to all that have the national welfare at heart, to a student of literature, the latter standpoint must make a profound appeal. The consequences in the literary sphere, of India's gradual absorption of English literature; the achievements of at least appreciable ability within the country itself, by the Anglo-Indian and the Indian; its usefulness for the Indian genius as a possible means of expression,—such are some of the subjects that ought to suggest themselves to one when some consideration is bestowed on English literature in India.

* A paper read recently at the Teachers' Association, Teachers' College, Saidapet, by Mr. P. Seshadri, M.A., of the Pachayappa's College.

When the energy that is being spent upon the study of English literature by the children of this country is realised, it will be seen that the pursuit of a subject on such a large scale must cease to be aimless, and must proceed in the direction of a clearly marked out goal. There is everywhere a wider and wider recognition of its value and usefulness for the people of this country. The Universities have given a very large share of attention to it in their scheme of studies and it only seems to increase year after year in importance. The sons of the intellectual aristocracy of this land are fed on its priceless beauties and the future reveals for it only a wider field of activity. With his characteristic genius for adaptation the Indian has assimilated it in a wonderful manner. He is able not only to explain the abstruse verse of Browning and appreciate the subtlety of its philosophy but also to perceive the same depth and beauty in the intellectual systems of his own ancestors. The writing of Ruskin has familiarised him, it is true, with the beauties of Alpine scenery, ravishing pieces of Swiss landscape and the great architectural monuments of Italy. But he has at the same time realised the occasion for such writing, in the beauty of the 'supreme Himalaya in sunrise,' in the Indian dawn breaking over the Orient sea scattered with isles of palm, in the dream in marble at Agra, in the rock-cut caves of Western India and in the sacred shrines of the South. Wordsworth's applause of the daffodil and the lily has inspired his mind with a similar deep-seated worship of the lotus and the champak. Shelley's *Ode to the Skylark* has been read to little purpose if the 'little, little kool,' singing on the *Sirish* bough does not inspire a similar train of golden fancies. The ballads of Scott have been made use of by the Indian, for does not his heart throb listening to the tramp of Mahratta horse at Raigarh, or the dashing array of restive Rajput steeds before the gates of Chitor!

The Indian mind has naturally not stopped with the æsthetic perception of literary merits in the masterpieces of the English language; or even with the application of such a process to things in the atmosphere of India that may be suggested by such a study. It has also occasionally striven to frame its conceptions of the beautiful in the language with a success which has been exciting the admiration of some of the most scrupulous of English critics. It is not merely that the Indian is successful as an English orator on the platform; he has begun to show his capacity in the serious forms of literary activity.

II.

Before discussing the principles involved in the question of the capacity of the Indians for achieving success in English literature, it is necessary to make a reference to the large part the language is bound to play in the future history of India. If only the subject is approached in a sober, academic spirit without one being led away by impulses of patriotism, one is bound to confess, that in time to come, its influence will be more potent in the country than that of all Indian languages. Though it is too early to point to it as the language of the Indian millions of the near future, those who conjure up before their mind's vision a common language for India, have to take note of it with as much certainty and confidence as other languages which are spoken, at best by a few districts or parts of a Presidency. The attention the language has been receiving in the country; its importance, nay, almost imperative necessity for India's taking any appreciable share in the progress of the modern world; the peculiar political circumstances which invest it with dignity and attraction for the Indian; its favoured position as the common medium of expression of the most advanced Indian class even to-day—all seem to point to a consummation in which English will be the language of the land for all practical purposes.

A student of history sees that it is the only possible conclusion. Whether it is desirable or not, is a matter which the tide of events will not pause to consider.

And after all, there ought to be no occasion for regretting it in the interests of national progress. In one of several kind letters I had the privilege of receiving from the eminent English writer, Mr. Frederic Harrison, he writes: "I am one of those who regret that in colleges in Indian Universities, so much attention is given to the study of English literature and to acquire the niceties of English prose style. It can be acquired—but it is alien to the entire body of Indian thought and life in which the Indian scholar's whole existence is necessarily passed." There can be no denying the loftiness of the spirit that has prompted the noble-hearted positivist philosopher to give expression to these sentiments. But it must be seen that the political condition of India and the current of historical forces render the present course not only inevitable, but also eminently desirable. The sustenance for the spirit of modern progress must come from the literature of the West, with its ideals of energy and action and its interest in social and political organisations and not from the literature of the Indian languages, with their insistence on the immateriality of this world and their philosophy of spiritual renunciation. Even as a step of practical expediency it is difficult to see any better method of deciding their rival claims than the introduction of a new language which can already be regarded as a common medium of expression in the country. The stress of modern civilisation will not allow the possibility of cultivating a hundred languages, each with its limited area of adherents, within the same country. If it did, it would be the toleration of one of the most frightful instances of the waste of human energy, certainly inconsistent with the spirit of modern progress. There should be hesitation for the sacrifice of sentiment in the interests of the country's prog-

ress and it is good to remember it is for the adoption of a language which links Indian with the civilisation of the most advanced part of the modern world; which is full of life-giving ideals for the progress of the individual, the society and the State, contributing to material happiness and growth; which asks for no artificial aids as it is impelled by the tide of historical and political forces; and which has to its credit an ever-growing literature, whose influence touches to-day the farthest confines of the world. It is a mistake to imagine that it will lead to any loss of national integrity or distinction. The example of the United States of America where different nationalities have adopted the English language and yet form the units of a single political organisation, quite distinct in its spirit, must serve to remove the misconception. Far from its leading to any such decay or obscuration, it seems to be the only means of creating a national sense in this country and leading her into the highways of progress. As for its being an exotic element it can only be said that the Indian genius will soon make it its own, and by applying it to the Indian atmosphere will make it thoroughly local in colour and national in spirit.

III.

Ignorance, prejudice and pessimism have often raised the croaking voice, that it is not possible for the Indian to wield this alien medium of expression with any success. Where it is mere expression of bigotry and narrow prejudice it hardly deserves any respectful attention. Where a personal weakness in the subject prompts such a belief it is a sight for the exercise of pathos. The voice of pessimism deserves only a severe silence and an amused contempt. It is, however, worth while examining the honest arguments which are sometimes advanced. The critics fail to perceive that the advantage of English birth gives the literary aspirant a start only in dia-

lectic vividness, homely flow of conversation, and richness of native humour. It is forgotten that these do not constitute the only virtues of literary and artistic excellence, nor do they occupy any appreciable importance in some of the most cherished branches of literary craftsmanship. The slang of Sam Weller, the speech of Tennyson's Northern Farmer, the humorous doggerel of Barham, and the homely excellence of Mrs. Poyser's exquisite sayings are, it is true, beyond the reach of the Indian, but is it not possible to evolve a transformed literature of his own even in these directions to suit the peculiar circumstances of his country?

How do English birth and environment invest a person with a finer capacity for lyrical poetry, for heroic verse and the loftier fields of prose? What are the specially English elements in Shelley's lines

"Life like a dome of many coloured glass,
Stains the white radiance of eternity?"

or Keat's

"Then felt I like some watcher of the skies,
When a new planet swims into his ken."

or Wordsworth's

"To me the meanest flower that blows can give
Thoughts that do often lie too deep for tears."

The difficulty of the Indian in imitating effectively the English accent which has been however rendered largely possible by recent Phonological aids, is sometimes put forward. But it is forgotten that Philology knows no correct pronunciation, its standard being derived only from the most widely accepted form of speech. The Yankee feels himself at liberty to introduce his own eccentricities into the English tongue. The Scotchman has been persisting in his own variations for the last several centuries. The pronunciation of English has been developing peculiarities even in so recent a colony as Australia, and the inhabitants of a far off island cannot effectively and for ever prevent the Indian mind from exercising one of the acknowledged privileges of people using an instrument

not able to suppress the longing for England's 'good greenwood' for her 'hawthorn glades' and a mere sight of her oaks again.

The work therefore devolves upon the Indian, and from what has been said already, it will be seen that the situation is hopeful. Lord Curzon, not a great admirer of Indian virtues of head or heart, in a speech before the Society of Authors in England, ventured to prophesy that in course of time a society of English authors of Indian birth may meet at the capital of British India. If there is the possibility of literary prognostication with any success, it may be said that there will spring up a class of Indo-English literary men in the future who will do for the artistic interpretation of India what Longfellow, Lowell, and Walt Whitman have done for America. As in the days of the Roman Empire, a class of poets from the subject race shall rise to share the literary glories of the rulers. One is disposed to linger fondly on the vision of such a future, to see a race of Indian literary men glorifying their motherland in the English tongue—to see a Tennyson singing the deeds of King Vikram; a Browning elucidating the philosophy of a cross-legged Brahmin ascetic on the Ganges, or a Bhikshu in Buddha-Gaya; a Keats clasping with rapturous enthusiasm the angels of the Hindu pantheon; a Dickens delineating the scenes of Madras in a new series of Sketches by Boz; a Scott narrating the thrilling romance of the land of Rajasthan; we may go further—a Milton treating in epic poetry a lofty theme from Hindu mythology, and if it please God, an Indian Shakespeare writing on the *Merchant of Surat* in the clutches of a Guzarati Shylock, depicting idyllic life in an Indian forest of Arden, or moving us to tears with the tragedy of a Hindu Othello or Hamlet. The Indian has entered upon the field of English literature with the right of an adopted brother, with 'Shakespeare's children and Milton's kindred.' A beginning has been made, which by a long series of steps will result on the day when the sons of

India will glorify, in English poetry,
That sweet Indian land
Whose air is balm; whose ocean spreads
Over coral rocks and Amber beds;
Whose mountains pregnant by the beam
Of the warm sun with diamonds teem
Whose rivulets are like rich brides;
Lovely with gold beneath their tides;
Whose sandal groves and bowers of spice
Might be a Peri's Paradise.

V. ON THE TEACHING OF MATHEMATICS IN SECONDARY SCHOOLS.*

(Continued from page 410, Vol. XVIII.)

In this article, I shall deal with (i) some important algebraic processes applied to numbers; (ii) the decimalization of money, English and Indian.

From the examples worked out below it is not meant that algebraic formulæ can always be applied with advantage in arithmetical calculations, nor is a student advised to stop in his calculations and think how he can make use of a particular algebraic formula. This will be just like a student keeping a set of phrases and idioms to be used in his composition.

$$i. a^2 - b^2 \equiv (a+b)(a-b).$$

Evaluate $37.75^2 - 32.25^2$.

$$37.75^2 - 32.25^2 = 70 \times 5.5 = 385.$$

Multiply 11.75 by 9.25 .

$$11.75 \times 9.25 = (10.5 + 1.25)(10.5 - 1.25)$$

$$= 10.5^2 - 1.25^2$$

$$= 25(2.1^2 - .25^2)$$

$$= 25(4.41 - .0625)$$

$$= 25 \times 3.3475$$

$$= 83.6875.$$

$$ii. a^2 + b^2 \equiv \frac{1}{2} \{ (a+b)^2 + (a-b)^2 \}.$$

Evaluate $11.625^2 + 9.375^2$.

$$11.625^2 + 9.375^2 = \frac{1}{2} (21^2 + 2.25^2)$$

$$= \frac{1}{2} (441 + 2.5 \times 2 + .0625)$$

$$= \frac{1}{2} \times 446.0625$$

$$= 223.03125.$$

* The right of publishing these articles is reserved.

$$iii. ab \equiv \frac{1}{4} \{ (a+b)^2 - (a-b)^2 \}$$

Multiply 11.625 by 9.375 .

$$11.625 \times 9.375 = \frac{1}{4} \{ 21^2 - 2.25^2 \}$$

$$= \frac{1}{4} \{ 441 - .0625 \}$$

$$= \frac{1}{4} \times 435.9375$$

$$= 108.984375.$$

Evaluate $11.75^2 + 9.25^2$.

$$11.75^2 + 9.25^2 = (10.5 + 1.25)^2 + (10.5 - 1.25)^2$$

$$= 2(10.5^2 + 1.25^2)$$

$$= 50(2.1^2 + .25^2)$$

$$= 50 \times 4.4725$$

$$= 223.625.$$

$$iv. a^3 - b^3 \equiv (a-b)(a^2 + ab + b^2) \text{ or}$$

$$(a-b)^3 + 3ab(a-b) \text{ or}$$

$$(a-b)(a^2 + b^2 - ab).$$

Evaluate $25.25^3 - 14.75^3$.

$$25.25^3 - 14.75^3 = 10.5^3 + 3 \times 25.25 \times 14.75 \times 10.5$$

$$= 1000.125 + 157.5 + 3 \times 10.5 (400 - 5 \times 5 \frac{1}{4} - .0625)$$

$$[5 \times 25^2 = 5^3 + 2 \times 5 \times .25 + .25^3]$$

$$= 5 \times 5.5 + .25^3$$

$$= 1157.625 + 3 \times 10.5 (400 - 27.5625)$$

$$= 1157.625 + 3 \times 10.5 \times 372.4375.$$

$$= 1157.625 +$$

$$11173.125 +$$

$$558.65625$$

$$= 12889.40625,$$

or

$$25.25^3 - 14.75^3$$

$$= 10.5 (40^2 - 20 + 5.25 \times 20 - 5.25)$$

$$= 10.5 (1600 - 400 + 5 \times 5.5 + .0625)$$

$$= 10.5 \times 1227.5625.$$

$$= 12275.625 +$$

$$613.78125$$

$$= 12889.40625.$$

$$v. a^3 + b^3 \equiv (a+b)(a^2 - ab + b^2) \text{ or}$$

$$\equiv (a+b)^3 - 3ab(a+b).$$

Evaluate $15.625^3 + 4.375^3$.

$$15.625^3 + 4.375^3$$

$$= 20^3 - 60 (10 + 5.625)(10 - 5.625)$$

$$= 8000 - 6000 + 60 \{ 5 \times 6.25 + .625^2 \}$$

$$= 2000 + 1875 + 60 \times .36$$

$$30$$

$$6$$

$$25$$

$$= 3875 + 6 \times 3.90625$$

$$= 3875$$

$$23.4375$$

$$= 3898.4375.$$

$$vi. a^3 + b^3 + c^3 - 3abc \equiv \frac{1}{2} (a+b+c) \{ (a-b)^2 + (b-c)^2 + (c-a)^2 \}.$$

$$+ (b-c)^2 + (c-a)^2 \}$$

$$XIX$$

Evaluate

$$3760^3 + 3750^3 + 3740^3 - 3 \times 3760 \times 3750 \times 3740.$$

$$3760^3 + 3750^3 + 3740^3 - 3 \times 3760 \times 3750 \times 3740$$

$$= 10^3 [376^3 + 375^3 + 374^3 - 3 \times 376 \times 375 \times 374]$$

$$= \frac{10^3}{2} \times 1125(1^2 + 1^2 + 2^2)$$

$$= 10^3 \times 1125 \times 3$$

$$= 3375000.$$

$$vii. (a+b+c)^3 - (b+c-a)^3 - (c+a-b)^3 - (a+b-c)^3$$

$$\equiv 24abc.$$

Evaluate $5.25 \times 3.5 \times 1.75$.

$$5.25 \times 3.5 \times 1.75$$

$$= \frac{1}{2} \{ 10.5^3 - 0 - 3.5^3 - 7^3 \}$$

$$= \frac{1}{2} \{ 27 \times 3.5^3 - 3.5^3 - 8 \times 3.5^3 \}$$

$$= \frac{1}{2} \times 3.5^3$$

$$= \frac{1}{2} [27 \times 125 + 4 \times 5 \times 3.5]$$

$$= \frac{1}{2} \times 42.875$$

$$= \frac{128.625}{4}$$

$$= 32.15625.$$

$$viii. \text{ Now } W^3 - X^3 - Y^3 - Z^3 = 24abc \text{ where}$$

$$a + b + c = W$$

$$-a + b + c = X$$

$$a - b + c = Y$$

$$\text{and } a + b - c = Z.$$

Evaluate $18^3 - 2.5^3 - 5.5^3 - 10^3$.

$$18^3 - 2.5^3 - 5.5^3 - 10^3 = 24abc \text{ where}$$

$$a + b + c = 18$$

$$-a + b + c = 2.5$$

$$\therefore a = 7.75$$

$$a - b + c = 5.5$$

$$\therefore b = 9.25$$

$$a + b - c = 10$$

$$\therefore c = 4.$$

$$= 24 \times 7.75 \times 6.25 \times 4$$

$$= 6 \times 31 \times 25$$

$$= 4650.$$

$$ix. \text{ Resolve } a^6 - 1 \text{ into factors and hence deduce the prime factors of } 999,999.$$

$$a^6 - 1 = (a^3 - 1)(a^3 + 1)$$

$$= (a-1)(a+1)(a^2+a+1)(a^2-a+1)$$

$$\text{put } a=10$$

$$\text{then } 999999 = 9 \times 11 \times 111 \times 91$$

$$= 3^3 \times 11 \times 3 \times 37 \times 7 \times 13$$

$$= 3^3 \times 7 \times 11 \times 13 \times 37.$$

A number can be looked upon as a function of 10 and putting a for 10 we get a function of a to represent a number, the digits forming the number being the coefficients of different powers of a . Thus $a^4 + 4a^3 + 5a^2 + 2a + 9$ stands for the number 14527; $3a^3 + 5a^2 + 7$ stands for 3507.

Evaluate 1111^2 .

$$\begin{aligned} \text{Now } (1+x+x^2+x^3)^2 &= \{(1+x)(1+x^2)\}^2 \\ &= (1+3x+3x^2+x^3) \times \\ &\quad (1+3x^2+3x^4+x^6) \end{aligned}$$

$$\begin{array}{r} 1+3+3+1 \\ 1+0+3+0+3+0+1 \\ 1+3+3+1 \\ 3+9+9+3 \\ 3+9+9+3 \\ 1+3+3+1 \\ 1+3+6+10+12+12+10+6+3+1 \end{array}$$

Remembering that $x = 10$ we arrange the co-efficients thus: 1 + 3 + 6 + 0 + 3 + 3 + 1 + 7 + 3 + 1 and the corresponding number is 1371330631.

The application of the Remainder Theorem in this connection is instructive.

Now if an integral function of x is divided by $x - 1$, the remainder is found by putting $x = 1$ in the function, i.e., the remainder = the sum of the co-efficients, i.e., the sum of the digits in a number; by our assumption $x - 1 = 9$. So this gives that when a number is divided by 9 the remainder is the sum of the digits and if the sum of the digits be a multiple of 9 the number is divisible by 9. Again if an integral function of x is divided by $x + 1$ the remainder is found by putting -1 for x and the result is the sum of the odd co-efficients —, the sum of the even co-efficients. So when a number is divided by 11 the remainder is the difference between the sum of the odd digits and the sum of the even digits and if this difference be zero or a multiple of 11 the number is divisible by 11. The Remainder Theorem gives that $3x^5 - 5x^4 + 10x^3 - 11x^2 + 2x + 1$ is divisible by $x - 1$ and we infer that 310021—5110, i.e., 304911 is divisible by 9, which is otherwise obvious and hence verifies the Remainder Theorem.

An algebraic expression $5x^3 + 3x^2 + 6x + 8x^4 + 9x + x^3 + 4$ can be put into the form $5x^4 + (3x + 6)x^3 + (8x + 9)x^2 + x + 4$, and the remainder when this is divided by $x - 1$ is easily seen to be $5 + (3x + 6) + (8x + 9)$

+ 1 + 4. Now from this it is clear that when a number is divided by 99 the remainder is the sum of the numbers formed by taking the digits 2 by 2 from the units digit and when this sum is greater than 99, 99 or a multiple of 99 should be subtracted from the sum and the remainder obtained; and this suggests an easy method of obtaining the quotient and the remainder when a number is divided by 99.

Let us take the number represented by the algebraic-expression in the previous paragraph and divide it by 99.

$$\begin{array}{r} 536890104 \\ 5368901 \\ 53689 \\ 536 \\ 05 \\ \hline 542313235 \\ 1* \\ \hline 36 \end{array}$$

* From the rule we get 135 for the remainder and 100 carried forward will give 1 to be added to the quotient and 1 added to the remainder.

The co-efficient is 5423132 and the remainder is 36.

The same algebraic expression can be arranged as $x^4(2x^2 + 3x + 6) + x^3(8x^2 + 9x) + x^2 + 1$ and this suggests a similar method to obtain the quotient and the remainder when a number is divided by 999. Taking the same number we have:

$$\begin{array}{r} 536890104 \\ 536890 \\ 0536 \\ \hline 537427530 \\ 531 \end{array}$$

Quotient: 537427.
Remainder: 531.

DECIMALIZATION OF MONEY.

Before beginning decimalization the student should be made to grasp well the elementary ideas about decimals. In a decimal fraction that a unit in the 3rd place is 10 times a unit

SCHOOL-MANAGEMENT AND HEADMASTER'S WORK.

I.

MATTERS of method and technical details of school-work ought to receive their special attention at the hands of professional people. But, those facts and principles necessary for guiding the policy of a school or even an educational institution of a superior order ought to be the common property of the educated public. When the Ripon-Hunter Commission collected evidence, it was the late Justice Telang who emphasised the view that intelligent men of general education conversant with broad principles could very well take part in University discussions and need not necessarily consist of professional experts alone. The need for this arose from the manner in which the idea of education being directed by lay-men was altogether ridiculed. In this contention, the late K. T. Telang was certainly in the right. Men in the field of education and outside elements should join so that there could be scope for variety and different types of culture.

In University education, the lamentable feature is going from one extreme to another. Before the recent changes now worked out, too large a number of lay-men took part in the Senate and the Syndicate. The present tendency is to have too large a number of men engaged in the profession of teaching. The forces at work in the higher department of education naturally permeate the lower strata. A disproportionately large number of people has begun to say that, even in the management of schools, the vast majority should consist of teachers. Amongst teachers are met with men who may be thorough in details of instruction and those not wanting

in the 4th place and so on; this applies to fractions also, e.g., when a fraction belonging to the 3rd place is multiplied by 10, the integral portion belongs to the 4th place—for example $0.37\frac{1}{2} = 0.379\frac{1}{2} = 0.3791\frac{1}{2}$ and so on. The student should also be very familiar with the decimal equivalents of at least $\frac{1}{2}$ and its odd multiples. With this notation $\frac{1}{2}$ and $0.4\frac{1}{2}$ are intelligible and the student must at once understand them to be 0.5 and 0.4875 .

Now a shilling is $\frac{1}{2}$ of a £ and 5s., 3s. 6d., 11s. 9d. are respectively $2\frac{1}{2}$ £, $1\frac{1}{2}$ £, $5\frac{1}{2}$ £ and are equal to £25, £175 and £5875 respectively. Now the student can decimalize shillings and pence to within 3d.

$$1q = £ \frac{1}{960} = £ \frac{0.25}{24} = £0.01\frac{1}{24}$$

$$\text{and } 4q = £0.04\frac{2}{24}$$

$$\text{Now } 2\frac{1}{2}d. = £0.101\frac{1}{24} = £0.10416\ldots$$

$$2\frac{1}{2}d. = £0.11\frac{11}{24} = £0.115$$

$$47\ldots\ldots$$

$$= £0.1197\ldots\ldots$$

$$\text{Decimalize } £35, 17, 10\frac{1}{2}d.$$

$$£35.8875$$

$$0.05\frac{5}{24}$$

$$5555\ldots\ldots$$

$$23$$

$$£35.89328\ldots\ldots$$

The student should always reduce such fractions $\frac{5}{24}$ mentally. The process of reduction should be $\frac{1}{24}, \frac{1}{12}, \frac{1}{6}, \frac{1}{3}, \frac{1}{2}, \frac{1}{4}, \frac{1}{8}, \frac{1}{16}, \frac{1}{32}, \frac{1}{64}, \frac{1}{128}, \frac{1}{256}, \frac{1}{512}, \frac{1}{1024}, \frac{1}{2048}, \frac{1}{4096}, \frac{1}{8192}, \frac{1}{16384}, \frac{1}{32768}, \frac{1}{65536}, \frac{1}{131072}, \frac{1}{262144}, \frac{1}{524288}, \frac{1}{1048576}, \frac{1}{2097152}, \frac{1}{4194304}, \frac{1}{8388608}, \frac{1}{16777216}, \frac{1}{33554432}, \frac{1}{67108864}, \frac{1}{134217728}, \frac{1}{268435456}, \frac{1}{536870912}, \frac{1}{1073741824}, \frac{1}{2147483648}, \frac{1}{4294967296}, \frac{1}{8589934592}, \frac{1}{17179869184}, \frac{1}{34359738368}, \frac{1}{68719476736}, \frac{1}{137438953472}, \frac{1}{274877906944}, \frac{1}{549755813888}, \frac{1}{1099511627776}, \frac{1}{2199023255552}, \frac{1}{4398046511104}, \frac{1}{8796093022208}, \frac{1}{17592186044416}, \frac{1}{35184372088832}, \frac{1}{70368744177664}, 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who have really educational ideas. But, the latter class is not necessarily restricted to the masters. Amongst outsiders are found men not only of superior attainments in subjects of study but also of broad educational ideas. The services of these ought to be utilised for the good of schools. The greatest pity is that they have not got the leisure for doing as good work as they can, especially as the majority of them belonging to the legal profession are too busily occupied in their own professional work and in too many kinds of activity to make themselves felt. Purely professional people may easily note that, in the public life of Great Britain and America, the legal element preponderates. The credit that Britain claims is that the proportion is less in it than in America and that a larger number of outsiders is found to take part. It seems to be a curse of the teaching profession even in Europe that its members are not able to combine effectively for organised efforts in improving their own material condition.

In all worldly matters, power naturally goes into the hands of men who control the purse and take part in legislation. In school matters also, headmasters and assistants should show that they can give or get the necessary amounts needed for improving the efficiency of schools, while teaching up to a high standard. This requires a great deal of self-sacrifice as in the case of the founders of the Fergusson College, Poona, amongst whom the illustrious names of Messrs. Agarkar, Tilak and Gokhale are too well-known to need more than a bare mention. They will have, then, all the power in their hands. Till then, they may envy in vain the authority of outsiders in the management. But, these have also equally to consider whether, not satisfied

with merely financial aspects of education, it is possible for them to take an intelligent, active interest in the educative portions of school-work; otherwise, managers equally find themselves merely envied. It is not our business now to inquire into the relationship between two classes of men, but to see how educational interests suffer to the detriment of progress of the large number of school-going youths in the land. Headmasters and assistants must, therefore, show a greater knowledge of the world by coming into contact with business-men and winning them over to contribute large sums.

Managers ought to be daily conversant with the educative aspects of school-work. These can have their useful share thereof by co-operating with the headmaster. He is the responsible person through whom they can and have to exercise their influence on school-work. Now that the headmaster is made the supervisory authority without full class-work, it is for them to see how it is exercised. The headmaster ought not to be in charge of any subject fully for one class. The subjects taught during those periods, especially in the lower forms and primary school classes, suffer for want of occasional effective supervision. He ought to bear the lion's share of work in taking, only for a short time, each form or class in the most difficult subject or important portion of any subject known to him. He is intended to be the teacher of model-lessons capable of improving the assistants. The management may co-operate with the headmaster in a way, by going with him round the classes from time to time and seeing what kind of improvement he effects on the assistant's work. If this is done, the headmaster more profitably uses the ample leisure left to him.

His attention and time are better utilised in model teaching than in office work with its own importance. Then, his supervisory work is bound to meet with greater success. The headmaster ought to be able to calmly think for himself and decide what writing work is necessary and what he can conveniently manage by friendly contact with the teacher. The manager may, if necessary, advise him to avoid long or unpleasant reports submitted to him in writing as business people find it easier and more useful to have short reports on the needs of the school and to gain a better name for considerate management by gentleness and sympathy.

Every intelligent manager ought to see a school-calendar placed by the headmaster in the hands of every teacher and school boy, so as to show the text-books and portions, dates of examinations and payments of fees, the holidays of the year. Pachaiyappa's College, for example, issues one for the High School department also. It is found very convenient by pupils and masters.

The manager may ascertain whether the headmaster holds teachers' meetings to make them profitable in work in imitation of the Japanese Parliament which conducts business without much talk. The manager may learn and directly see what is done with regard to games, as they help the formation of independence and obedience to authority.

The problem of problems is to see what steps are taken to bring into force in actual life the methods of securing the intimate contact of the teacher with the parent, that of the teacher with the pupil being too well-known in theory to need mention.

A committee of management ought to have a due share of the educational element represented in it. With it, the management is

bound to make its achievements more glorious. But, the representatives of the teaching profession must be such as carefully work to give the benefit of their experience. Supposing it to be actually found, the task of co-operating with the headmaster is comparatively easy, only if it is intended to be done in right earnest. Supposing it is not found, an intelligent member on the board of management ought to be able to go with the headmaster round the classes to test educative methods. The manager may enter into a conversation with boys and see what they have got to say in matters of general interest and what intelligence they show in briefly answering questions requiring not mere cram but sound, common-sense. The headmaster will then be able to convince his superior that he is the important factor in educational matters, the sole power for the diffusion of instruction on a large scale or even of knowledge on a small educative scale. This method is useful in proving supervision to be necessary. The ordinary public conception at present is that the headmaster ought to have far more of teaching work than he has undertaken to do. People outside the profession and even in it can be satisfied if they see that far more is gained by efficient supervision than by teaching. This requires culture which it is difficult to attain; but, no reason can be assigned to the want of active work and interest with the attempt at culture that can be made out of the material available at present.

Some useful work of the management consists in passing proceedings fit to guide. Intelligent lay-men of education ought to take heart and feel that, if they only *will*, they can have their useful share in improving the tone of school work.

If the Universities' Commission had the object of securing continuity throughout the

College course, the Secondary School-Leaving Certificate scheme has for its object the proper supervision by the headmaster and the elevation of the teacher to a higher status. The headmaster and the management may co-operate to achieve it.

For more than a quarter of a century, the greatest living educationist of Southern India, the Rev. Dr. Miller, set an example of teaching in the High School department of his well-known premier college and of supervising work. It is not everywhere that it can be done; but, the principle exemplified ought to be borne in mind though we may not have professional men of that eminence. Headmasters and managers producing results in public examinations by cramming and mechanical methods may not see much of use in it; but, to the parents and the public interested in culture, it is educative work that is worthy of imitation. The headmaster is expected to teach in an exemplary way and to be able to give constructive suggestions raising the standard of an assistant's work.

If we have ventured to say all this, it is because we ought to make it understood by the general public that a vast field of work lies open to the learned man even outside the pale of the teaching profession. In this case only does a supervisory headmaster prove that he satisfies intelligent, public opinion.

If we have not entered into concrete details of management, it is because they are largely determined by local conditions and details within the easy reach and knowledge of any learned man in earnest about his work. Any such particulars are more properly topics for treatment in detail. We shall, if necessary, utilise, later on, the pages of *The Educational Review*, our only organ for purely educational matters in this Presidency.

It is not hereby meant that the Secondary School staff especially of the upper forms

need be subjected to interference of a three-fold character from the headmaster, the management and inspectorate. The teachers of the fourth, fifth and sixth forms are almost generally no inferiors to the headmaster and the only safe course for the head is to ascertain the methods that his assistants mean to follow and to secure their co-operation. Equally the sound policy of the management is not to interfere needlessly with the headmaster and his staff. *The London Times*, the enlightened organ of British public opinion, made the characteristic remark a few months back that nothing ought to be done which makes pupils feel that the authority of the teacher is checked. Equally true it is that the authority of the headmaster ought not to be lowered before his assistants, so long as he is kept to do responsible work.

Both the management and the headmaster should co-operate with the inspectorate and be definite about the policy of the school and its methods. The very object of the Secondary School Leaving Certificate scheme is to allow scope for variety and differences in taste of various assistants. They have received training at the Teachers' College and are conversant with the latest and best methods of handling subjects. The headmaster and the management should agree to help them to follow their own methods so long as they are intelligent and well-informed. They should further see that changes in the inspecting staff do not prevent steadiness in and continuity of school-work for some definite period. The view should always be to secure variety with tolerant supervision.

C. R. SRINIVASA RANGACHARY.

UNIVERSITY OF MADRAS.

CONVOCATION ADDRESS.*

At the Convocation of the University of Madras held on 21st November 1912, the following address was delivered by the Rev. Allan F. Gardiner, M.A., S. P. G., Principal and Warden of S. P. G. College, Trichinopoly and Fellow of the the University.

MR. CHANCELLOR, LADIES AND GENTLEMEN:

As I rise to address this Convocation in compliance with the request of the late Chancellor and in accordance with the regulations of the University, my thoughts revert to the last occasion on which this time-honoured custom was observed.

There stood before us then one whom we shall hear no more, though being dead he yet speaketh. His interesting survey of University education, past and present, his keen appreciation of the reforms but recently introduced into the University system of this Empire, and his sensitive consciousness of existing limitations are all still fresh in our memory, while his words of congratulation and counsel to the graduates of the year will never be forgotten by those who heard them. The Hon'ble Mr. V. Krishnaswami Aiyar was a man whom the King delighted to honour: a graduate, a Fellow, and a Syndic, of whom this University was justly proud. Unerring insight and unfailing sympathy characterized every action of his life, and his public career was distinguished throughout by a rare single-mindedness of purpose inspired by a large-hearted patriotism.

It is a difficult and responsible task for me to follow in the steps of so clear a thinker and so brilliant an orator, and to succeed all the other speakers of wide experience and impressive eloquence who have addressed this Convocation year by year. But I have the secret encouragement of knowing that my enthusiasm for the cause of higher education in India at least is as

* Reproduced from the University edition of the Address.

boundless as theirs, and my affection for this land and Empire as deep as that of any of my predecessors in this honourable office.

In the sphere of University education in this country one outstanding feature arrests the attention of every interested observer. It is the transition of the University from the formal position of a purely examining body to the dignity of an institution which not only tests but teaches, and devotes herself to training not only the intellect but also the character of her sons and daughters.

Such a responsibility was recognized and accepted by the University of Madras at an early period of her existence, and recent administrative measures have served only to facilitate and quicken her discharge of it. So invaluable are the benefits which accrue from such reform that new schemes for the promotion of Universities in India can only hope to gain acceptance in so far as these principles are strictly observed.

The development has been marked in the first place by the gradual transformation of a number of loosely affiliated institutions into a compact group of constituent Colleges over which the University has assumed a position of responsibility and control by dictating measures for their more collective organization and conduct, and by instituting a system of periodical inspection.

As the Head of not the least distinguished of those Houses I may be permitted to express the gratitude felt by all towards the great statesman who inaugurated that policy and towards those upon whom the duty of giving effect to it has devolved.

In pursuance of the policy indicated in the Indian Universities Act of 1904 the hostel system has been brought into prominence and an approximation has been made to the residential system of the older Universities of the West. The advantages of wider social intercourse and of a more vivid realization of corporate life among students have for centuries past found expression elsewhere in hospices and halls. Six hundred and fifty years ago the need of such

hostels for University students was realized and supplied at Oxford by Walter of Merton, who laid down regulations for their discipline under a warden, sub-wardens, and monitors. Proper provision was also soon made for healthy recreation as *lusus pilæ in horto causa exercendi corporis et sanitatis*. That noble example of private beneficence if followed in this Presidency and in the adjoining States would confer as great honour upon the benevolent founders as on the favoured Colleges.

It is in the development and extension of this hostel system on a sound basis that a solution will be found for one of the gravest and most pressing problems of modern education.

While the University as a body thus assumed a still larger measure of responsibility for the education imparted in her affiliated Colleges and thereby constituted herself vicariously a teaching institution, the gracious influence of His Majesty the King-Emperor and the generosity of the Imperial Government have opened out new paths of enterprise.

In Europe in the Middle Ages teaching Universities and hostels preceded the formation of such teaching Colleges as were founded after the model created at Oxford by William of Wykeham in the fourteenth century, and the local guild of professors in the *studium* had long preceded the organization of the *universitas*. In modern Universities the function of preparing candidates for University degrees has devolved upon University Colleges, and the University in her individual capacity has assumed a peculiar function distinct from that of a University College. In the latter the acquisition of knowledge, however highly specialized it may be, is but one factor in the more liberal education of its scholars, while the University considered apart from her Colleges cares less for the wider culture of the individual and more for his independent research and the assured results of his investigation. To fulfil this special duty the University aims at guiding the studies of advanced students by the co-operation rather than by the instruc-

tion of her own professors and by providing facilities for such research.

In the West, and elsewhere in India, generous endowment by religious and other institutions or the liberal support of public-spirited individuals has enabled Universities to discharge this distinctive function, but hitherto in this Presidency we have been precluded from doing so by a lack of general interest and of adequate funds. The imperial grant has now provided this University with materials for erecting monuments of research, and the University in availing herself gladly of the opportunity has proposed to appropriate the grant for the building and equipment of a library and for the establishment of University professorships.

Such a recognition of the special aim of the University, in conjunction with the better fulfilment of her wider purpose through University Colleges, vindicates the traditional claim of Universities to be perhaps the most important factors in national progress, and cannot but evoke a liberal response from every section of the community.

In harmony with His Imperial Majesty's express desire to conserve the ancient learning of this land, the claims of the languages and literatures of South India, native and naturalized, have received the foremost consideration by the University of Madras. This is a field of inquiry which affords unique opportunities for local research and holds out promise of a degree of success which it would be difficult to attain elsewhere. The claims of other departments of research in closer touch with the professional and industrial life of the community have been temporarily waived in deference to the prior claims of pure learning, but will assuredly be honoured worthily as time and circumstance permit.

The preference thus given to Oriental Languages is an inevitable corollary of Lord Macaulay's famous Minute of 1835, in which it was decided once and for all that the English language should be the medium for higher educa-

tion in India. The only languages seriously considered as possible alternatives at that time were Sanskrit and Arabic, the classical languages flourishing in the land. The latter was rejected because it was as foreign as English and less effective, while the claims of the former were disputed on the ground that it had been dead for two thousand years, during which a large proportion of its literature had been written—a literature great indeed in matter, form, and spirit, but deficient in certain departments and not greater in any than the literature of England.

But although the local demand for learned research in the department of Oriental Languages is great (as the recent proposals of the University testify), yet the need for the popularization of useful knowledge through the vernaculars is even greater.

Though there never was (nor has been) any intention on the part of the British Government that English should be generally substituted for the vernaculars—even if such a policy were remotely practicable—yet the competition of the vernaculars could hardly be taken into account in deciding upon the means of higher education. But their claim on the further attention of Indian Universities has always been great and cannot be ignored with impunity.

Language is the sole channel through which we communicate our knowledge and discoveries to others, and through which the knowledge and discoveries of others are communicated to us.*

If the principles of Western civilization and the discoveries of Western thought and science (which are of universal, not merely local, validity) are to permeate this land, it will not be through English or Sanskrit or Arabic. The enlistment of the vernaculars is an indispensable element in national enlightenment. For while on the one hand the function of English is to unite in one enlightened body those who participate directly in the learning of the West, on the other hand the national assimilation of that more accurate information and wider culture can

be effected only by calling in the aid of the vernaculars. At present there appears to be a danger that the English language which is a bond of union among the favoured few may become a barrier of separation between them and their less fortunate fellow-countrymen.

The fascination of European culture and education exerts so strong an influence—due partly to worthy, partly to unworthy motives—that there is a clear disinclination on the part of University students to select optional courses of study in their own languages, though it would be difficult to determine how far the education of an Indian could be considered in any sense complete without an adequate acquaintance with one or other of the languages and literatures which have sprung up in his native land or have become acclimatized to it.

To the influence of those literatures is largely due all that is good and beautiful in Indian life and the preservation of such influence and of its sources should accompany the infusion of the elevating and inspiring elements of Western culture. Otherwise there would appear to be a real danger that by their education the sons and daughters of India may forfeit the most precious portion of their glorious heritage.

The history of University education in India during the past half-century is a record of rapid advancement along every line of national thought, and the Universities may claim to be the most fruitful source of inspiration for intellectual, social, and ethical progress; but at present it cannot be denied that the English-educated class have to a large extent failed to adjust their enlightenment to the needs of their fellow-countrymen. As an evidence of such failure there is a striking absence of individual effort, of originality, of stimulating thought and imagination on the one hand, and on the other among those not so educated a widespread suspicion and distrust of all rational reforms based upon the knowledge that is imparted by English education.

Graduates of the year, it is my duty to-day to exhort you to conduct yourselves suitably unto

* George Campbell, *Philosophy of Rhetoric*.

the position to which by the degrees conferred upon you you have attained. I congratulate you on having for the most part attained a standard of proficiency in the vernacular languages of South India, for the diffusion of knowledge through those vernaculars is one of the foremost duties of graduates. There is an imperative need of translating and accommodating that knowledge to meet the needs of the masses, and unless this task of interpretation is undertaken the moment of inspiration may be irretrievably lost.

There is much in the old vernacular literatures that exerts a reactionary influence and withholds the benefits of the new learning and culture from the country at large. The time is ripe for the renaissance of those vernaculars as living forces with a renewed vigour and a wider range. While the system of education through the vernaculars is already considerable and is increasing with the rapid extension of elementary education, the present supply of sound modern literature and of instructive lectures in the vernaculars is scanty and soon exhausted. And yet the vernacular seems destined to remain the spoken and written language of the larger part of the educated community. The literates in English in this Presidency do not number one in every 150 of the population, and for every literate in English there are eleven literates in the vernaculars. The vital importance of female education and the almost incalculable influence of the women of India in Indian life have frequently been emphasized, but only 4,000 Hindu and Muhammadan women, and 9,000 Christian Indian, out of a total population of over forty-one millions, can read and write in English. The very imperfect knowledge of most of these literates in English further discounts their number, already insignificant in itself.

There is yet another influential section of the community to be considered in the application of such a test, for

the wealthy as yet hardly appreciate the value of a University education*

* Census of India, 1911, vol. xii, part i.

to their children.

Every graduate of the University becomes directly or indirectly, deliberately or involuntarily, a teacher of the people, and the extension and improvement of English education will serve only to alienate the interest of the masses and to accentuate their prejudices unless it appeals to their hearts and minds in a form that can be readily understood and appreciated.

The vernaculars are in a malleable and plastic state, capable of receiving the impress of new ideas, and the national demand for their modification and enrichment is insistent.

If I seem to have digressed from the express subject of the Convocation Address it is on account of my firm conviction of the paramount importance of the position which the vernaculars should hold in the scheme of higher education for the average student.

It is my very pleasant task to congratulate you, graduates of the year, on the distinctions which you have won. If my words of hearty congratulation and kindly admonition should strike some of you as trite and commonplace, I ask you to believe that they are none the less sincere, and I invite you further to accept their very familiarity as a proof of the unalterable affection and unchanging interest which the University ever takes in the highest welfare of her children.

To you, ladies and gentlemen who have graduated to-day, this is a memorable occasion, for graduation in any department of learning comes but once in a student's lifetime. It is an impressive ceremony, an impressive moment in your lives, and in your case at least the solemnity of your present experience will, I venture to trust, invest my faltering words with a peculiar freshness.

I stand before you at this moment when you are flushed with triumph, not to stimulate the pride of knowledge but to instil the humility of wisdom. The education which you have received, the courses which you have completed, at

the cost of great self-denial on your own part and perhaps of still greater self-denial on the part of your parents and relations, are to-day crowned with a success which is hard-earned and well-deserved.

This academic year marks the passing of the old courses of study, the advent of the new. But as the last representatives of the old order you have nothing to regret. Turn your eyes on the long roll of men of ability and distinction, living or dead, whose path to honour and fame was the same as that now trodden by you. If the coming age require men trained under a more highly-specialized system, yet in this age of transition, as indeed in every age, men and women of wide culture, broad sympathies, and noble character, will ever find a field for the exercise of all their talents. With such examples behind you and around you, and with such a hope before you, I can, and do, most cordially congratulate you on the position which you hold.

You stand at a parting of the ways of life to choose a career for which your education hitherto has been a training. Your courses of studies now honourably concluded have afforded you an admirable preparation for life as a whole, and in most cases have developed aptitudes which will be of invaluable service to you in your special avocations. And let me assure you that it is a matter of gratification to the University that the distinctions now conferred upon you should improve your material prospects in life, for the foremost duty of every citizen is to earn an honest living in an honourable occupation. And though it is not an uncommon experience to hear the mercenary aspect of education decried, there is nothing in such criticism that need necessarily cause you even a momentary feeling of shame. But your education will have failed in its purpose if you regard this degree as its completion, or even as its highest reward. For the knowledge which you acquire is always of greater value than any distinction or reward which it may achieve and your education in the University of Life will never be completed till your latest hour.

You have realized that in life and work the method of attainment is of greater importance than the means, the faculty of observation mightier than the power of memory, and the application of knowledge far more valuable than its acquisition.

It is my duty to remind you of the solemn obligations which you have taken here to-day. You have promised *that you will in your daily life and conversation conduct yourselves as becomes members of this University; that to the utmost of your opportunity and ability you will support and promote the cause of morality and sound learning; that as far as in you lies you will uphold and advance social order and the well-being of your fellow-men.*

I need not remind you that these are no merely formal promises, though made in accordance with a set form, nor are they the less binding on each of you severally though ratified by all simultaneously. You have undertaken a great responsibility, but if, as I cannot doubt, you have derived the full benefit of your training, you will be able and ready to discharge that responsibility with credit to yourselves—and to the University, for to-day the University has constituted you the guardians of her honour in the wider world.

Higher education is to-day on its trial, and its critics are many and relentless. The system is judged not on its academic or intrinsic merits, but on its actual products. And this is a fair criterion, for education is not a lifeless system but a living instrument.

What has been solemnly promised by you, ladies and gentlemen, upon whom professional degrees have been conferred, is morally binding upon all who pursue honourable and useful callings, namely, *to maintain their purity and reputation and never to deviate from the straight path of their honourable exercises by making your knowledge subservient to unworthy ends.*

In his ideal state, the name of which has become a byword for impracticable schemes, Sir

Thomas More sketched a practicable fulfilment of such promises :

'The *Utopians*,' he wrote, 'consider it an evidence of true wisdom for a man to pursue his own advantage as far as the laws allow it, but they account it piety to prefer public good to one's private concerns, and think it unjust for a man to seek for pleasure by snatching another man's pleasure from him. On the contrary they think it a sign of a gentle and good soul for a man to dispense with his own advantage for the good of others and believe that by this means a good man finds as much pleasure one way as he parts with another: for as he may expect the like from others when he may come to need it, so, if that should fail him, yet the sense of a good action done, and the reflections which he makes on the love and gratitude of those whom he has so obliged, give the mind more pleasure than the body could have found in that from which it had restrained itself. They are also persuaded that God will make up the loss of those small pleasures with a vast and endless joy, of which religion easily convinces a good soul.'*

Whatever may be your occupation in life, be sure that your personal character will be reflected in your discharge of its duties, for it is impossible to adopt one moral standard for your public life and another for your private. The temptation to do so is one to which many succumb though the moral standard of human life in all its varied activities is constant and immutable—industry, integrity, modesty, and benevolence.

The responsibility which you have assumed demands above all else that key-stone of virtue in man and woman—moral courage. It is the absence of moral courage that spells degradation and ruin for individual and social life. As students you have acquired an aptitude to learn which will always lead you to seek and follow the guidance of all whose opinions are worthy of admiration and respect; but you have also attained a position in society which justifies and demands of you a sturdy independence of thought, deliberate formation of accurate and impartial judgment, courage to act upon your measured opinions, courage to alter those opinions if necessary, courage to respect the moral courage of others, and courage to bear the consequences of your devotion to conscience and duty. This is

* Sir Thomas More, *Utopia*.

the harder road. *Facilis descensus Averno*. It is fatally easy to bow the neck unquestioningly to the yoke of public or communal opinion, to court the breath of popular favour by a blind acquiescence in the prejudices and superstitions of the multitude, to echo and imitate the thoughts of others as slaves of convention, not as pioneers of freedom. This would be a betrayal of the trust of individual privilege and prerogative, a stain on the honour of the man, a stain on the honour of the University.

As educated ladies and gentlemen it is your high calling to advance as the leaders of public opinion, as the appointed representatives of the sacred cause of progress, not only to preserve traditions that are good but also to create traditions that are better, always bearing in mind that nothing but indigenous enterprise and effort can change or modify the customs of the race.

Fine maxims and noble sentiments excite a warm glow of feeling which is too often mistaken for the action to which they prompt, but character can be built up only by acting upon such feelings and using every opportunity for doing so. There is no more pitiable or pathetic spectacle than that of men and women actuated by noble motives indulging in a weak sentimentalism unredeemed by one manly act. Such an equivocal attitude towards life undermines not only public confidence but also personal character. A strong initiative and a determined perseverance are what is needed in every community of men to bridge the gulf that too often separates platform and practice.

In the task of upholding and advancing social order and the well-being of your fellow-men, it is inevitable that political considerations should arise. As students you have probably realized the danger and futility of immature minds attempting to grapple with the intricate and elusive problems of statesmanship, but graduation you have incurred in some measure at least responsibility for leading or for misleading others. No discontent can claim to be divine

unless it has a worthy and a practicable object in view, to be attained by honourable and straightforward means, nor can any political criticism be worthy of the name if it be devoid of sound commonsense and appreciative sympathy. For intelligent co-operation is the key-note of British Rule.

But the social and political influence of the educated classes is not comparable either in force or in opportunity with their moral influence in the land. It is not brilliancy of intellect that can best illuminate personal character or enlighten the nation but the splendour of moral courage and the radiance of purity.

Graduates of the year, in you is represented the flower of India's youth. See to it that in your generation you fulfil your natural destiny by bearing the fruit of India's glory.

ALLAHABAD UNIVERSITY.

THE CONVOCATION ADDRESS.

THE CHANCELLOR'S ADDRESS.

The following is the full text of His Honour Sir James Meston's speech as Chancellor of the Allahabad University at the last Convocation on Saturday :—

Mr. Vice-Chancellor, Fellows and Graduates:—Our Convocation to-day is held on the 25th anniversary of the incorporation of the University of Allahabad. Our Act or Charter passed into law in September 1887; and on November 16th in the same year the University came into existence as a corporate body, with that distinguished administrator and scholar, Sir Alfred Lyall, as its first Chancellor. We meet then on an auspicious day, with a quarter of a century of history behind us. Brief indeed is that period beside the venerable antiquity of the great Universities of the West. But for the wide-reaching provinces in which this University has raised the torch of learning, it has been a period of progress in which our *Alma Mater* has played no small or ignoble part. Into the public

services, into the learned professions, into the world of trade and industry, she has now been sending her sons for a generation, and she may well be proud of their record. Much lies before her in the near future. New lines of thought and new social theories will force themselves across her traditions. New fields of teaching will have to be surveyed and entered upon. The intellectual basis for new claims of personal right and new ideals in politics and morality will have to be searched and tried. The burden of these changes will press upon us all, but it will rest in a special manner upon the University and on those whom it sends out to influence the young. All your wisdom will be required, all your patience, all your patriotism, if the result is to be good and not evil. The task is no light one; but your experience of the past 25 years may inspire you with the hope of success. You have worked with those who have the good of India at heart; you have rooted the University in the confidence of the people; you have assisted and co-operated with the Government of the country. If these continue to be your principles, a brilliant future lies before you.

During the last academic year the University has shown all the vigour of its comparative youth. It has affiliated a number of important colleges in additional subjects; it has settled new regulations for degrees in medicine and surgery; and it has examined altogether the very large number of 6,861 candidates. It has gained a new dignity in the handsome Senate Hall which was formally opened last August; and it has suffered a severe loss in the resignation by our Chief Justice of the Vice-Chancellorship which he had held for the previous three years. The lustre and distinction which Sir Henry Richards lent to that office, and the energy with which he devoted himself to it amid his many other pre-occupations, are well-known to those of you who worked under him, and have earned for him the gratitude of the University. I can wish his successor, Dr. Sundar

Lal, no kinder fortune than that his reign may be as successful and as popular as that of our distinguished Chief Justice.

GOVERNMENT'S EDUCATIONAL POLICY.

Members of the University, when your present learned Vice-Chancellor invited me to address Convocation to-day, he suggested that I should explain my views and the policy of the Local Government regarding education. To do that would eat up the short hours of the remaining day, and would unduly detain our young friends who are eager to return to their homes in all the new dignity of their degrees. But perhaps you will accept a brief outline of how I estimate our present and immediate needs. As we know well, education, like religion, comes to bring not peace but a sword. It brings not the peace of passive acceptance, but the sword of questionings and searchings and strivings. To some minds it brings more. They see in education the motive power for that unrest which makes men discontented with their social environment, with their employers, with their government. They regard education as responsible for the disrespect of servant to master, of the young to the old; responsible for many disquieting inroads on our ancient peace. With such doubts it is impossible not to feel some sympathy. But we may look beyond the present twilight of our educational system to a clearer day. The stage of transition and adaptation to new ideas may be long. It will pass however—such at least is my hope and belief—into a stage where education will not be divorced from contentment, or the pursuit of knowledge from reverence.

In any case, gentlemen, the practical position with us is free from all ambiguity. The gracious announcement of the King-Emperor at Delhi has shown us the way and set us our course. The Government of India is presided over by a Viceroy whose warm sympathy and unsparing labour are, as I can assure you from personal knowledge, devoted to the advance of education.

And under Lord Hardinge's Council, you have a skilled department specially created for that cause and now settling down to the great task before it under the brilliant leadership of one whom you all know—Sir Harcourt Butler. The Government of this country has thus put its hand to education, and we cannot turn back the hands of the clock. My views, and the policy of the Local Government, are therefore, exceedingly simple. We are bound to push on the education of the people in all its branches, by every means in our power. A comprehensive scheme of our operations is now being prepared. It will show, I hope, the order in urgency of our needs, their approximate cost, and the ratio in which the work may properly be shared between Government, local bodies and private enterprise. When the scheme is ready, we hope to publish it for discussion before it is submitted for final authorization, and to be favoured with the opinions on it of the University in particular. What the scheme will comprise, I cannot yet say in detail; but certain essential features in it are clear, and I will mention them in the briefest possible manner.

PRIMARY EDUCATION.

Let us begin with primary education. We hope to see it widely extended as rapidly as respectable teachers can be procured and trained. For that purpose we must establish more training centres and above all we must provide for a scale of pay which will enable our primary schoolmasters to live in decency and self-respect. There is no reform with stronger claims upon us in common humanity and in the interests of the rising generation. Then we cherish the belief that primary education could be made much more serviceable to the people if it took more account of the needs of the agricultural and artisan classes. A proper system of primary education should provide suitable instruction, not only for the children who will use the primary school as a stepping-stone to the secondary school

and thence ultimately to the University, but also for the children whom it is not desired to withdraw from or make discontented with their ancestral callings. The subject is beset with difficulty, and the precise method of approaching it—whether by a general simplification of courses in the primary schools, or by the establishment of separate courses and classes, or even by having separate schools for the children of agriculturists and artisans—has yet to be ascertained. It is clear, however, that our schools at present do not attract the children of these classes as we should wish, and it may be that this is due to the unsuitable character of the education we offer. A system which, while avoiding scholastic curricula, would aim at guiding the self-activity of the young mind, and at imparting such simple knowledge as will be useful to them in their daily work, and will help them to avoid the petty tyrannies of life which ignorance engenders, might conceivably do much to overcome the indifference with which the rural classes now regard education. Such, in the barest outline, are our ambition for primary education. There are many details yet to be considered; and during the present cold weather we hope to have the advice of a conference of officials and non-officials interested in this branch of our work.

SECONDARY EDUCATION.

In regard to secondary education, there is little to be said except that we are anxious to give all reasonable inducements to private endeavour. It is difficult for Government to gauge the true demand for this class of instruction, and it would be impossible, with the resources at our disposal, to cover the whole field. There are gratifying signs of increasing activity in this direction among private groups and sections of the community. High schools for different castes or religious bodies are springing up, and seem to me to deserve all encouragement; for it is at this period of life that

the formation of character can best be served by the discipline of a common faith and communalities. There will be no backwardness on the part of Government to assist such efforts, on proof of sound education and good morals. But on one point we may justly insist, that these schools and all our high schools give something more than lip learning. Their scholars are at the age when habits are most easily moulded; and it must be one of their first duties to inculcate obedience, manners and cleanliness. To this end, proper boarding houses or hostels, in sanitary order and under the personal supervision of trusted masters, will gradually become a condition of our grants-in-aid.

TECHNICAL EDUCATION.

Technical and special education are subjects on which I need not occupy your time to-day. They, and the equally thorny but, to my mind, all important subject of female education, hardly lie within the purview of the University, though I am confident in the advice and, if necessary, the assistance of the University in dealing with them. For almost the exactly opposite reason I do not propose to touch on collegiate education; its characteristics follow so closely the requirements of the University that no discussion of them without previous consultation with you would be seemly. Here also, however, I may say how deeply I am impressed by the need of exhibiting in our colleges those qualities which no book-study can impart. Some of our colleges already do a great deal in this way others do little; all of them could do more. Good manners, courtesy, cleanliness in person and in surroundings, self-restraint and self-respect—those are infinitely greater gifts than a knowledge of Hegel or the binomial theorem: and is it not possible for all our colleges to put them in the fore-front of the battle? Members of the University, I leave the question in your thoughts. Government will do what it can, by making grants for the improvement of the pay of teachers,

by building hostels, and by pressing for adequate supervision. But the in-dwelling spirit from which these virtues flow must spring from the minds and influence of those who have the College under their daily care.

THE UNIVERSITY.

Lastly, we come to the University itself. For it I hope that our scheme will provide liberal assistance. By the establishment of a Law College the first steps have been taken towards the transformation of the University from a purely examining body into a genuine teaching University. The orders of the Government of India on your proposals for the utilisation of their recent grants of Rs. 45,000 a year and a lump sum of Rs. 300,000 in the establishment of three additional chairs are still awaited. I trust that in principle at least your suggestions will be approved. The most urgent need of the University is more teaching and more post-graduate and research work. Apart from this, money is required for the construction of the library block, Sir Swinton Jacob's plans for which are ready, for a Law hostel, for residences for the Principal of the Law College and the professorial staff to be attached to the contemplated chairs, for the purchase of books and for general administrative purposes. For some of this we look partly to the endowments of pious donors; but Government will also try to help, as it is identified with the progress and dignity of the University which, whatever the future may bring, will always retain the honour of being the senior in these provinces. And now, gentlemen, you have my confession of faith about education. I have omitted much, and especially all controversial matter. There is nothing new in the statement nothing original. Most of the reforms on which I have touched were worked out under my predecessor Sir John Hewett, and all that is now being done is to bring them together. For saying so much as I have done, my excuses must be the

Vice-Chancellor's injunction and a desire to avert any suspicion of heterodoxy in my educational creed.

ADVICE TO STUDENTS.

Members of the University, I must not tax your patience much longer. But will you, at my first meeting with you, permit me the expression of a few thoughts which I would commend to you and to the young graduates who have to-day received their degrees. I do not profess to speak to you as a man of learning. I do not wish to invoke the gubernatorial authority which has been for only two months on my shoulders. But I have had a great deal to do with University men and I have watched the career of many of them with affectionate interest. Above all, I have a fervent faith in the rise and progress of India and a deep conviction of the part which our Universities can play in the upward movement. It is on your citizenship, therefore that I should like to offer a few words of advice to graduates and under-graduates alike. I am not going to weary you with platitudes about education being a means and not an end, or about the imperfections of our literary training or how your education does not conclude, but only begins, when you take your degree. All that is common knowledge, and until we can make our educational system a more powerful agent for touching the soul and tempering the character these truisms are but irksome verbiage. What I ask you to consider to-day is the special obligation of life and example that rests on you as University-men when you go out to work among your fellow citizens. You may forget much of what you learned at College. Your classics may get rusty, your science out of date, your history shaky, your integral calculus a nebulous memory, but the spirit of your college life should remain the hard work, the *esprit de corps* and the balanced judgment; and it is this spirit with which you can illuminate the ordinary business of life. Moreover, a degree makes you

a marked man; your neighbours watch you, copy you, are influenced by you in a manner which you may not suspect. Each of you in his circle is the touchstone by which the value of education is tested; and on your conduct the credit of the University largely depends. What is it then that you can carry away after your college days are over, and use for the bettering of your fellows by precept and by example? There are many such things; but three of them stand clearly out. You have learned the need of a calm and balanced judgment, the value of co-ordinated effort and the supreme power of truth. I have a very few words to say on each of these.

Calmness of judgment is what your books have surely united to teach you; the dispassionate marshalling and weighing of facts in order to determine their effect. The need for similar judgment must appeal to you every day in the practice of your profession or calling, it turns the balance between success and failure at every step in your own affairs. Will you not use it also, gentlemen, for the benefit of your neighbours? Their judgment has not been trained as yours has been. They will turn to you for guidance. When foolish and baseless rumours are unsettling the people, whether about public affairs or otherwise, you can do much to dispel them. When gusts of emotion stir the crowd, you can apply the sedatives of common-sense. Bogus nostrums, in politics, in medicine, or in any other sphere of life, do not take you in, and surely you can help to relieve your neighbours of their tyranny. You have been taught to judge between good and evil. Exercise that gift, and lend it to your neighbours. You will thus help to make them happier and better citizens.

The second lesson which I ask you to share with others is the value of combination. It is not a lesson that needs a University to teach it but your history and your mathematics must have given you a scientific basis for it and must have taught you to be peculiarly watchful for the beginnings of friction and disintegration.

XIX

You know, with a conviction that passion should never shake, how certainly dissension undermines the family and the State. It is to you educated men that the well-wishers of India look, to check dissension and to impress on your neighbours the disasters which attend it. You have endless opportunities. There are the family quarrels which are constantly with us; they have often the most trivial origin; but their net result is that enormous sums are poured into litigation which the country sadly needs for fertilizing its soil and fostering its industries. Then again, there are the petty jealousies which clog public life and interfere with municipal advancement. And there are many other instances of wholly needless friction. To my mind, none of those at the moment is sadder or more unnecessary than the acute distrust which in many quarters is threatening to break up the old friendship between Hindus and Mahomedans. If it were a mere passing wave of temper, I should say nothing about it. But, in parts at least of these provinces, racial feeling is now permeating and embittering the life of the community to an extent which I have never observed before. There is no justification for it. Hindus and Mahomedans have lived in amity in the past without any sacrifice of their respective religions. Nothing has happened to make it impossible for them, with a little mutual forbearance, to do so still. Gentlemen, there is much that you can do to prevent these divisions. When I enquire into the causes of schisms, I am sometimes told that educated or professional men have been involved in fomenting the trouble. I hope and trust that my information is wrong; I set too high a value on education to believe that it can readily be degraded to such a use. I am confident that you at least will place patriotism above self-interest, and I appeal to you to exercise all your influence in your various spheres of life to check these growing evils. India cannot be divided and prosper.

The last point on which I wish to touch is the supreme value of truth. If, as we believe, righteousness exalts a nation, it is your duty and mine if we wish India well to wage incessant war on half-truths and falsehoods. Your education has taught you the great and ennobling power of truth. Carry that knowledge into the circle you live and work. Set your face against intrigue and back-biting. Practise plain speaking and encourage it in others. When the people are being misled by a false guide help to unmask him. When lies are circulated about the actions of Government, or the motives of your public men, or the character of your neighbours, disown the falsehoods and attack them. Education has stood for the removal of corruption from public life, from the public services. Let it make an equal stand against intrigue, misrepresentation, the thoughtless untruth, the malicious lie.

Members of the University, I have come perilously near to preaching you a sermon this afternoon. I ask for your indulgence if I have strayed beyond the ordinary academic limits of a Convocation address. But you, who represent the forces and products of education in these provinces, are if I can gain your confidence and co-operation, partners with Government in the great work of progress and enlightenment. At this my first meeting with you, it is my anxious desire to bespeak your help and to suggest the lines on which you can work for our common object. Education has its responsibilities as well as its privileges. Accept these responsibilities and join hands with those who have the welfare of India deep in their hearts. So shall we move forward slowly to a great Imperial ideal of citizenship, like unto the "sacred fane," which was to be no home of party strife or sectarian schism.

But loftier simpler, always open doored.

To every breath from Heaven; and Truth and peace.

And love and justice came and dwell therein.

Such, according to the poet, was the dream of the Emperor Akbar. It may be only a dream. The millennium is not yet. Universal peace and happiness is a far-off ideal. But we can all of us in our degree influence those around us and the influence of an educated man has a value particularly its own. If you can use that influence in the direction of greater charity, concord and truth, then the University will be justified of her children and the Kingdom of God will be nearer.

EDUCATION IN THE MAGAZINES.

Mr. Edmund Gosse on Poetry.

Mr. Edmund Gosse presided at a Browning Centenary dinner given at the Hotel Cecil by the members of the Poetry Society. Among the guests were Earl Brassey and Lady Helen Brassey, Lord and Lady Southwark, Lady St. Davids, Sir Squire Bancroft, Mrs. W. H. Kendal, Mrs. Edmund Gosse, Mr. Israel Zangwill and Dr. Blake Odgers.

The Chairman, in proposing 'The Immortal Memory of Robert Browning,' said that he was not aware that this dinner was to be associated with Browning's name. It was the twenty-third anniversary of Browning's death. Now, had it been the twenty-fifth anniversary, he felt that his eloquence might have been inflamed, but on the twenty-third anniversary of a melancholy event he did not feel that there was very much to be said; and therefore he proposed to take for granted the fact that this was a Browning celebration, and turned to another subject, on which he had intended to speak. Speaking then on the subject of poetry generally, he said that there could be no comprehension of the real character of poetry if we considered it as an art which abruptly ceased to develop when we ourselves were approaching middle life; and yet that was the attitude of the majority of those who discussed it. They seemed content to believe that what came into existence in the far-away dawn of human intelligence, and had been the living ornament of mankind ever since, suddenly became a museum of specimens a few years ago, when they ceased to be young and frisky. But the elements of joy were eternal, and it was not in poetry, but in ourselves, that the sources of vitality dried up. Disenchantment, the sin which did most easily beset us in advancing years was the token not of healthy taste, but of the deadly and anti-poetical scepticism which was the antithesis of good taste. It was important, therefore, that we should continue to look out for new expressions of poetic genius. But we must be sure that we were not led away in our desire to be discovering novelties, or duped by a mere self-advertising violence, or by revolutionary artifices which had nothing truly poetical about them. We needed to divest our minds of prejudice against everything which was new and strange, and at the same time to be on our guard against preposterous disregard of those principles of harmony and beauty which were absolutely essential to the existence of poetry.

Mr. C. P. Ramaswami Iyer on Education.

Mr. C. P. Ramaswami Iyer made an interesting speech in seconding the resolution on Education at the Bankipore Congress from which we extract the following:—

Not the least notable of the Royal boons announced during the visit of the King-Emperor was the inauguration of a forward movement in the educational policy of the country by a liberal initial grant in the cause of education and by his gracious promise that that grant would be augmented as time goes on. His Majesty has thereby evinced his deep and abiding love for the masses of the country and his solicitude for their true welfare. It is unnecessary to dilate on the absolute necessity of a system of free and compulsory education throughout the country. One need only recall to one's mind the famous dispatch of Lord Curzon, who himself has declared that the extension of elementary education is the only true solvent of India's troubles. The main reason for the defeat of the Hon. Mr. Ghokhale's Bill is the view taken in high official quarters as to the alleged disproportionate expenditure that would be entailed by Mr. Gokhale's proposals. The view of the late Sir Herbert Risley has found favour that free education is tantamount to reduction of taxation. Surely it is impossible to take a more short-sighted view of the situation. Free education ought to be regarded not as involving reduction of taxation, but as the fulfilment of one of the prime obligation of the State.

Gentlemen, you will realise that throughout the length and breadth of India in the year 1910-11 there were only 63½ lakhs of school-going youth of both sexes and the proportion for that year of school-going population to the whole population was only 1:9. Even the most backward countries of the world, Russia and Philippines, easily beat us in this respect. During the last decade whilst the military expenditure, expenditure on railways and on the civil establishments have increased by crores, that on education has only advanced by a few lakhs. And even this is grudging by those in power, let them, we ask, apply to India standard commensurate with those in other civilised countries of the world. In England 25% of the general revenues is spent on education, in Germany even more. Is it to be tolerated that for every four towns and villages on an average there should be only one school for boys and for every 40 towns and villages one school for girls? These figures speak for themselves, and unless we are content to let our masses grow up in ignorance it behoves us to

make all possible efforts to strive for the introduction of free and compulsory education throughout the country, bearing cheerfully if necessary the burden of any educational cess that may be levied for the purpose, a burden which can certainly the more lightly be borne than many another that I can name. If by private effort or by convincing Government we can achieve this reform, all other reforms are bound to follow inevitably and in due course.

This resolution embraces another aspect of the educational problem, viz., the establishment of teaching and residential Universities in India. Whilst the spread of elementary education is necessary to lift the masses from the mire of ignorance, this reform is essential if we are to have an organised band of efficiently educated men to form the vanguard of national progress. Complaints have been frequently heard that higher education in India has been barren of results and have so far culminated only in the glorified clerk. The explanation for this is sought for in what is called the soullessness of Indian education. The answer is to be sought not in the lack of moral or religious education but in the entire absence of organised education. To make higher education profitable it ought to be imparted somewhat in the manner of our ancients adapting it, of course, to modern requirements. Each student has, as far as possible, to be taken in hand and his individual requirements studied. Research is not possible in crowded class rooms cramming for competitive contests.

If assimilation and not imitation is to be the aim of higher education, that aim cannot be achieved by a number of isolated examining Universities. It is gratifying to find that the Government have recognised the extent and magnitude of this evil and have made attempts both at Calcutta and Dacca to form a nucleus of teaching and residential Universities. But both State and private enterprise ought to co-operate and cover the country with a net-work of residential Universities which will impart true culture and serve to create a body of students who will organise research and prove the inestimable benefits of the *esprit de corps* and moral tone which would be inseparable from such a system. Deeply thankful as we are to the inaugurators of the Hindu and Mahomedan Universities we want not two but 20 such Universities serving to incite all the brighter intellects into a federation of disciplined scholars whose aim will be to carry forward the traditions of ancient and modern culture and science for the lasting glory of our country.

Experiment in Education : The Montessori System.

A Joint Conference of the Child Study Society of London and the Montessori Society of the United Kingdom was held recently at the Royal Sanitary Institute, Sir John A. Cockburn presiding.

It was explained that the master-principle of the Montessori system of education, which was evolved by Dr. Montessori, the first Italian lady physician, was that of self-development in an atmosphere of freedom as full as was compatible with the maintenance of social life in school. It resulted in the development of a new type of discipline, which, based on self-control, was voluntarily imposed by the children upon themselves. It was claimed that the success of the method lay in the fact that at every moment the scholars were happily employed educating themselves in various ways without realizing that they were doing anything but play. The 'toys' with which they played belonged to an elaborate and skilfully thought out apparatus, by means of which they trained their bodily senses, acquired control of their limbs, and learned writing, reading, and arithmetic. So smoothly did the system work that in three months from the date of admission children of four and five were able, without the least trace of mental strain, to write words and sentences in a good round hand—an accomplishment which came to them as naturally and with as little consciousness of effort on their part as the accomplishment of speaking came to children between the ages of one and two.

Miss E. E. Lawrence said that the Montessori system catered for the 'formal' and ignored the literary and artistic side of life. There was no painting, drawing, and dancing, and opportunities for mental expansion were limited.

Dr. G. E. Shuttleworth said that the system was particularly valuable for those children who were not in full possession of their faculties. What the ordinary child did quite spontaneously the feeble-minded had to be taught.

Mr. Herbert Barrows said that Sir John Cockburn had declared that the Montessori system had abolished original sin, but he declined to believe that a child had any original sin. If the Montessori system regarded the child as an incipient human being and considered the physical, mental, and moral nature of the child, and carried that idea into adolescence and manhood, a nobler nation would result.

The Rev. Cecil Grant said that after the coming of the Montessori system education could never be the same again. We now know that education must not begin at twelve years, but at two years.

Lord Moulton on Education.

Lord Alverstone, the Lord Chief Justice, presided at the celebration of the eighty-ninth anniversary of Founder's Day of the Birkbeck College. Mr. G. Armitage Smith, the Principal, said that during the year 728 male and 308 female students had attended, 194 being day and 842 evening students. During the session 48 students obtained degrees in arts or science, and of these 16 took honours; 53 students passed the intermediate examinations.

Lord Moulton, who presented the awards, said that the students represented a cause for which he had fought because of his own experience. The Institute was formed to give those who had small wealth or opportunity the education they needed to help them to rise. The London University was formed by people with the same idea, that the hardworkers of the world could make educationary use of the few stray hours they could spare from toil. The honours list showed how much recognition for themselves the students had forced, and a further measure of the Institute's work was found in the increased capacity of all who desired education and had to compete in the modern strenuous life. There was going to be, however, an excess of enthusiasm for education, which he said, it was not education unless it was complete. There was a tendency to slight the partial education which people could secure for themselves. That was a great danger. They should strengthen the spontaneous growths of the English character, which could alone use education as a source of success. A University could give guidance and recognition, but if any attempt was made to exclude those who did not come up to some ideal standard its usefulness would be crippled. They ought to protest against any attempt to shut out Institutes such as that from University benefits. His gorge rose at the phrase 'University atmosphere', which only meant the atmosphere every man made about and for himself. He hoped they would always fight for their poorer brethren.

Sir James Meston's Advice to Students.

In the course of a lengthy address at the Central Hindu College, Benares on the 17th instant, His Honour Sir James Meston gave valuable advice to students from which we extract the following:—

'The second thought which your reception stirs in me is gratification at your unqualified confession of patriotism and loyalty. Your pride in the motherland and in the empire to which India belongs touches a chord in the hearts of all of us who are fellow-citizens in that mighty empire. Your devotion to the Throne and your reverence for the King-Emperor are the worthy and necessary complements of your piety. You worship the Almighty Spirit who rules the world. You must also venerate the King, His regent here on earth.

'My third thought and the last with which I will trouble you is the hope that you, and under your example the students of this College, will supplement your allegiance to the King-Emperor by fidelity to those who represent him, however unworthily, in this country. Gentlemen, let me not be misunderstood. The British Government in India suffers, as its predecessors did, from the disadvantage of being a foreign government, and it cannot expect the same spontaneous affection which goes out to a government, whether theocratic or democratic, drawn from the people's own kith and kin. But the British Government is not a party government. It cannot be outvoted and turned out of power to make place for another Government, equally zealous to serve India and equally competent to maintain her in peace and prosperity. To talk and write of it as if it were a party government, to abuse it as party governments are abused in other countries, to attempt to weaken its power and influence are acts based on a false analogy and destined, it is my firm conviction, to deter the progress of this country. Gentlemen, I am not presuming to lecture any one here on loyalty, nothing could be further from my wish, especially after the warm expressions of loyal friendship which characterise your address. But what I ask for is the help of your influence on the rising generation in promoting a sentiment of attachment to the constituted Government of the country. We believe that we are here under Providence to work for India's advancement and enlightenment, and we earnestly believe that those who wish India to progress and prosper must stand with us and not against us. I do not ask for loud protestations of

allegiance or for unquestioning acceptance of everything we do. The officers of Government make mistakes like everybody else, individual members of the public services are at times unworthy of the high trust that is reposed in them, and we are all of us the better for frank speech and temperate criticism. But I should like to see the rising generation taught that the trend of our rule is towards good and not evil, that the noble spirit of the King-Emperor's message infuses those who do his work in this country, that to side with the Government is not necessarily the sign of cowardice or sycophancy or time-serving, and that the British Government is and means to be the friend of India and her best friend.

Lord Haldane on Universities.

On the occasion of the installation of Lord Haldane as Chancellor of the Bristol University, he delivered an address on "University in general and the modern civic University in particular" which was remarkable both for its liberality of thought and its courageous independence of expression. The fruitful scientific spirit, that is to say the spirit which carries science out into the world and applies it to the needs of mankind, is only capable of the highest cultivation in the atmosphere of a fully developed University; and it is to the newer Universities that Lord Haldane looks for the abolition of the barriers that now divide class from class, and for the provision of that equality of opportunity which will enable every scholar to pass on from the secondary school to the University. But Lord Haldane undoubtedly did well in advising these newer and more modern institutions to keep their standard high, and in warning the democracy that public work of the highest quality and kind demanded high intellectual training and acquirements. In its earlier stages (he said) democracy was apt to be unduly jealous, and to show a disposition towards a general levelling down, but he thought that it would be wiser to add a new plank to its platform in an insistence upon equal educational advantage being brought within the reach of the youth of all ranks and classes, so that intellectual ability, wherever found, might assert itself and justify its claims.

Modern Languages and the Universities. The Need of Reform.

The annual meeting of the Modern Language Association was begun on the 8th and resumed on the 9th inst. at the University of London. The main subject of discussion was the modern language courses at the Universities.

Miss Spurgeon read a paper written by Miss Tuke, Principal of Bedford College, London, in which she declared that the study of modern language, even with medieval thrown in, had not proved equal to that of the classics in producing a scholarly habit of mind. But she was not convinced that this defect was inherent in modern language as a subject of study. It was probably due to the fact that the training had been far from careful and thorough. Possibly there was a conflict between academic and utilitarian aims which did not exist in the teaching of classics and history. What she desired from the study of language, ancient and modern, was that it should widen the outlook, and train the intelligence and the reasoning powers. A language taught with those ends in view would avail, whether it was needed for business purposes or not. The study of a language trained the mind by demanding accuracy and by the use of reasoning powers in the understanding of the grammar and history of the language. The outlook was widened by the acquaintance afforded with the life and thought of a race other than our own, and by the study of its literature, history, and social customs. She would prefer that German should take the place of French as the modern language most generally taught in our schools, because German afforded a better training for the child's mind and its literature was more easily appreciated by young persons. Latin should come second. French should begin late in the school course, and should be taught only to those children who had a foundation of Latin. Failing this change they should demand that a student who entered a University with the intention of making French his study must have a good basis of Latin. It was essential for a student of literature to know something of the historical events which formed the background of that literature; and he could not appreciate any one period of literature unless he had some idea of the general chain of

literary development. In the honours examination in literature the student should be required to write his answers in the language he was studying. In composition a sufficiently high standard was not set in regard to accuracy and nicety of expression. That criticism held good not only in regard to foreign languages, but also to English. It ought not to be possible to obtain high honours in English at a university, and yet write ungrammatically. The standard set was still less adequate in regard to the spoken language. The oral test should be concerned only with excellence of expression. There was a tendency also to insist too much upon the philology to the detriment of the other sides of the subject. This danger could be avoided by allowing greater liberty in the examination which would permit the candidates to specialize on the literary or on the philological side.

Professor Milner Barry, University College, Bangor, outlined the present modern language courses in the University of Wales and indicated reforms which seemed to him to be desirable. Every effort, he said, had been made to prevent the decay of German in the Welsh schools, but failure had to be confessed. He thought the remedy was to accept German as an alternative to Latin in the Welsh matriculation and to remodel the university course so that under carefully guarded conditions they could offer an honours scheme which would at least be as sound educationally as the present schemes, containing as they did compulsory intermediate Latin or Greek. As far as modern languages were concerned, he should like a four years' course, with facilities for spending the third year at a foreign university. The course should include a knowledge of the history of the country concerned.

The Moral Evolution of France.

Professor Camamian, University of Paris, read in French a paper on the moral evolution of France as exemplified in recent developments in the political life of the country and the new spirit which had animated its citizens. France, he said, had scandalized her neighbours many times, and even the clouds that had passed over the English political sky of late had not reconciled Englishmen to the stormy propensities of French politicians. Yet there had been changes which might have escaped attention in

England. The political atmosphere of the French nation was altering and improving. It was becoming more like the political life of England; and England was still the country that was most interested in the difficult art of self-government. Europe was apt to charge the French citizen with instability in his political ways, and to attribute that instability to lightness of heart and mind; to impatience of the law; to lack of perseverance and of respect for traditions and customs. Frenchmen were growing conscious of the truth of this criticism to some extent.

The fact that France had subjected herself to self-examination in the light of European opinion and had endeavoured to correct her failings was evidence of advanced psychological evolution and of a new initiative in the progress of human life. The great trial of 40 years ago had produced a serious feeling in their minds and hearts. Though France had made up for her loss to a large extent and might now look to the future with confidence, Frenchmen had studied the moral meaning of sacrifice and knew themselves better. France was trying by the practice of sports and open-air exercises to acquire the habits of self-command, discipline, concentration, and combined effort. The French were trying how to handle the Parliamentary machine. They were trying to put up something like a guillotine, but they proposed to use it in a manner different from the old one. The three candidates for the Presidency were all scholars and members of the Institute, as well as politicians. The average duration of their Ministries was increasing, though it was not yet what it ought to be. The moral unity of France was progressing, and the recent elections passed in a calmer atmosphere than formerly. They were trying to pay more respect to the law and to be less peacefully submissive to the agents of the law. Although France would remain a southern as well as a northern nation, and would preserve the variety and richness which she owed to her double nature, still the moral centre of France was rather shifting to the north. That was evident in the calmness of France at a recent trying moment. That calmness was quite natural; they were not conscious of it. The liberty of England would perhaps always be a little more substantial and practical than that of France. But the liberty of France would probably

remain more intellectual and more ideal. They would always try to retain in their maturity that youthful joyousness which pleased both them and Englishmen.

The Geographical Association. The Objects of Education.

There was a large attendance at the annual meeting of this Association at London University. The annual report stated that the number of members was now 1,000, an increase of 38 during the year. It also referred to a committee which had been appointed by the Association to discuss with the representatives of the Board of Education the draft of a new edition of the suggestions for teaching geography in elementary schools.

Mr. Mackinder, M.P., opened a discussion on the teaching of geography and history as a combined subject in schools. He said that they had three things to do in education—to teach the three "R's," to teach sooner or later some art which would enable a livelihood to be earned, and to make citizens. If they were to make good citizens they must impart—he admitted on a low plane—that sense of proportion and perspective, that outlook which came from the study of the humane letters in a university. It was possible for them to do much with children between the ages of ten and 14, provided they knew a great deal more than they taught and selected the great facts, both of history and geography, correlating them and teaching them with such appeal to the visualizing power that they lived in the mind and presented the grand development of human society in outline, but outline defined and indelible. The time was when the really important thing for the man in the village was the village pump; now it was the place where his wheat was grown. He urged that the Government and the universities in their different ways should require the learning both of history and geography by those who were going to be teachers in the schools—he was not speaking of the higher secondary schools—and then give them freedom, not requiring them to teach the subjects separately, but saying to them, "You have your equipment, throw pedantry on one side; what you have to do is not to teach history and geography, but to give an outlook on the interesting

world into which the great majority of your students are going."

Miss Spalding thought that while elementary education ended at 14, its limitations must be accepted. Her experience of children was that in geography the things which interested were those of their immediate environment, and that it was only with a great mental effort that they took in vast geographical spaces; that in history, they were attracted primarily by individuals, and were little able to conceive of communities.

Glaciated England.

Professor E. J. Garwood, who was elected President of the Association for the ensuing year, gave an address on "Arctic Glaciers and Glaciated Features of Britain." After dealing with the deposit that characterized the glacial period in Britain he said that there were only two theories of their formation which needed to be discussed in the present day. The earlier geologists were in favour of sea ice as being at all events a very potent agent, while the younger geologists supported on the whole the theory of land ice as the chief agent. The edge of the British Isles must have been a sort of debatable ground between the two, for the chief interest of our islands was the fact that in addition to the ice which accumulated on certain mountain centres there were invading foreign masses. His conclusion from recent study in glacial regions was that England was glaciated by land ice, by a series of local glaciers, complicated by two great ice seas, one on the east and the other on the west coast; and that most of the phenomena previously difficult to understand could be explained by studying ice in the Arctic regions.

Science and Literature.

Sir A. Geikie on the position in Public Schools.

The general meeting of the Association of Public School Science Masters was opened on Wednesday the 8th inst. at the London Day Training College.

Sir Archibald Geikie said that 60 years ago it was quite possible for a man to have carried off the most valuable prizes at a public school, and to have taken a good degree at the end of his university

career, and yet to be ignorant of even the rudiments of any branch of natural science, and consequently without the knowledge and training that would enable him intelligently to appreciate the nature and interconnexion of the discoveries in science which were working such changes in the modern world and throwing such a flood of new light into our conceptions of the universe. He remembered meeting on one of his geological rambles in the West Highlands, in his early youth, a man who had taken a degree in arts at Cambridge, and distinguished himself more especially in classics. In the course of their conversation he alluded to the Gulf Stream, in an endeavour to explain some of the main causes that were believed to determine the climate of these islands, when his companion broke in with the exclamation, "Gulf Stream, what in the world is that?" While strongly in favour of assigning an adequate place to the teaching of science in public schools, he had always not less strongly felt that the literary side, from its manifold human interest, ought to remain predominant in any wise system of education. No amount of training in science could compensate for an inadequate training in literature. It was to its literary education that Britain owed the breed of public men who through the centuries had built up her greatness, and nothing ought to be done to injure the noble work which the literary side of education still carried on. But in the course of time men had come to realize the interest and importance of science in the modern world, and to comprehend that there were faculties of the human mind which it was highly important to develop, but which were comparatively little affected by a literary training. Those faculties were best reached by a study of science. Thus the combination of the two sides, literary and scientific, provided a scheme of education which, in the present state of our knowledge, was the most perfect that could be devised.

Professor H. B. Baker, of the Imperial College of Science, was elected President for 1914.

Practical Examinations in Science.

Mr. Douglas Berridge (Malvern) spoke on "The Value of Practical Examinations, as Tests of Scientific Knowledge." He said that the exami-

nations might be divided into those at which an external examiner was present and those more elementary ones at which the invigilation was undertaken by some other person than the examiner. The great difficulty in the case of the former examination was the lack of sufficient apparatus for the large number of candidates. London University had overcome it in a most unsatisfactory manner. Six questions or so were printed and one was allotted to each candidate in turn. The candidate had no choice in the matter; he must do the question given to him or lose all marks. The same system had been adopted by the Civil Service Commissioners in the two examinations that had been held by them under the revised regulations for entrance to Woolwich. When it was remembered that 400 marks were given for practical work in physics and an additional 200 for practical work in chemistry, the unfairness of allowing chance to enter into the competition would be understood. One of his Army candidates last July was unusually weak in science, and almost the only practical work he could do in physics was to determine the apparent expansion of a liquid. It so happened that the question given to the candidate in the examination was to do this, and possibly three-quarters of his marks were for the result he obtained. The candidate did not pass, and he took the examination again last November when, as luck would have it, he was again given the same problem. As an Army tutor he (Mr. Berridge) was pleased; as an educationist he was saddened. In the case of examinations at which the actual examiner was not present the problem was naturally much greater. For one thing it was almost impossible to make an adequate allowance for accidents which were not seen by the examiner. In his own experience a boy who was weak in all kinds of manipulation was being examined in practical chemistry when, near the end of his experiment, he broke his glass. As in duty bound he reported the occurrence to the Board on sending in the papers, and the boy was given much higher marks than many who were greatly his superiors but who had the misfortune not to meet with an accident. He could, of course, also give instances of pupils of his having suffered un-

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justly through the defects of the system. Another objection was that for some psychological reason which he did not understand an examiner seemed to take less care in the preparation of a paper at the working of which he would not be present than in the preparation of one that he would see worked out by the candidates. The alternate practice of London University, in its Matriculation Examination, of allowing candidates to take chemistry as a subject without exacting any proof that it had been studied in an experimental manner was detrimental to the students. His proposal was that all examinations in practical science of a standard not higher than that of "Matriculation" should be abolished, and in their place a certificate from some responsible person, stating that a given number of hours had been spent in practical work, should be exacted from all candidates before they were allowed to sit for a paper in science. The question of "home students" was a difficult one. Still, he considered that no form of science was a suitable subject for those working without a teacher, and such students would gain a far better introduction to science by taking mechanics at the Matriculation Examination than by trying to learn chemistry by themselves.

In the discussion which followed, general agreement with Mr. Berridge as to the unsatisfactory character of the practical examinations in science was expressed, but there was a difference of opinion in regard to the changes suggested by him, and no recommendation was made.

Newton in the Schools.

Mr. W. D. Eggar (Eton) read a paper on the "Value of the Historical Sequence in Teaching Physics." He thought that if a teacher made a subject dull by treating a subject historically he might with advantage reverse the order. If history did not serve the purpose of supplying human interest it might well be neglected. Electricity touched human life at so many points nowadays that there might well be different ways of approaching the study of it, all of them interesting. In mechanics, however, there was less room for difference of opinion. The historical sequence must mean the approach of the subject practically. To

trace the development of ideas which culminated in Newton's discovery was to open a new vista. Putting it on patriotic grounds, Englishmen might be expected to know more about Newton than the stock anecdote. The educated man usually knew something about Shakespeare's plays. The poet's deer stealing and his will leaving, his second best bed to his wife were of minor importance. Newton was the one man comparable with Shakespeare in English history. He was not a mythical figure. Nobody had suggested that Clarendon or Samuel Pepys or Christopher Wren wrote the *Principia*. Yet to most boys Newton was the man on whose head the apple fell.

Mr. G. F. Daniell submitted that in the class instruction the teaching of "density" should be put into the background, and that of "roomage" be given priority in order and importance. The word "roomage" was used in the Navy. The usual English scientific term was "specific volume." He thought the advantage of the single word, with its familiar root, was obvious; and as "roomage" afforded direct appeal to the eye it was more easily grasped by boys than "density."

Teachers and their Salaries.

The Conference of the Incorporated Association of Headmasters was continued on Wednesday, the 8th inst. At the outset the meeting passed a vote of condolence with the relatives of the late Canon Bell, who was President of the Association in 1904. An interesting debate took place on the proposed new scheme of examination for responsions at Oxford, but the Conference, while approving the scheme in general, expressed its regret that Greek still remains a compulsory subject. The conditions of service of assistant teachers were discussed, and a resolution was adopted urging the establishment of adequate salary scales in secondary schools, due regard being paid to the cost of living in the different districts.

Dr. McClure opened a debate on the question whether or not secondary schoolmasters should become Government servants, but no resolution on the subject was submitted.

The Rev. C. J. Smith (Hammersmith) moved, that it is a matter of urgent necessity to establish adequate salary scales in secondary schools, due regard being paid to the cost of living in different districts. He said that it was a great mischief that very largely the teaching profession was compelled to be a celibate one. It was only when an assistant master became also a hotel-keeper and had many useful methods of adding to his income that he could take to himself a wife. He himself began work at a salary of £40 a year.

Mr. A. A. Somerville (Eton College) said that the assistant masters recognized that the headmaster could not do the impossible. They knew that he had to deal with a needy governing body or with a local authority without understanding which was much more ready to build ornamental edifices than to pay the assistant masters adequate salaries. But headmasters, even if they could not make salaries adequate, could give their staff such spare time as was necessary and allow them to use that spare time in other pursuits and in mixing with their fellowmen. The secondary assistant master, taking the whole State of Prussia, received an initial salary of £135 and a final salary of £360, with a rent allowance varying from £65 to £28 in the smaller towns. Every German State provided pensions varying from 75 to 100 per cent. of the last salary received, and only half the States and those the smaller ones, required contributions from the teachers. He also urged that each school should provide free places for the sons of the assistant masters. The lowest salary paid should be £150 a year, rising by automatic yearly increases of £10 to £300, and then by yearly increases of £15 to £450.

The resolution was carried unanimously.

THE UNIVERSITIES.

CALCUTTA UNIVERSITY.

Election of Fellows.

Professor Chandra Ghose, M.A., and Kaviraj Jamini Bhusan Sen, M.A., M.B., have been elected Fellows of the University.

Originally there were four candidates for the two Fellowships of the Calcutta University, viz., Dr. Suresh Prasad Sarvadhikary, Professor Chandra Ghose, M.A., M.B., and Mr. Dwaraka Nath Mitra, M.A., B.L. Dr. Sarvadhikary, however, retired from the field as he was averse to canvassing without which there is hardly any chance of being returned, irrespective of the merits of a candidate. The contest was, therefore, confined among the other three candidates. Professor Ghose, however, could count on the support of many of his colleagues as he already made his mark both in the Senate and the Syndicate during his term of office. It was only meet that he secured the largest number of votes. Of the remaining two Kaviraj Jamini Bhusan Sen, M.A., M.B., came in second. And the "formal" announcement of their election has already been made at a Senate meeting.

Three New Honorary Degrees.

A special meeting of the Senate of the Calcutta University was held recently at the Senate House, College Square. Sir Ashutosh Mookerjee, Vice-Chancellor, presided and there was a fair attendance of Fellows.

The only item before the meeting was to confirm the recommendation of the Syndicate that honorary degrees of Doctor of Literature, Doctor of Science and Doctor of Law, be conferred on Professor Herman Oldenberg, Dr. Andrew Russell Forsyth, and Sir Tarak Nath Palit respectively.

The Vice-Chancellor moved that the recommendation of the Syndicate be confirmed and the motion was carried with acclamation.

University Representative in the Legislative Council.

At a meeting of the Calcutta University Senate, Doctor Devaprasad Sorbadhikary was elected to represent the University on the Bengal Legislative Council.

ALLAHABAD UNIVERSITY.

Election of Fellows.

As many as a dozen rules for the election of ordinary Fellows of the Allahabad University Senate by registered graduates are published in the United Provinces Gazette.

Every registered graduate whose name is on the register, shall be entitled to vote. Each voter shall be entitled to as many votes as there are vacancies, but he shall not record more than one vote for any one of the candidates. If more than one vote be recorded by a voter for the same candidate, such votes shall be reckoned as one vote. If a voter records more votes than the number of vacancies, his vote shall be cancelled. The decision of the Registrar and the two members of the Senate appointed to act with him shall be final as to the validity of any votes recorded. In case of difference of opinion between them, the decision shall be in accordance with the opinion of the majority.

THE PROPOSED MOSLEM UNIVERSITY.

At a recent meeting of the Foundation Committee of the Moslem University it was considered advisable to appoint a representative committee to act as plenipotentiaries of the community in carrying on negotiations with the Government. Mr. Muhammad Ali, Editor of the "Comrade," was requested to move and Major Hasan to second the resolution. In a speech of great persuasion Mr. Muhammad Ali related the whole history of previous discussions which had led to the step he was taking and justified the conclusions at which they had at last unanimously arrived.

Complete harmony is now once more restored in the community. The following are the names of the gentlemen who have been appointed to finally settle all matters relating to the Muslim University.—H. H. the Aga Khan, the Hon. the Raja of Mahmudabad, Mr. Muhammad Ishaq Khan, Secretary-elect of the Aligarh College, Nawab Vikar-ul-mulk, Sahebzada Aftab Ahmed Khan, Mr. Nabiullah, Mr. Wazir Hasan, Khwaja Ghulam-us-Saghlain, Mr. Shafi, Dr. Iqbal Malik Mobariz Khan, Mr. Rabim Baksh, Mr. Fazle Husain, Mr. Muhammad Ali Jinnah, Mr. Fazalbhoy Currimbhoy, Major Hasan Bilgrami, Mr. Justice Hasan Imam, Mr. Fakhruddin, Mr. Mazhrul Haq, Mr. Muhammad Ali, Editor, "Comrade," Sekh Yakub Hasan, Nayab Gulam Ahmed Kalami, H. M. Malak.

THE PROPOSED HINDU UNIVERSITY FUND.

Statement showing the amount of donations to the Hindu University received from 16th December 1912 to 31st December 1912.

[N.B.—Money still held by the Secretaries of District Committees or deposited in Banks other than the Bank of Bengal are not shown here.]

Brought over Rs. 17,02,070-4-8; Pt. Bishwanath Misra Jotsbi, Benares Rs. 10; Collections from Cawnpore, Rs. 18; Raja Rampal Singh, C.I.E., Rai Bareli, Rs. 10,000; Collection from Rai Bareli, Rs. 330; Rai Sabeel Lala Murlidhar, Amballa, Rs. 100; Babu Pran Hari Sen, Benares, Re. 1; Collections from Bahraich, Rs. 6,100; Babu Bhairu Dutt Goshain, Bahraich, As. 7; Babu Raj Bahadur Langora, Agra, Re. 1; Pt. Bharat Chand, Delhi, Rs. 10; Babu Sunder Lal Sabu, Malda, Rs. 65; Collections from Etawah, Rs. 176-10-3; Babu Deokinandan Bhargava, Jodhpur, Rs. 9-14-0; Collections from Sitapur, Rs. 100; total Rs. 17,19,032-3-11; Deduct collections from Calcutta as per letter No. 2339 of Babu Gokul Chand, Secretary, District Committee, Calcutta, Rs. 1,101; Total Rs. 17,17,931-3-11.

ABERDEEN UNIVERSITY.

A Bequest.

The Aberdeen University has received intimation of a bequest by the late Mr. Alfred Gilchrist for the foundation of bursaries in the Faculties of Art and Medicine, and of lectureship on the Progress of Medical Science and the Progress of Educational Science, the lectures to be delivered every five years by the Professor of Materia Medica and the Lecturer in Education.

LONDON UNIVERSITY.

Mr. Ratan Tata's Gift.

A scheme has been arranged for the administration of Mr. Ratan Tata's gift of Rs. 21,400 a year for 3 years to the London University to promote the study of methods for the prevention and relief of poverty. A bureau is to be formed for the provision of information, and lectures are to be delivered and published on the subject. Mr. R. H. Tawney who has been connected with the workers of educational association, has been appointed Director.

GLASGOW UNIVERSITY.

A Bequest.

The late Mr. Robert Marshall of Glasgow has bequeathed to the Glasgow University, by a special deed of trust, his lands and estate of Grangehill, Beith, or the proceeds thereof when sold, for the purpose of endowing a chair of modern languages in that University. The annual value of the estate is between nine to twelve thousand rупres. There are, at present lectureships in the University in French, German and Italian, and there has already been endowed funds for chairs in French and German.

OXFORD UNIVERSITY.

The number of new men who have joined the University of Oxford last October has gone down from 922 of last year to 873, but the decline is almost entirely accounted for by the fact that this is a year in which no new Rhodes scholars came from the United States. The presence of one of those 873 new men has brought Oxford, and specially the Magdalen, into all the illustrated English papers. A great effort seems to have been made to allow the Prince of Wales to live like an ordinary commoner. Though he has his own tutor and a suite of rooms in Magdalen, such as no undergraduate has, he attends lectures and plays games in the happy state of an ordinary mortal.

Reviews and Notices.

MORALS AND MORAL LESSONS, BY J. NELSON FRASER, M.A. (LONGMANS, GREEN AND CO.). 4s. 12.

This book is not a series of moral lessons as its title may indicate but a discourse on the question of moral instruction in schools and is intended for teachers. The author is evidently well acquainted with the characteristics of Indian students and has bestowed much thought and expresses very sound views on the subject of moral education in Indian schools. He recognises the limitations to the practice of morality in schools and points out that systematic moral instruction as such was never given in any of the English schools, although the pupils acquired certain habits as the result of the discipline maintained in them, such as the power of facing hardship and privation, subordination to authority, responsibility, etc. He very rightly says that the surroundings of the pupils have a greater influence on their morals than the school-room, and therefore only so far as society seconds and supports the schools will the schoolmasters' victories in this sphere be real.

The author then discusses what feelings can be cultivated in schools to a certain extent and shows considerable insight into the failings of Indian students in general. He also discusses the relation between religion and morality and which of the various sanctions of morality can be best appealed to in Indian schools. The book must be very interesting and useful to the schoolmasters who have at heart the real well-being of their students and who wish to form in them a sound character.

We are however, not pleased with the style of English used which is too stiff for the ordinary teacher in schools and is not free from ambiguities and even grammatical mistakes.

KEY TO THE EXERCISES IN ENGLISH COMPOSITION, BY W. MURISON, M.A. (CAMBRIDGE UNIVERSITY PRESS).

Murison's book on composition has long enjoyed a well-deserved popularity. The present 'Key' will enhance the value of the book by enabling those who have not the privilege of studying it with the help of a teacher, to understand the principles of composition. We have only to add that a 'Key' is liable to abuse in the hands of an idle student.

MODERN ENGLISH GRAMMAR, BY J. C. NESFIELD, (MACMILLAN AND CO.) 2s.

Mr. J. C. Nesfield, the well-known writer of school and college manuals on grammar, has brought out a new volume for the use of students. There has been some departure from the traditional manner of exposition, the principles of composition that underlie, coming for adequate recognition. There are a number of appendices on subjects of value, on Prosody, Figures of Speech, Synonyms, etc. We have no doubt the book will prove quite as valuable as his other productions.

A TEACHER OF ENGLISH GRAMMAR AND COMPOSITION, BY S. APPAIYYA, VOL. I. (LAWRENCE ASYLUM PRESS).

This is a book on the principles of grammar by an able and experienced teacher of the subject. The treatment is scholarly, elaborate and thorough. It is doubtful if the over-minute classification of terms adopted by the author will command the approval of the English Teachers of to-day, but we have no hesitation in saying that it is an accurate and reliable exposition of grammar.

JUNIOR MAGNETISM AND ELECTRICITY, BY R. H. JUDE AND SATTERLY, LONDON: (W. B. CLIVE, UNIVERSITY TUTORIAL PRESS, LTD.). 2s. 6d.

This is indeed a very good book, a most welcome addition to the volume of scientific matter at present within the reach and comprehension of students of Elementary Physics. It has about it many features of interest. The diagrammatic representations of apparatus and experiments are

very nice. Justice is done to the Theoretical as well as to the Practical side of the subject. The authors have taken good care to build up the subject on a logical basis by proceeding from the simpler and the more familiar to the harder and the less familiar parts of it. The experiments described and the apparatus suggested are so simple in character that one using the book need not despair of success in practical work in this branch of Physics. The general treatment is most commendable in that it does not depart altogether from the old lines in respect of description and explanation. Of course, the more modern and intelligent view of electric processes is in evidence wherever such is to be preferred. The examples worked, those given for exercise at the end of each chapter are useful in their own way. Further, the answers to the exercises given at the end of the book are fuller and more instructive than those given in other books of the kind. The appendix at the end of the book is well designed and quite in place. On the whole, the authors of the volume have spared no pains in making it useful and instructive in every way. Still we are tempted to observe that they would have done well to notice in their book an induction machine, at least the commonest rather than the plate electric one, if not both. They could have likewise given fuller explanation of the strong back E. M. F. referred to in para. 2 of page 206. As it is, the student is kept in suspense which is certainly not desirable. Books of the kind before us are expected to be free altogether from typographical errors. But we can mention one at page 209, section 153. In the next impression such mistakes will certainly be avoided. Nicely got up and carefully prepared as the book is in every way, it is a pity that it does not exactly meet the requirements of the Madras S. S. L. C. Examination. But it might be well used as a companion volume or a book of reference, as there is in it a great deal of what we most want. We heartily recommend it to our junior students of Science.

THE ORGANIZED SCIENCE SERIES: SECOND STAGE INORGANIC CHEMISTRY (THEORETICAL), BY G. H. BAILEY, D.Sc., EDITED BY WILLIAM BRIGGS, LL.D., M.A., B.Sc.; REVISED BY H. W. BAUSOR, M.A., LONDON. (W. B. CLIVE UNIVERSITY TUTORIAL PRESS, LTD.). 4s. 6d.

As the authors say, the volume before us together with First Stage Inorganic Chemistry provide

ample material for a satisfactory course in Inorganic Chemistry. The treatment of the subject is quite clear and up to date. The summary of the characteristic properties of each group of metals given at the beginning, as well as the section on the Detection and Estimation of each metal and that on the atomic weights of the whole group at the end of each chapter on *Metals* are the noteworthy features of the book. There is a large body of searching questions on the contents of each chapter given towards the close which greatly enhances the value of the book. The chapters on Valency, Radio-activity, Theory of Qualitative Analysis are particularly interesting. The experiments described are clear and instructive, and the apparatus suggested are by no means very elaborate. The diagrammatic representations of the experiments and apparatus given in the book are sufficiently attractive. We have no hesitation in recommending it for use by students of Elementary Chemistry.

THE FUNDAMENTALS OF PSYCHOLOGY, BY BENJAMIN DUMVILLE, M.A. (LOND.) F. C. P. (UNIVERSITY TUTORIAL PRESS, LONDON). pp. viii, 382. 4s. 6d.

This small volume, as the sub-title indicates is "a descriptive account of mental processes for the use of teachers." While the author has taken care not to encumber the book with a large mass of unnecessary and perplexing details, still all the fundamental principles of psychology essential for the teachers' guidance are treated in a masterly way. We assure the author that the psychology expounded in the book is sound and up-to-date. The emphasis laid on the active side of mental life is admirable. 'Learning by doing' treated of in the chapter on Perception should be brought home to the teachers in Indian schools. The indispensable minimum of the physiology of the nervous system necessary for a correct understanding of psychological principles, is clearly presented. The author is not a victim to the mistaken tendency of viewing psychology as a branch of physiology which some students of psychology exhibit. He rightly recognises that physiology is a supplement to, and not a substitute for, psychology. Mr. Dumville's book, is, on the whole, thorough and well-arranged and will be an illuminating introduction to teachers who begin a course in psychology. But we doubt much about the function he would have his book fulfil, viz., a text-book of psychology for teachers, since the application of psychological principles to educational problems, is not as much as it can

possibly be. To the general reader, we recommend this manual as one which is popular, easy reading and furnishes a good deal of useful knowledge. Although not written for the delectation of philosophers who might be left alone since they are already overburdened with ideas, the book is one which even the philosopher may read with profit. A good feature of the book is the addition to each chapter of a set of questions.

AN INTRODUCTORY ECONOMIC HISTORY OF ENGLAND, BY STANLEY SALMON. (LONGMANS, GREEN AND Co.) 1s. 6d.

This little volume though intended primarily for school use presents certain good features which are not ordinarily found in elementary text-books. The author does not treat economic history as a mere chronicle of new enterprises and discoveries but tries to give a clear view of the growth of economic ideas underlying the present English industrial system. The devotion of nearly half the book to topics like poor-relief, banking, the labour problem, etc., is bound to stimulate some interest in the minds of young readers and help them in a rational comprehension of the various sides, both good and evil, of English national economy. The practical utility of the study of a book like this renders it valuable for other people besides mere school boys.

HAZELL'S ANNUAL, 1913.

Our old friend Hazell's Annual has turned up, as usual at Christmas time to present us with a connected story of the events of the past year and a guide to the questions likely to come to the fore in 1913. The story of the Balkan War is brought down to the armistice of Tebataldja, and is illustrated by a map which has the advantage of having been drawn after the victorious progress of the allied armies, and of showing, therefore, all the place-names mentioned in the narrative. Maps illustrate also special articles on the Panama Canal, the Marconi Agreement, and the proposed Trans-Persian Railway to India. The points of the political, social, and religious movements of the day are presented with a clearness which renders them intelligible to anyone, while the interests of scientific, artistic, literary, and sporting tastes are catered for as fully as usual. Some idea of the extraordinary extent and variety of the information compressed into this indispensable volume may be conveyed by the statement that its index fills 34 pages and contains about 7,000 references.

Indian Educational Notes.

MADRAS.

Madras students studying in Europe—The approximate number of the Madras students who went to Europe during last year has been put down at 37, excluding two who went to America. Of this number 28 were Hindus; one, a Mahomedan; three, the domiciled community and five Indian Christians. There were only three ladies in this number. Of these, it is understood that 24 have formally or informally consulted the advising committee and nine have expressed their willingness to be under the guardianship of the Adviser. Two of the number are Government scholars and one is a scholar sent by the Vysia community; eleven intend to take University degrees in arts or science, seven go in for engineering, six for the bar, eleven for medicine, four for I. C. S. and other services, two for forestry and one for accountancy. With regard to their educational qualifications, we are told one is an M.A., eleven are graduates, three have passed in two branches of the B.A., eleven are F.A's., four are Matriculates, four hold School Leaving Certificates and one has passed the Cambridge Local, while the qualifications of two are unknown.

The Christian College Day—The twenty-second College Day of the Madras Christian College was celebrated on the 27th ultimo, in the Anderson Hall, with Rao Bahadur W. L. Venkataramaiyya of Berhampore, in the chair, when a large number of past and present students of the college were present.

A social gathering was held when light refreshments were served to the guests. The guests then moved to the Anderson Hall where the meeting was held. As was customary the Chairman first proposed the toast of the King-Emperor. The toast was carried, the audience standing, and it was honoured by the singing of the National Anthem. The Chairman next proposed the toast of the Madras Christian College and Mr. Peter Paul Pillay the toast of Dr. Miller. Mr. K. R. V. Krishna Rao Bahadur then proposed the toast of *Our Young Friends* and with a vote of thanks to the Chair the meeting terminated.

The Evolution of Telugu Prose—Prof. B. Seshagiri Rao, M.A. of Vizianagram delivered a course of four lectures in Telugu on the above subject in the local Kallikota College under the auspices of the local Andhra Bhashabbivardhani Samajam. The lectures began on the 1st of January and closed on the 4th. The first lecture was preliminary, in which the lecturer urged that Telugu studies, where they are optionally elected, must be conducted with a broad outlook and in a historical spirit.

In the second lecture he pointed out on what basis a classification of Telugu Literature could be made.

In the third lecture he illustrated with reference to his alphabet charts the point that certain specimens of inscriptions (which he read) from Nellore Inscriptions could be referred to the times of Nannaya and even beyond that period and showed how in Sandhi, grammatical forms and diction they tallied with Nannaya's prose showing thereby that a tradition of Literary Telugu prose was formed even by the time of Nannaya just as the London Dialect as used by Chaucer was formed by the time of Chaucer.

In the last lecture which he threw open to debate he discussed with the help of texts from Adhavana, Kitana and Appakavi the question of what is Gramya and showed that according to their clear statements it is the only language of the uneducated classes that should be called Gramya and the language of the polite and refined educated people has been consistently regarded by ancient grammarians as Desya and not Gramya.

The lectures were attended by students for whom they were mainly intended.

Re-organization of Training Schools—We understand that the scheme of re-organization of Government Training Schools for Masters in the Madras Presidency has been sanctioned by Government and it will be brought into force in the course of a few weeks, the main changes being the inclusion of the masters employed in these schools in the cadres of Sub-Assistants and Supervisors of Elementary Schools. There will be in all, six Secondary, ten Elementary Higher Grade and 14 Elementary Lower Grade Government Training Schools for Masters in which will be employed six teachers on Rs. 200 and 34 Sub-Assistants and 62 Supervisors of Elementary Schools of different grades, apart from the staffs of the model schools attached to the schools.

Grant to Wesley College—The Government of Madras have sanctioned a grant not exceeding one-half of the actual expenditure or Rs. 12,750 towards the cost of carrying out certain additions and alterations to the building occupied by the Wesley College, Royapettah, subject to the following conditions:—(1) that in carrying out the work the suggestions of the Chief Engineer are adopted; (2) that a certificate signed by the Superintending Engineer to the effect that the existing walls and foundations can carry the extra load which it is proposed to impose on them is submitted; and (3) that all the conditions prescribed in the Grant-in-Aid Code have been duly complied with.

The Tamil Academy—The President and members of the Tamil Academy, Madras, had a social gathering at the Victoria Hall recently in order to meet the Hon'ble Mr. K. Chidambaramatha Mudaliar, one of the newly-elected representatives of the Southern group of Landholders in the Madras Legislative Council. The gathering was attended by a large

number of distinguished and influential men. Rao Sahib T. Ramakrishna Pillay, President of the Academy, received the guest on arrival and a meeting was then held, presided over by the Hon'ble Mr. Justice T. Sadasiva Iyer. Mahamahopadaya Swaminatha Iyer spoke of the guest as being one of the foremost patrons of Tamil literature, being himself a profound Tamil scholar. Mr. Justice Sadasiva Iyer observed that Mr. Chidambaranatha Mudaliar was sure to be an acquisition to the Legislative Council. He was a very influential landholder in the Tanjore District, and having benefited by Western education had most enlightened views on all important subjects. The Hon'ble Mr. Chidambaranatha Mudaliar made a suitable speech thanking those present for the honour done him and promising to work in the Council in such a way as to deserve at least a little of all the flattering things said by his friends.

Basel German Mission High School Day, Mangalore.—The close of the long term of the academic year 1912-13 was marked by a grand and impressive ceremony in the B. G. M. High School, when the school-day was celebrated in the presence of a large audience. V. Venugopala Chetty, Esq., I.C.S., the District Judge, presided on the occasion. The varied programme of the evening began with music by the school choir. Then the Manager, Mr. Blum, read the school report for 1911-12, which showed the progress of the school in all directions. The next item in the programme was the distribution of prizes; these were given not only for proficiency in learning but also for good conduct, for skill in music and drawing and for efficiency in outdoor games. Nearly 75 students received prizes in books. Next came the Chairman's speech. The last item in the programme was a dramatic performance given by the students of the VI Form. The ceremony ended with "God Save the King."

A Prize-distribution—It was a pleasant function which was performed on the 3rd instant by Mr. L.T. Harris, J.P., I.C.S., the District Collector, in connexion with the distribution of prizes to the successful pupils of the O. B. M. School, Vizagapatam. There was a large and distinguished gathering, which included ladies, officials, and the gentry of the town. A big *pandal* was erected in the spacious quadrangular courtyard of the building where the school is at present located, and in the absence of floral decorations it presented an appearance of dignified simplicity. There were illuminations all round and much enthusiasm prevailed among the staff and the students of the institution on the occasion.

The proceedings began with the hymn 'Praise to God' sung melodiously by young boys and girls and it was followed by a prayer by the Rev. O. E. Sell. The farce excited roars of laughter and the recitation of 'speak gently' by Miss M. Janakamma was much appreciated by the audience. The Christ-

mas Tree which was exhibited on the stage, arranged for the occasion, was of such fine and exquisite construction that it was a delight to look at it.

Mr. D. Lazarus, the Principal, read out the more important portions of the Report for 1911-1912, which bore testimony to the excellent work done by the institution during the year. The Chairman then made an interesting speech, on "The Real Object of Education."

Mr. A. Suryanarayana Rao proposed a hearty vote of thanks to the Chair. The National Anthem was next sung and the meeting dispersed.

Educational Grant—The Government has sanctioned Rs. 18,650 as grant towards constructing a building for the B. G. M. High School at Udipi.

Kulitalai Students' Association.—The 2nd anniversary of the Board Secondary School Students' Association, Kulitalai, was celebrated within the school premises on the 10th instant at 5-30 p.m. The Annual Report read by Mr. Madhava Rao, the 4th Assistant and Secretary of the Association, showed the gradual progress which the students were making towards extempore speech. Dewan Bahadur T. Desikachari, B.A., B.L., High Court Vakil, delivered a lecture on "The Proper Way to Study the History of Southern India." R. Narayana Iyer, Esq., I.C.S., Sub-Collector, presided on the occasion. In the night at 8-30 p.m. Moliere's *Miser* was staged. On the night of the 21st Mr. P. Sambandham's Tamil Drama "Yayathi" was staged.

The Arts College, Rajahmundry.—The yearly dramatic performance of the students of the Arts College came off recently when they enacted Shakespeare's 'Hamlet' in the Hindu Theatrical Hall. The performance commenced at 9 p.m., before a full house consisting of all educated people—students and gentlemen—of Rajahmundry. The audience was spell-bound all through the performance and the chief tragic situations and the thoughtful and vigorous soliloquies of Hamlet were appreciated in profound silence. No pains seem to have been spared in the way of appropriate action, delivery and scenic arrangements and the performance was of uniform excellence from beginning to end. An ex-student of the college, Mr. J. Ganganna, B.A., L.T., who successfully impersonated Othello and King Lear on previous occasions, played the part of Hamlet and it was a perfect success. The King, Ophelia and Polonius were also very well represented. The performance as a whole is an unqualified success and the credit is mainly due to Mr. O. J. Couldrey, Principal of the College, who always evinces personal interest in promoting such healthy activities of college life.

Admission of students in Saidapet College.—The Government of Madras have approved the proposal of the Director of Public Instruction to delegate to the Principal of the Teachers' College

his power under Rules 113, 121 and 125 of the Madras Educational Rules, so far as that Institution is concerned, to permit late admissions of students, to sanction their discharge from the College and to grant additional leave without stipends to them respectively. They also accept the recommendation to dispense with the Director's sanction for the time-tables of the Teachers' College prescribed by Rule 124 and to that end direct the omission from the article of the words "of the Director in the case of Colleges and."

Elementary Education.—The Government have approved the proposal of the Director of Public Instruction for the distribution of a sum of Rs. 80,156 to certain Taluk Boards and Municipalities to meet the cost of the enhancement of the pay of teachers in Elementary Schools. Cannanore Municipality gets Rs. 336, Tellicherry Rs. 192, Calicut Rs. 240, Palghat Rs. 228, Cochin Rs. 48, Mangalore Rs. 110, the Tellicherry Taluk Board gets Rs. 816, Wynad Rs. 192, Calicut Rs. 312, Malappuram Rs. 744, Palghat Rs. 672, Mangalore Rs. 974, Coondapur Rs. 1042, and Puttur Rs. 890. The pay of trained and approved teachers is raised to a minimum of Rs. 10.

A Popular Teacher.—On Saturday, the 4th instant, the members of the Secondary School Teachers' Association, Mayavaram, entertained Mr. G. Srinivasa Aiyar, B.A., L.T., Assistant, Municipal High School, Mayavaram, on the eve of his departure to Tinnevely as Lecturer in History in the Hindu College. Mr. R. K. Seshu Aiyar, B.A., L.T., Headmaster, and President of the Association, was *At Home* to the members for the day. After breakfast in the President's house the members assembled in the High School at 10 a.m. A very interesting programme of music mainly contributed by the members was gone through. Some of the members spoke in appreciable terms of the very amiable social qualities of the guest of the day. The President in a short speech referred in very high terms to the able work of Mr. Aiyar and said the school was losing a very good and popular teacher. It was then unanimously resolved to place on record the excellent services rendered by Mr. Aiyar in various capacities and to wish him long life and prosperity, in his new sphere. Mr. Aiyar though overpowered with feelings made a suitable reply. The members then had a sumptuous dinner at the President's house. In the evening the students past and present of Mr. Aiyar gave him an entertainment in the school hall. After light refreshments an address was presented to him at a numerous attended meeting with Mr. D. Vaidyanatha Dikshitar, B.A., B.L., High Court Vakil and Municipal Councillor, in the Chair. Mr. Aiyar rose amidst deafening cheers, thanked the students in suitable terms and gave them pieces of wholesome advice. The meeting came to a close with three hearty cheers for the long life and prosperity of Mr. Aiyar. Mr. G. Srinivasa Aiyar's popularity

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was well evidenced by a large number of students and some of his colleagues including the Headmaster assembling at the Railway Station platform at 5-30 p.m., to see him off.

CALCUTTA.

New Year Honours on Educationists.—In the educational circles no two honours among the New Year's Honours list will be more widely appreciated than the knighthoods conferred on Dr. Francis Darwin and Mr. Taraknath Palit. Dr. Darwin is a scientist of no ordinary reputation and his friends and admirers will wish him a long life of health and happiness to himself and of usefulness to the world at large. The recent munificent donations of Sir Taraknath Palit must be fresh in the minds of our readers and it can be justly said that the honour could have been appropriately bestowed on him years before. It is hoped however, that the knighthood is a prelude to still higher honours and that the great benefactor of education will long be spared to enjoy his well-earned distinction.

Ananda Mohan College, Mymensingh.—With reference to the raising of the Ananda Mohan College to the first grade status the President, College Council, has received the following information from the Director of Public Instruction:—Principal's wire of 4th instant to the General Secretary regarding the application for affiliation. Government gives Rs. 55,000 non-recurring grant on condition that the College contributes Rs. 50,000 from its own resources. Government also gives a grant of Rs. 6,000 in 1913-14 for purposes of recurring expenditure, and further recurring grant not exceeding Rs. 6,000 if the University grants affiliation in Arts.

The news has given great satisfaction to the local public who hope that the munificence of some liberal-hearted Zamindars of Mymensingh will soon enable the College Council to fulfil the condition mentioned in the telegram. The public earnestly wish that the A. M. College be raised to the first-grade status from the next session.

Post-Graduate Research Scholarship, 1913.—

1. Two Post-graduate Research scholarships of the monthly value of Rs. 100 each, and tenable for a maximum period of three years, but in the first instance for one year only, will be awarded early this year.

2. No candidate will be considered who has not passed the M. A., the M. Sc., the M. D., the D. L. or the Master in Engineering Examination of the Calcutta University in 1910, 1911 or 1912. No candidate will be considered who is not possessed of high qualifications, and who cannot show that he has a capacity for original research or who is not a *bonâ fide* native of West Bengal.

3. One of the scholarships will be awarded to a candidate who proposes to carry on original research in some scientific subject, such as Natural and Physical Science, Chemistry, Mathematical Science,

etc. The other may be awarded to a candidate who undertakes research in some literary subject, such as a Language, Comparative Philology, Palæography, Epigraphy, Philosophy, History, Archaeology, etc; but no application for a scholarship for research in a literary subject will be considered unless a candidate presents himself who not only shows that he has the capacity for undertaking the research proposed, but also makes it clear, by the programme which he submits, that he has thought out a definite course of enquiry. In the event of no suitable candidate for a literary research scholarship being forthcoming, both the scholarships may be awarded for scientific research and *vice versa*. Each candidate for a scholarship must state as definitely as possible the subject or branch of a subject in which he proposes to carry on investigations. He must also indicate the institution or institutions or in default the circumstances or conditions under which he proposes to work.

4. All applications must be submitted, through the head of the institution in which the candidate was last a student, so as to reach the undersigned on or before the 15th February 1913.

5. Application forms may be had from the Personal Assistant, Office of the Director of Public Instruction, Writers' Buildings, Calcutta.

The Hindu Boys' School.—The annual distribution of prizes to the deserving boys of the Hindu Boys' School, 97-1, Serpentine Lane, was held in the school hall on Saturday, the 28th ultimo. There was a large gathering and Dr. Jogendranath Ghosh, the Ward Commissioner, presided. The prizes included, besides a number of valuable books, four silver medals most of which were awarded by gentlemen of the neighbourhood. A special medal was given on the spot by the President and another by Mr. N. D. Chakravarti in memory of the founder of the school, the late Babu Chandi Charan Bardhan. The report shows that the Institution is doing excellent service to the local public for the last 20 years of its existence.

The Calcutta Literary Society.—The second public meeting for the thirty-eighth session of the Calcutta Literary Society was held at the hall of the National Medical College and King's Hospital, No. 92, Upper Circular Road, on Thursday the 9th instant, at 4-30 p.m. The meeting was well attended. On the motion of Babu Sham Lal Day, the Founder-Secretary to the Society, seconded by Babu Debendra Nath Sen, Babu Panch Cowri Banerjee, Editor, "Nayak," was voted to the Chair. Mr. Day having read the proceedings of the last thirty-seventh anniversary meeting, the Chairman asked the venerable Pandit Madhu Sndan Goswami Sarbabboum of Sri Brindaban to deliver his lecture on the "Kingdom of God." The learned Pandit very ably spoke on his subject for nearly an hour and he was heard with rapt attention. The Chairman then spoke a few words and thanked the venerable lecturer.

ALLAHABAD.

Central Hindu College, Benares.—On the 17th instant, his Honour Sir James Meston accompanied by the Hon. Mr. Douglas Straight, the Commissioner, Captain Watson-Smyth, Private Secretary, and Captain Black, A.D. C., proceeded to the Hindu College. He was met at the entrance by the Trustees and a body-guard of the students. A telegram was received from Mrs. Besant expressing her sorrow at not being present. The Trustees presented an address in which they spoke of the growth of the college in the last 12 years and the ideals they aimed at. In reply his Honour gave a lengthy speech from which we give extracts in another page.

Anglo-Bengali School.—The annual prize-distribution to the pupils of the Anglo-Bengali School came off on Saturday, the 11th instant, at 4-30 p.m. The school hall was profusely and tastefully decorated for the occasion and there was a large gathering of friends and sympathisers of the school and parents and guardians of the students. His Honour the Lieutenant-Governor, who on arrival was received by the members of the school committee, presided over the meeting. Mr. Durga Charan Banerji, Honorary Secretary of the School, read the annual report. After a suitable reference to the fiendish attempt that was made on the life of H. E. the Viceroy at Delhi, the report proceeded to give a brief account of the progress made by the school since its establishment in 1875, with only five boys and one teacher in the house of the late Babu Setal Pershad Gupta in Shahganj.

After the reading of the report a programme of songs, recitations and dialogues was successfully gone through. His Honour distributed prizes to the successful pupils of the school and then addressed those present and the pupils in a lengthy speech. Mr. Justice Banerji proposed a vote of thanks to His Honour. His Honour then announced his offer of a gold medal to the best boy in the school beginning from this year and also requested the headmaster to grant a holiday which was given. The gathering dispersed after giving three cheers to the King and to His Honour.

PANJAB.

Education in the Panjab.—The Report on Education in the Panjab during the quinquennium ending with 1911-12 shows that a very large increase in the number of children attending school in the Province occurred in the five years. The advance amounted to nearly 35 per cent. 81,272 pupils, including 12,626 girls, having been added to the rolls, this total comparing with an increase of 52,600 in the preceding quinquennium. In the Government Resolution on the Report Sir Louis Dane remarks that the greatest obstacle to compulsory education is the innate prejudice of the cultivators. But a change in their attitude towards education is noticeable, which appears to be largely the result of the improved condition of the

agricultural classes. "More men have raised themselves to the position of *safedposh* (wearers of clean clothes), and these naturally desire that their children should be educated to maintain and, if possible, raise their status." One obstacle to educational progress has been the absence of competent teachers in the Elementary schools. Until recently many of these men earned hardly more than a cooly. But their position has been much improved. All the District Boards have raised the minimum salary to Rs. 15 per month for a head teacher and Rs. 12 for an assistant, and provident funds have also been established. The outcome of these changes is that admission to the Normal schools for training is being keenly sought, and, for the first time, selection of would-be teachers has become possible.—*The Statesman*.

MYSORE.

The Bangalore Students' Convocation.—Under the auspices of the Young Men's Indian Association, the sixth annual Convocation of the Students of Bangalore was held in Janopakari Doddanna's Hall on Tuesday, the 31st December 1912. Mr. H. V. Nanjundayya, M.A., M.L., Senior Councillor and Offg. Chief Judge of Mysore, presided on the occasion. The proceedings commenced with an invocation sung by three little boys. Mr. A. R. Nageswara Iyer, B.A., B.L., Secretary of the Y.M.I.A., in welcoming the students, briefly mentioned the circumstances under which the Convocation became a function of the Association, after having been held for five years by the Indian Progressive Union. He thanked all the ladies and gentlemen who had largely contributed to its increasing usefulness. Two successful recitation competitors recited Lovell's "William Lloyd Garrison" and "The Heritage" which were well appreciated by the audience. Mr. C. H. Yates, Superintendent, Government Press, delivered an address on "Turning over new leaves." After the address, Mr. C. Venkatawarada Iyengar, Joint Secretary, announced that over 160 of the senior students of nearly all the institutions of Bangalore had signed pledges against tobacco and bad books. A framed portrait of His Highness the Maharaja of Mysore was presented as a mark of honour to the Wesleyan Mission High School for showing the best record of pledges. The next item was the distribution of prize-books which were kindly given away by Mrs. Anderson, wife of Professor Quinton Anderson of the Central College. Two of the prizes were awarded for recitation, and the rest for character, the latter being decided by election among the students themselves. The donors were Mr. M. Visvesvaraya, C.I.E., Dewan of Mysore; (prizes for the best two inmates of Central College Hostel), Mr. H. V. Nanjundayya, M.A., M.L., 1st Councillor (two for recitation), Mr. V. Subramanya Iyer, B.A., Head Master, Government High School, the Indian Progressive Union, Mr. K. Ramachandra Rao, Head Master, London Mission High School, and the Young Men's Indian Association. A prize offered by an "old boy" of the

Wesleyan Mission High School was reserved as no election had been held. The President exhorted the students to carry in their hearts the advice contained in Mr. Yates's very interesting and comprehensive address. The President and the lecturer were garlanded and thanked on behalf of the students and the Y.M.I.A., after which the Indian National Anthem was sung in Telugu; and the meeting closed with three cheers for His Highness the Maharaja.

TRAVANCORE.

Education in Travancore.—We take the following from the Report of the Director of Public Instruction for the year 1907 M. E. published by the Travancore Government:—The total number of recognised schools rose from 1,648 in 1906 to 1,698 in 1907, and the strength from 1,59,668 to 1,78,775, showing an increase of 50 schools and 19,107 scholars. The increase was mainly in the departmental schools. The departmental schools increased in number from 517 to 703, and in strength from 79,529 to 1,06,215; the aided private schools also rose in number from 805 to 837, and in strength from 56,491 to 59,902, the number and strength of unaided (but recognised) private schools falling from 326 and 23,648 to 158 and 12,658 respectively. It is satisfactory to note that the number of the private schools on the aided list has increased. The increase in the departmental schools was chiefly in the elementary schools, of which as many as 181 were newly opened during 1907. There was an inappreciable increase in the number of scholars in the college classes, and some increase in that of high schools. In elementary schools, however, the strength rose from 1,45,659 to 1,64,253, an increase which was nearly three times more than what it had been in 1906. In regard to elementary education, a satisfactory feature was the decrease in the number of schools with a single class and the increase of those with higher classes, the policy of discouraging single class schools being continued and grants being given to them only on condition of an additional class being opened as early as possible. The accession of strength, in the higher classes was not spasmodic and gratuitous, but showed that vernacular education has been advanced by the introduction of the Education Code. The Government regret that the Educational Boards, which were set up for facilitating the progress of elementary education, have not shown any activity and say that, if the Inspectors put forth efforts in this direction, these bodies would not fail to respond. In their review of the progress made in education in the State after the introduction of the Education Code, the Government state that the first object—the gradual extinction of unrecognised schools—is on a fair way of fulfilment. The training of teachers, improving their pay and prospects, bringing the whole body of teachers under greater discipline by a system of issuing licenses, the revision of the curricula of studies, the supply of suitable textbooks, the improvement and strengthening of the controlling and inspecting staff—have all been

attempted and are in progress. As for stimulation of private effort, we are told that the scale of grants-in-aid provided in the Education Code has brought many more schools under the aided list, the increase in the volume of aid given to the private schools being 21 per cent. It is stated by Government that, with a few exceptions, managers of private schools have accepted the Code in a loyal spirit and have tried to the best of their ability to work up to the conditions laid down there.

Foreign Notes.

GREAT BRITAIN.

Advisers for Indian Students.—When the post of Secretary for Indian Students was created the Secretary of State decided to ask the co-operation of the University authorities in each provincial centre where Indians study, in the appointment of local advisers. The Secretary of State, in consultation with the Universities concerned, has now made the following appointments, with effect from January 1st:—

Cambridge—Mr. E. A. Benians, Fellow and Tutor of St. John's College, and recently holder of an A. K. travelling scholarship.

Oxford—Mr. Stephen Montagu Burrows, son of the late Professor Montagu Burrows, and sometime member of the Civil Service in Ceylon.

Manchester—At the School of Technology, Mr. Dulanthy; at Owen's College, Mr. Gilbert Cook.

These officers and others to be appointed at other centres will make it their duty to know and help the Indian students at their respective Universities, to give them information and assistance, and to act as guardians to State scholars and to other students if requested to do so by the parents.

A forward Training College.—The new Training College for Teachers at Beckett's Park, Leeds, is described as the most complete educational institution of its type in Europe. The buildings have over eight acres of floor space upon which will stand 1,000 separate rooms. The area of ground enclosed is about 97 acres. The principal structures are an imposing central block, looking over a fine sweep of lawn, and eight hostels, five accommodating 300 women students, and three, 180 men. There is a tutorial staff of 30 and a domestic staff of 60. The total number of students in residence is only 450, or 80 below the maximum admissible. The college is the largest residential college in the country, and has the advantage of all the most modern scientific equipments. The total cost of land and buildings is £242,000.

A "Public Health Series."—The Syndics of the Cambridge University Press are about to inaugurate a "Public Health Series" of text-books, which ought

to be of considerable value to Municipal authorities as well as to readers of a more strictly professional order. Such subjects as sanitary law, fever administration, offensive trades, and the chemical analysis of foods are discussed by experts in a popular fashion, and books of this kind have an obvious appeal to Municipal engineers, architects, school-teachers, and sanitary officers. The general Editors will be Dr. G. S. Graham-Smith, University Lecturer in Hygiene at Cambridge, and Mr. S. E. Purvis, University Lecturer in Chemistry and Physics.

Westfield College.—Miss Constance L. Maynard, Mistress of Westfield College, will resign her post at the end of the summer term, 1913. Miss Maynard will then have held her present position for 31 years. Her educational experience covers the whole period since the movement for the higher education of women was first initiated. She entered Girton in its earliest days, and was one of the first two women students to take the Moral Science Tripos. She taught for a short time at the Ladies' College, Cheltenham, and then joined her friend, Miss Lumsden, LL.D., at St. Leonard's School, St. Andrews. Miss Maynard had already conceived the idea of a resident college for women preparing for the examinations of the University of London which should be founded on a definitely Christian basis, and in 1882 this idea was realized by the foundation of Westfield College by Miss Dudin Brown, Miss Maynard being appointed the first Principal. In 1902 the college was admitted as a school of the University of London in the Faculty of Arts.

Miss Maynard's successor has not yet been appointed.

Education in Edinburgh: Annual Report.—The annual report states that during the past year the total number of matriculated students (including 572 women) was 3,404. Of these, 1,259 (including 525 women) were enrolled in the Faculty of Arts, 466 (including 25 women) in the Faculty of Science, 54 (including one woman) in the Faculty of Divinity, 277 in the Faculty of Law, 1,330 (including six women) in the Faculty of Medicine, and 18 (including 15 women) in the Faculty of Music. The numbers in the Faculties of Arts and Medicine show a small reduction, but the number of students in the Faculty of Science exceeds by 40 that for 1911, and by 84 that for 1910, this being the highest number ever reached in that faculty. Of the students of medicine, 591, or over 44 per cent., belonged to Scotland; 228, or over 17 per cent., were from England and Wales; 95 from Ireland; 102 from India; 265, or 20 per cent. from British Colonies; and 49 from foreign countries. These figures show that the proportion of non-Scottish students of medicine is well maintained. Besides these matriculated students, 87 non-matriculated students have paid the 5s. entrance fee, of whom 39 were women, chiefly attending music and German

literature classes. The number of women attending extra-academical lectures, with a view to graduation in medicine in the University, was 69.

The following degrees were conferred during 1912:—M.A., 252; D. Litt., 1; B.Sc., 71 (the highest number ever reached); D.Sc., 4; B.D., 6; LL.B., 20; M.B., C.M., 2; M.B., Ch.B., 201; M.D., 55; Mus.B., 2.

The General Council of the University, now numbers 11,941.

The diploma in tropical medicine and hygiene was conferred on one candidate; the diploma in psychiatry on four candidates.

The total annual value of the University Fellowships, scholarships, bursaries, and prizes now amounts to about £19,420, viz., in the Faculty of Arts, £10,300; Science, £1,190; Divinity, £2,010; Law, £570; Medicine, £5,230; and Music, £120. A number of bursaries are in the gift of private patrons, but the great majority of the University bursaries, prizes, &c., are awarded by the Senatus after competitive examination. In addition a sum of upwards of £660, being the income of the Earl of Moray Endowment Fund, is annually available for the encouragement of original research.

The Science Museum: An Advisory Council.—The President of the Board of Education has appointed an Advisory Council for the Science Museum.

The Council will be asked to advise the Board on questions of principle and policy arising from time to time and to make an annual report on their proceedings to the Board, together with any observations on the condition and needs of the Museum which they may think fit to make.

The following will be the first members of the Council:—

Sir Hugh Bell, Bt. (Chairman), hon. D.C.L., LL.D.; Mr. R. Elliott Cooper, C.E.; Dr. J. J. Dobbie, F.R.S.; Mr. W. Duddell, F.R.S.; Mr. E. B. Ellington, M.I.C.E.; Sir Maurice FitzMaurice, C.M.G.; Sir Archibald Geikie, K.C.B., F.R.S., F.G.S.; Dr. R. T. Glazebrook, C.B., F.R.S.; Sir Alfred Keogh, K.C.B., LL.D., M.D., F.R.C.S.I., &c.; the Right Hon. Sir William Mather, LL.D.; Sir John Murray, K.C.B.; K.C.B., LL.D., D.Sc., Ph.D.; Sir William Ramsay, K.C.B., LL.D., D.Sc., M.D., Ph.D., F.R.S., F.C.S., the Right Hon. Sir Henry E. Roscoe, F.R.S., Ph.D., LL.D., D.C.L.; and Sir William H. White, K.C.B., F.R.S., LL.D., D.Sc.

The Secretary will be Captain H. G. Lyons, F.R.S., of the Science Museum.

A Comprehensive History of India by the Cambridge University Press.—The Syndics of the Cambridge University Press propose to publish a comprehensive History of India, from the earliest times to the present day, on the model of the Cambridge Modern History. The work, as projected, will be completed in six volumes of about six hundred pages, two volumes being devoted to each of the main periods—Ancient India, Muhammadan India, and British India—under the editorship, respectively of Professor E. J. Rapson, Lieut.-Col. T. Wolseley Haig, I.S.C. and Sir Theodore Morison, K.C.I.E. The various chapters in these sections will be entrusted to scholars who have made a special study of the period or subject; and the Syndics hope, in this way, to produce a history of the nations of India, past and present, which shall take its place as the standard work. They are indebted to the generosity of Sir Dorab Tata for the means of providing additional maps and illustrations, which will add greatly to the value and interest of the volumes.

THE OXFORD GEOGRAPHIES

Vol. III

THE SENIOR GEOGRAPHY

BY

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AND

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Second Edition.

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The Educational Review.

The Report on the Progress of Education in the Panjab during the Panjab Quinquennial Report. 1911-12 is an interesting record of steady progress. The pupils receiving Primary education have increased by 27 p. c., Secondary 46 p. c., and Collegiate 66 p. c. Correspondingly the expenditure under each head has grown by 37 p. c., 50 p. c. and 59 p. c. respectively. An Agricultural College was opened in 1909, but it has not yet attracted many pupils. The Government Engineering School has been remodelled. Board schools have fixed the minimum pay of a head teacher of village primary schools at Rs. 15 per mensem and of an assistant at Rs. 12. This is gratifying. The present day fad of religious instruction—a cry which old moral decrepits so frequently raise—which men with pro-government views expect to develop loyalty, but which is more apt to develop the Pandit or Moulvie cast of mind and will, if anything, promote disloyalty, is looked on with favour by the Lieutenant-Governor, who promises to further the erection of denominational hostels. But we agree with Mr. Godley, Director of Public Instruction of the Panjab in regarding “the definite merit of associating pupils of all classes and creeds on the same plane and thus promoting mutual forbearance and tolerance” and mutual understanding and wearing off of angles is moral education in the best sense and the only moral or religious education that ought to be attempted in schools. Outside schools, there is religious education *ad nauseam*. The average Hindu or Muhammadan household is saturated, nay oppressed, with the heaviest religious at-

mosphere imaginable. Let boys have some respite at least in schools! Indeed, in this very report we are now considering, para. 7 approves of religious education, but para. 10 deplors “the tendency on the part of certain private institutions...to foster sectarian rivalries.” In England where religion is less fluid than in India, where on the whole social life is freer from pseudo-religious convention than here, where public education has been organized for a much longer period and where general enlightenment is much more widely spread than in this country, the Education Act evoked such savage passion and such ridiculous excesses of demonstration but recently. Yet people here light-heartedly propose to wreck the little education that is imparted in India by floating it on the turbulent sea of religious discussion.

Says Mr. Godley, “the Panjab University continues to maintain two Oriental degrees in Panjab and Madras. *teaching colleges—the Oriental and Law Colleges.*”

En passant, we thank Mr. Godley for the phrase “teaching college” and hope that in the other colleges, there is no teaching but letting the brains of pupils grow “of its own accord.” With regard to the former of these institutions, we learn, “the Oriental College embodies the intentions of the original promoters of a University scheme for the Panjab, and as such is an interesting survival; it is lacking, however, in vitality, and is chiefly kept alive by the aid of scholarships and stipends. The College has three functions. It prepares students for the various Oriental title examinations of the University and also for the Oriental degrees of B. O. L. and M. O. L., which were supposed to represent the attain-

ment of European learning through the medium of the Vernacular languages; while it also undertakes the instruction of the arts students of the Government College in the classical languages of the East. Owing to the failure of the Oriental degree courses as formerly constituted to attract candidates, the regulations were changed during the quinquennium so as to make these courses include a knowledge of English, combined with Indian History and Oriental languages. The result has not been encouraging, only four students having obtained the degree of B. O. L. during the period and one the degree of M. O. L., and it is fairly evident that the revised courses are hybrids which do not at present appeal to students either of the old or the new type.” In Madras we have just adopted these “hybrids” in our University and further burdened them with impossible courses of study in Oriental and European learning; for the University has published a list of books—current and out of print and *not yet in print*, both up-to-date and hopelessly out of date—and withal so long, that none but an immortal can negotiate it, as part of the course for these title examinations. Yet with this pretentious syllabus the Madras University is so bankrupt of Sanskrit scholarship that it cannot devise correct names for these titles! One title that it proposes to award is Nyāyas’irōmaṇi—the crest jewel of logic. How can a man be a jewel of logic? He can be a jewel among logicians—Naiyāyikas’irōmaṇi; otherwise he is no more a man but a book and this is the reward which the University gives for an impossibly long course of study!

Mr. Godley discusses the evils of examinations dominating school work, a subject on which has been written a sensible note, printed in the Appendix to the report by Mr. Wyatt, Inspector of Schools. Mr. Godley thinks the criticisms of this examination “much exaggerated.” He consoles himself with saying that “a teacher who has higher ideals than pass percentages.....can both educate and pass his pupils;” this remark merely blinks the fact that the atmosphere of examination necessarily kills out the “higher ideals.” Mr. Godley apparently regards the United Provinces scheme of roving examiners with qualified approval, but, curious to say, does not seem to have heard of the Madras scheme of the Secondary School Leaving Certificate, in which the domination of the external examiner on school work has been attempted to be considerably reduced, though not extirpated. An Inspector of Schools of the same Province, Mr. Crosse is better informed with regard to what is going on in other provinces. Mr. Crosse is a follower of the reformed method of teaching English, ordinarily called “the Direct Method,” on which he has contributed a short note and which he has introduced in the Panjab. He knows about the introduction of the method in Bombay, Bengal and Madras; but he is wrong in thinking that it was started in Madras in 1908. Nearly a decade before that date it was used in certain schools. He refers to the books on the method by Mr. Nelson Frazer of Bombay, Mr. Tipping of Bengal and Messrs. Yates and Srinivas Iyengar of Madras, as also to the hesitating, half-hearted attempt to reform English teaching advocated by Mr. Wren of Bombay. Mr. Crosse then describes the experiments he

has conducted in the method and closes with a remark, which we quite agree with, "I believe that with this method there will be a steady growth in the command of the English language, that with this the main difficulties of our Anglo-Vernacular pupils will disappear, and that we shall get a much more intelligent and better educated boy by the time he leaves the fifth high class than is at present the case."

Beside Madras, the only other part of the British Empire that has devised a satisfactory School-Leaving Certificate scheme is Scotland. An account of it was furnished to the Education Science Section of the British Association at Dundee in September 1912 by Mr. J. Strong. In an ideal scheme the danger of premature specialization should be prevented by the inclusion of humanistic and mathematical or scientific studies in the compulsory portion of the scheme. The Leaving Certificate while giving the right of entry to a University, should restrict the pupil to the particular course for which he has shown fitness by his work in the optional portion. Preparation for later professional studies or entering into public service or business should also be provided for by correlating their requirements with the school work. The Scotch scheme fairly meets these requirements of the ideal scheme. Secondary education in Scotland begins at the age of eleven or twelve and extends over five or six years—an "intermediate" course of three years and a Leaving Certificate course of two or three years. The Intermediate course, which is the counterpart of our I, II and III Forms course, includes seven subjects: English, History, Geography,

Mathematics, one language other than English, Science, Drawing. Except for Science, all these subjects are taught in the lower forms of our Secondary schools. The Leaving Certificate course includes at least four subjects, three of which must be English (including History), one language other than English, and Mathematics or Science. Here the Scotch scheme is much superior to ours, because our scheme is burdened with 3 "A" subjects, English, Vernacular Composition and Elementary Mathematics; 4 "B" subjects, Indian History, Geography, Drawing, Elementary Science, all practically compulsory, and at least two others besides. This loading of subjects is a reminiscence of the Matriculation examination. A good three years' course in the I, II and III in the A and B subjects all (except English) conducted in the Vernaculars and taught not to enable the pupil to pass a written examination but really well, and that preceded by a four years' course in the lower standards—i.e. a seven years' study of the pupil's Vernacular, Geography, (Indian) History, Elementary Science, Drawing, Elementary Mathematics ought to constitute a thoroughly satisfactory course for the average child. English alone and perhaps Vernacular composition (in view of the fact that a modern prose style has to be evolved in this country in the future by these pupils when they become men) ought alone to form the compulsory portion of the Leaving Certificate course. To return to the Scotch scheme, the "Intermediate" certificate is given at the end of the first course and the leaving certificate the other. Here, again, we may very well copy from Scotland. Now that our Leaving Certificate has proved thoroughly popular, it is high time the work of the I, II and III Forms be taken on hand and

organized at that of the three higher ones. This will enable the B subjects and some of the A subjects to be shifted down. One other point we may borrow from Scotland. The papers are set in two standards and excellence in one subject may compensate for deficiency in another. "The Intermediate certificate indicates the satisfactory completion of a well-balanced course of general education, suitable for those who leave school at the age of fifteen or sixteen. It also acts as a passport to certain technical institutions and continuation schools. The standard of examination practically precludes the study of more than two foreign languages in the course. Leaving certificate courses may be classified as general, linguistic, mathematical, scientific, artistic, or musical. There is no difficulty in selecting a group of subjects which meets the entrance requirements of Universities."

From the account of the Scotch Leaving Certificate given above, it can be seen that whereas outside critics and some old fashioned teachers, too, in season and out of season, raise the cry that our partial specialization begins too early under our S. L. C. scheme, in Scotland the corresponding course is *entirely* a specialized scheme, the general education stopping at what corresponds to our III Form, two or three years before the highest school class is reached. "Some Notes of Thought on Education" by Mr. A. E. Haynes of the University of Minnesota in *School Science and Mathematics*, advocates the same system. "Our whole system of education tends to be *extensive* than to be *intensive*; too many subjects are taken to enable the pupil to be thorough in any. Such a method produces distraction

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rather than abstraction, confusion instead of order, dimness instead of clearness, and makes the pupils more like a parrot than a real student. "Going through books, does not necessarily educate one, any more than walking through beautiful gardens make one a botanist.....It is good, wholesome food, thoroughly digested and assimilated, that nourishes and builds the body" and not that which is crammed down one's throat and spouted forth to the examiner.

It is scarcely known to those that are not specialists that the solid continents on which we live are not absolutely fixed on their foundation but are subject to motion. Thus though there has been such a great *rapprochement* between the American people and the people of Great Britain and Ireland within the last quarter of a century, the countries themselves have literally moved away from each other. Accurate determinations of the distance between Greenwich (England) and Cambridge (America) have brought to light the fact that England and America have receded from each other by 90 metres in the course of 26 years. We learn also from the *Scientific American Supplement* that lunar observations show that Greenland and Europe have in the last 84 years gone apart from each other by 940 metres. This is due to horizontal displacements. Vertical displacements of continents also take place constantly. A heavy body pressing a continent makes it sink down as a cork floating on water sinks when a weight is placed on it. These displacements are believed to be due to the weight of ice which accumulates on continents and produces the motions which cause these changes of distance.

It makes one sigh with undisguised envy to learn of the Rice Institute in the United States which starts with an endowment of 10 million dollars, "with the foremost educators in the [American] nation aiding in planning the future; with picked men for administrative offices and faculty; and with a vigorous, growing country in which to prosper and wield its influence." The proposed President, Dr. Lovett, travelled all over the world to learn about other institutions of higher learning. 300 acres of land form the site and the plan of the building is one "that would embody in succeeding years the purposes of the Institute. The Institute will be open to both young men and young women. *There will be no charge for tuition and no fees.* "For the present it is proposed to assign no upper limit to the educational endeavour of the new institution," so that besides collegiate work, post-graduate work will also be provided for. The lower limit will be the entrance requirements of the more Conservative American Universities. The name of the institution alone is plebeian.

The virtues of an English education have come up so prominently in the evidence given before the Public Service Commission that it is worth while to note what such a great authority as Mgr. R. H. Benson says about it in the columns of the excellent new literary weekly periodical, *Everyman*. According to him the Etonians leave Eton "with a stamp upon them, that no other dares to imitate, and of which they themselves are never ashamed; they leave unbuttoned always the lowest button of their waistcoat, and

count themselves cadets, at least, of the noblest house in the world. But the education she gives them is deplorable." Mgr. Benson won an Eton scholarship for proficiency in Latin and Mathematics; he then went to Eton, and left it four years later, a hater of the classics, a fumbler over a sum in simple addition, "a disappointment to every one, including myself;" "yet I am not wholly without intelligence.....There are to-day, I suppose, still left two subjects which I can study without reluctance—history and English; since in neither of these two branches of knowledge can I remember a single lesson ever being given to me while I was at school." This apparently is a special virtue of Eton and not of schools generally in England. For Mgr. Benson in summing up his account, explains that the cause of the failure of Eton is due to want of specialization, the neglect of the study of the individual temperament of the pupil, not teaching him what he is constitutionally fit to learn, but to force all to master "minute details of grammarians' analyses of the Latin and Greek languages at certain limited periods of their development." Let Madras educationists note this, for this is exactly what patriotic advocates of the cause of the Pandits and the Tamil and Telugu Academies hold out for. Mgr. Benson further complains that "what is taught is taught drearily" at Eton and "the average Eton boy leaves Eton entirely uneducated." The same has been the case almost up to to-day with us, for dreary drilling in grammatical minutiae, mechanical drill in Euclidean deduction, and parrot-like memorization of isolated historical, geographical and scientific facts was all that was attempted in all schools and even now is all that is attempted in most schools.

Mr. Maurice Hewlett has written an equally scathing condemnation of English Boarding Schools in the December number of the *English Review*. "I believe," he says, "that when I went to my great school I had the makings of an interesting lad in me; but I declare upon my conscience that it was that place only which checked the promise for ten years or more, and might have withered it all together." The blighting influence of our own schools on promising lads is amply illustrated by the fact that the output of literary activity in India is so poor. The only remedy is the adoption of the principle of the Montessori method, which is now attracting so much attention in England and which we referred to in our editorial notes last month. It is this, that nothing can be more absurd than making every boy go through the same drill in the same subjects which the intelligent outsider who knows nothing of education and less of child psychology regards as constituting the minimum of knowledge with which every boy's mind should be stocked; but as Hewlett says, "the single aim of the master should be to give every boy in his charge some sane interest which he can pursue to the death, as a terrier chases a smell, in and out, up and down, with every nerve, bent and quivering." This and this alone develops intelligence and constitutes education. But with our cast-iron syllabuses, schemes of examination, and with our Chinese ideal, of literary examinations guarding the doors of office, and with our new pseudo-democratic ideal according to which a person who knows nothing of a question but who can shout most loudly is the most qualified to give a pronouncement on it, is there any room for

modern ideals to be understood, much less to be adopted? Hewlett condemns "drill in school, laissez-faire out of it." In the case of the Indian school boy, drill in school and drill at home, allows no scope for the fair flower of the soul to bloom out.

Several books published during the last two years have given An Anglo-Indian or three years have given poet, John Leyden. the lie to the charge of barrenness usually made against the education given by the Madras University; and "An Anglo-Indian poet, John Leyden" by Mr. P. Seshadri, whom we proudly claim as one of our most valued contributors is another glorious refutation of the charge. John Leyden was a priest, a doctor, a poet, a linguist, a judge and a soldier of the first decade of the nineteenth century, who served in India, China and Java for an all too-short period of eight years and then died. Mr. P. Seshadri has collected and published his Indian poems and letters and furnished them with a learned introduction. We are glad to notice that Mr. Seshadri is quite up-to-date in his methods of literary criticism, but we cannot congratulate him on his remark that the members of an unfortunate Indian caste are "probably incapable of feeling the emotion of Love," in his notice of Leyden's *Song of a Telinga Dancing Girl*, for we believe Leyden showed a truer discernment of human nature and was not influenced by Pharisaism. All other critical remarks of Mr. Seshadri are felicitous and illuminating and calculated to help the reader to appreciate the literary merits of Leyden's writings and the noble characteristics of this versatile Scotchman, who in talking to Brahmins "insisted on claiming divine descent for himself," being a descendant of "Adima" and "Iva," children of Manu Svayambhu.

The Indian poems of Leyden as well as his letters descriptive of Indian life cannot but be of absorbing interest to Indian readers. It is a pity that English literature, dealing with Indian

matters, though it consists but of scraps, is sedulously avoided by the University when it prescribes books for study in Indian schools and colleges. Stories and poems dealing with far off scenes and modes of life absolutely unfamiliar to master and pupil alike, accounts of mediæval tourneys, life in monasteries in by-gone ages in Central Europe, Scotch border-raids, the loves of Evangeline and Dora and other maidens that the Hindu pupil cannot feel much interest in are prescribed year after year. It would seem that nothing that can touch the Indian imagination is fit for Indian schools. The people that prescribe books consult their own tastes and whatever appeals to them or rather appealed to them when they were children running about on English meadows or playing hide-and-seek in ruined castles of Norman Barons are naturally set for study. And afterwards people

say that the study of English literature has not had any appreciable influence on the Indian imagination. First rouse the imagination by appealing to it through local colour, by making pupils read about what is familiar to them, e.g., Leyden's poems and letters, Heber's Indian poems, Indian tales, of which certainly there are a few, written in good English with a literary flavour; the imagination, once developed, can hook itself on to the unfamiliar and comprehend other English literature. Leyden's description of his landing at Madras, his jaunts in Mysore illuminated by his rollicking humour, form excellent reading. We have only to add that the get-up of the book is excellent and reflects great credit upon the premier printers of Mount Road, Messrs. Higginbotham & Co.

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By S. K. SARMA, B.A.

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THE SIMPLIFIED SPELING SOCIETY.

The 'Seemaisiological' Argument against Spelling Reform

By MARK HUNTER, M.A.

Onorari Secretari ov the S. Indian Braanch ov the S.S.S.

IT has been urjd bi literari pursonz, hard poot tu it to fiend baxis in reezon for a pyurli sentimental preferens, that etimological spelings ar ov survis, not meerli becauz thai teeoh (so it iz vainli contended) the histori ov wurdz, but becauz bi so duing, thai help us tu yuez wurdz corectli, that iz, with dyu regard tu thair tru and orijinal meening. Such spelings, it iz argyud, tend tu saiv the langwij from being contaminait bi solesizimz and the vulgaritiz ov slipshod ignorans.

It duz not, ov cors, ocur tu theez critics that, if thai ar tu be consistent, thai aulso ant tu becum spelling-reformerz, ov a sort, and advocait chainjez which shood enaibl our spelling tu discharj this supoezd funcshon mor satisfactorili and efshentli than it duz at prezent. If thair argyument haz eni validiti thai ant tu recwier the spelling ov aul English wurdz, or at leest ov surten spesified claasez ov them, tu be taicen mor or les directli out ov Greek, Latin, French and Anglo-Saxon dicshonariz.

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Thair iz, ov cors, a histori—or pre-histori—ov the sound and meeningz ov wurdz ling far behiend the dicshonari spelling. Eeven aafter the pre-historic peeriod, thair ar meni stajez in the histori ov wurdz, in form, sound and meening, and thair seemz no reezon whi eni particyular staj, urther than the laast, shood be singld out az speshali syutabl for spelling purpozez in preferens tu the urtherz. But ov such elementari considerashonz we can scairli eespect the etimological speler tu taic acount. We mai, however, inviet him tu test hiz argyument in the liet ov actyual fact; tu egzamin hou far chainjez in meening hav been or can be chect and controeld bi arested or arcaic orthografi; and, on the urther hand, hou far fonetic chainjez in spelling hav been responsibl for chainjez in meening, and whether chainjez so efected hav been disadvantageus or the revurs.* We shood then be in a pozishon tu prepair sum sort ov balans-sheet—profit bi etimological spelling, so much: los and wais-tej, so much. We, fonetic spelling-reformerz,

* Ov cors the English langwij iz graitli enricht bi the pozeshon ov wurdz historicali ov iedential orijin but at laiter stajez diferenshiat in pronunsiashon and meening, e.g., *blaim* and *blasfeem*, *fashon* and *facshon*, *dainti* and *digniti*, etc. It iz important that spelling shood help tu obsurv theez distinceshonz, and not in the styupid etimological wai, trie tu obliterate them.

noe preti wel the stait ov the account on the debit sied; and unless the asets ar veri much mor considerabl than haz so far been demonstraited, we ar prepaired tu sai that the condishon ov the etimolojical furm iz wun ov compleet and iretreevabl bankruptsi. A fyu asets hav been paraided bi wai ov saampl the Greek-Latin wurdz spelt with 'ph' (=f), and the French loen-wurd 'lieutenant.' If the rest hav no graiter valyu it mai confidentli be aserted that the hoel stoc iz hardli wurth scraping.

Let us consider the speling 'lieutenant,' and the *ph*-wurdz. The Oxford dicshonari wil tel us that, for sum sentyuriz aafter the introducshon ov 'lifenant' intu English, *f*-spelingz wer az comon az the etimolojical varieti, and thair iz nuthing tu shoe that enibodi woz eni the wurs. Etimoloji fienali prevaild. But what haz been the gain? If we hapen tu hav no French, the speling iz meerli a puzl tu us. If we noe a litl French and a litl Latin we can, no dout, split up the wurd intu its component etimolojical parts, and then formylait the ecwaishon 'lien tenant = *locum tenentem* = *plais hoelder*.' But hou duz this help us tu a corect yues ov 'lifenant' in modern English? A *lifenant* iz not a '*locum tenens*' and a *locum tenens* iz not a *plais hoelder*.

And so with the *ph*-wurdz. If we hav no Greek '*ph*' profits us nuthing. If we noe a litl, we can perhaps postylait '*philos* = fond, laving, *anthrōpos* = man, *logos* = wurd,' and then infar, 'philanthropist' = wun fond ov men, 'philologist' = wun fond ov wurdz. But this sort ov nolej iz bi itself perfectli yuesles. The indispensabl thing iz that we shoold noe the speshal meening which the wurdz in cors

ov tiom hav nou cum tu acwier. Such nolej iz tu be had without the help ov etimoloji, whiel thoez caipabl ov apliing etimoloji hav no sort ov yues for etimolojical speling. A meer nolej ov the 'derivaishon' iz just az liecli tu mislead az it iz tu help. Thair ar aul sorts ov 'luverz ov men,' from the public benefactor tu the ordinari flurt; men hav luvd wurdz in vairius waiz; Jacob Grimm in wun wai, Sur Jabesh Windbag in anuther. The Germanz spel the wurd 'philology' neerli az we du, but thai du not meen cwiet the ssim thing; our sens is much mor restricted. The Italianz, hu miet natyurali prefur the Latin speling, hav discorded it. Thai riet 'filantropo,' 'filologo,' speling, liec sensibl peepl, egzactli az thai pronouns. It iz not in evidens that thai hav been poot to eni ciend ov trubl in consecwens.

THE REPORT OF THE DACCA UNIVERSITY COMMITTEE.

BY AN EDUCATIONIST.

I.

THE first Teaching University in India is at last within hailing distance. At Dacca will be started a group of 10 colleges and collegiate institutions with arrangements for boarding and housing the pupils. So far the scheme sounds well. But when we examine its details, many undesirable features rise to rob us of the satisfaction that the first Teaching University talked of so long, is bound to give us. The final proposals embody a series of compromises between opposing interests and are not merely an honest attempt to put educational principles in practice. The Muhammadans would have no modern learning unless accompanied by boluses of mediaeval moulvi-dom, preservative

of faith in old-world fictions; and the Department of Islamic studies will be opened to prevent modernism from liberalizing young Mussulman minds. It only remains for the Hindus to clamour for a Department of Vedic studies (as Sir Gurudas Banerji has already begun to do) and provision will certainly be made for teaching the Brahmin pupils the mysteries of the horse-sacrifice, the Mahavrata ceremony (the *Paṇḍarika Yāgam*) and other holy rites, the Puranic geography and the sky-lore according to the *Sūrya Siddhānta* and *Bṛihat Jātaka*. But Hindu sentiment has been respected in a different way, by the provision for caste colleges; the 'Brahmin' institution will be the Jagannath College where low fees will be charged and the pupils will be mainly non-resident ones, who will eat undefiled food in their own sweet-smelling homes. The Kshatriya institution will be the Richman's College, to be started because "the failure of colleges to attract students of the well-to-do classes is a very serious and far-reaching defect of our education system." Thus the priggery, so carefully imparted in the average rich man's home, can be intensified in the University. The Dacca and New colleges will be the places for the middle classes—the Vaisya—of this new caste-system. Nothing can be more mischievous than this over-separation of class from class, sect from sect, in the University. No University life is worth living in any country in the world, if the rich and the poor are not to rub shoulders, if different religions are to revolve in different orbs. In India, under the present circumstances, this is a positive bane. As it is, the rich man is too full of snobbery, the Moulvie and the Brahmin too full of old-world prejudice, and it is a mistaken democracy to provide for the

perpetuation of hocus-pocus because an ignorant demos demands it.

THE TECHNICAL SIDE.

The technical side of the University is rather poorly conceived. There will be no Agricultural College. There will be no Law College, but only a Law department to prepare for the Calcutta Law degrees; this is a pity, because all Law colleges in India are not what they ought to be; the teaching very little and the attention paid to such teaching, almost *nil*; the examinations test but the memory. In fact all our Law colleges and examinations are attractions which keep down as far as possible the demoniac prepossession of our young men for the unproductive profession of the Law. There is in them no study or investigation of the Science of Law, of the only part of the study that will appeal to the reason; our Law colleges are not educational institutions but B. L. mills. It is regrettable that the only opportunity for forming a school of Indian Law is not going to be utilized. Nor will there be a Medical College; but the first year's course of a medical college,—which generally consists of a preliminary course of Physics, Chemistry and Botany,—will be provided for in the colleges of the Dacca University. This semi-affiliation to the Calcutta University is another undesirable feature of the scheme. If the Dacca University cannot make provision for legal or medical studies, why not leave them severely alone? Half-measures are bad anywhere; much more so in an institution, unique in India, a Teaching University.

THE DOMINATION OF CALCUTTA IDEALS.

Throughout the scheme, the domination of the ideals of the Calcutta University is

perceptible The Calcutta Matriculation certificate will be accepted as the passport of admission to the Dacca University. This is the most unintelligible part of the programme. The Calcutta Matriculation is the most unsatisfactory test in India, because of the vast number of candidates that apply for the examination; and if any University can arrange for an ideal method of Matriculation, it is a localized University like the Dacca one and not one like the Calcutta or Madras, whose High schools and colleges are scattered over a vast province; yet the Dacca University proposes to hand over to Calcutta its rights of matriculating its students. A similar domination of Calcutta is perceptible all along the part of the scheme dealing with the courses of studies and examinations. In only one important point will the Dacca University studies differ from the Calcutta ones and that is, in the provision for Honours studies in one subject, as in Madras. Another little speciality of Dacca will be that students of Arabic will be taught to converse in that language. This is rather curious. The Arabic of books is the language of Muhammad crystallized. Modern Arabic, that which is spoken to-day is so widely separated from that of the *Quran* by twelve centuries of phonetic and semantic change that it is almost a new language; it is difficult to guess what *earthly* purpose is served in getting pupils to converse in this antique Arabic; why not train Hindu boys to converse in Vedic? Or is this another sop to demos? We have dealt only with the defects of the scheme; all the same, we welcome it, for it is the first attempt, though a halting one, to organize a Teaching University in India. We hope, ere long, that every large city will have one for itself.

VI. ON THE TEACHING OF MATHEMATICS IN SECONDARY SCHOOLS.*

(Continued from page 19, Vol. XIX).

DECIMALIZATION OF ENGLISH MONEY. (Continued.)

IN the last article I explained the process of decimalizing English money. The inverse process is also important.

If the decimal be given to 3 places; to convert £345.678 to £, s., d. The greatest possible number of 'fives' in the number formed by the first two places gives the number of shillings; the student at once gets £345, 13s.; then we have left .028. Since the number forming the 2nd and 3rd places is greater than 24, the given decimal fraction gives 27q. for trial and since $\frac{1}{4}$, the quantity neglected, is less than $\frac{1}{2}$, the answer is £345, 13s. 6 $\frac{1}{2}$ d. To convert £3.496 to £, s., d. As before £3.45 gives £3, 9s. We have £.046 left which gives 45q. for trial but the quantity neglected, i.e., $\frac{1}{4}$ is greater than half, therefore the approximate answer should be £3, 9s., 11d.

If the decimal be given to 4 places or more; to convert £345.6789. As before we have £345, 13s., leaving £.0289 and 27q. will give £.0281 and the difference is greater than £.0005, i.e., $\frac{1}{2}$ q., so the answer must be £345, 13s. 7d. From this we see that if the 4th place calculated falls short of or exceeds the 4th place given by 5 or a greater number, we should increase or decrease the answer by 1q. Let us consider another example: £3.4963. First we have £3, 9s. and £.0463 gives 45q. for trial and 45q. gives £.04687... which exceeds the quantity given, by £.0005; hence the answer is £3, 9s. 11d.

* The right of publishing these articles is reserved.

From these we arrive at the following working rule:—

When the decimal is given to 3 places, divide the number formed by the 1st two places by 5, the quotient gives the number of shillings; then consider the number formed by the remainder in the 2nd place and the number in the 3rd place as so many farthings and subtract 1q. for every 24 and one for 12 and more of the remainder.

E. G., £3.799, £3, 15s., 49, 49q. — 2q. = 47q.; £3, 15s. 11 $\frac{1}{2}$ d.

When the decimal is given to 4 places. Write down £, s.; consider the number formed with the remainder in the 2nd place and the number in the 3rd place as so many farthings; subtract one if the number is 24 or greater than 24 and 2 if it is 48 or over; then calculate the 4th digit according to the rule. If this is less or greater than the given 4th place by 5 or over, increase or decrease the number of farthings by one.

E. G., £7.8952.

£7, 17s., 45 — 1, 44, 44 $\frac{1}{4}$, 45 $\frac{1}{4}$, 458; calculated result exceeds given quantity by £.0006; hence the answer is £7, 17s., 10 $\frac{1}{2}$ d.

This inverse process may be extended to find the number of farthings hence the number of pence in a given amount in £, s., d. The £, s., d. can be decimalized; then we have to multiply the result by 1000—40 to get the number of farthings, i.e., we remove the decimal point 3 places to the right, and subtract from this 40 times the original number. [Begin with the 3rd decimal place the multiplication by 4 and subtract from the 2nd decimal place in the product by 1000, both multiplication and subtraction being done in one process.] Thus we get the number of farthings and the number of pence on division

by 4. It is to be noted that it is necessary to carry the decimalization to 5 places.

E. G., to reduce £35, 17s. 11d. to farthings and hence to pence.

£35, 17s. 11d.
= £35 895 $\frac{1}{4}$ 83 85
34 460 00 4583
8615 d. [34460q.]

DECIMALIZATION OF INDIAN MONEY.

Of course Indian money is not so easy to decimalize as English money. The following process of decimalization I have been following in my classes and have found it generally successful. First to decimalize annas:

2 as. = Re. .125.	10 as. = Re. .625.
4 as. = " .25.	12 as. = " .75.
6 as. = " .375.	14 as. = " .875.
8 as. = " .5.	

Now for 1 anna, 3 annas, etc. We know that 1 anna = Re. $\frac{1}{8}$ = Re. .0625. 3 annas = Re. $\frac{3}{8}$ × 3. An easy way of making boys reduce this will be: $(3 \times \frac{1}{8} \text{ Re.}) = (3 \times 10 \text{ as.}) = 30 \text{ as.}$ which is otherwise obviously = $(1\frac{1}{2} \text{ Re.}) = 1875 \text{ Re.}$ $3 \times \frac{1}{8}$ must be also reduced by our Indian boys to $1\frac{1}{2} + \frac{3}{8} = 1\frac{7}{8}$ and $(\text{Re. } 3 \times \frac{1}{8}) = \text{Re. } 1875$. Similarly

5 as. = Re. $(5 \times \frac{1}{8})$ = Re. $(3\frac{1}{8})$ = Re. .3125.
7 as. = " (70 as.) = Re. $(1\frac{3}{8})$ = Re. .4375.
9 as. = Re. $(9 \times \frac{1}{8})$ = Re. $(5\frac{3}{8})$ = Re. .5625.
11 as. = " (110 as.) = Re. $(6\frac{3}{8})$ = Re. .6875.
13 as. = Re. $(13 \times \frac{1}{8})$ = Re. $(8\frac{1}{8})$ = Re. .8125.
15 as. = " (150 as.) = Re. $(9\frac{3}{8})$ = Re. .9375.

The reductions give practice in both the methods. The 'annas' method finds favour with our modern boys; it may be surprising to many teachers when I tell them that our boys of the VI Form find it difficult to multiply the fraction $\frac{1}{8}$ mentally by a number of 2 digits such as 13, 15, etc. The class should be well drilled in the conversion of annas into decimals of a rupee after the boys have

grasped the process of reduction. They should become thoroughly familiar with the figures. The boys should know that with regard to eighths 25 follows 1 and 6, 75 follows 3 and 8 and that with regard to sixteenths, 875 follows 1 and 6; 125, 3 and 8; 625, 0 and 5; 375, 4 and 9. At least familiarity with the eighths should be thorough with our Indian boys dealing with Indian money. Such answers as .825, .675 should be considered absurd.

Then to decimalize 'pies.' Now if the number of pies is multiplied by 5 then each unit in this number is $\frac{1}{16}$ of a rupee and bears the same ratio to it as a farthing does to a pound, and the rule for the decimalization of English money applies, i.e., we multiply the number of pies by 5, consider the product as so many farthings and express it as the decimal of a pound and the same decimal fraction expresses the given number of pies as the decimal of a rupee.

B. G. to decimalize 7 pies.
 $7 \times 5, 35$; Re. .035 $\frac{3}{4}$; Re. .036 $\frac{1}{4}$.

To decimalize $9\frac{1}{2}$ pies.
 $9\frac{1}{2} \times 5, 47\frac{1}{2}$; Re. .047 $\frac{1}{2}$ $\frac{47\frac{1}{2}}{24}$,
 = Re. .0485
 9
 Re. .0494

To decimalize Rs. 75, 13 as. $10\frac{1}{2}$ pies.
 Rs. 75.8125 (130 as., .8 $\frac{1}{2}$)
 $.0545 \left(.052\frac{1}{2} \frac{52\frac{1}{2}}{24} \right)$
 1
 Rs. 75.8671

The inverse process of reducing a given decimal of a rupee to Rs., as., ps. is somewhat

difficult. The difficulty lies in taking away from the decimals the portion equal to the number of annas. The following hints may supply an easy way to find out the number of annas. If the 1st digit is, say 8, then .8125 corresponding to 13 as. must be subtracted. At the sight of 8, 125 must follow from familiarity with the figures, and 13 will be suggested from the fact that $8 \times 16 = 128$ and the next multiple of 10 is 130, hence 13. Next suppose the first digit is 6, the decimal to be subtracted is either .625 or .6875 and the annas corresponding are 10 or 11 since $6 \times 16 = 96$, and the multiples of 10 may be 100 or 110. The remainder after subtraction is to be treated in the same way as the remainder, after finding the number of shillings, is treated in the case of English money, only we divide by 5 to find the number of pies. A few examples will make this clear.

To reduce Rs. 37.476 to Rs., as., ps.

Rs. 37.476	Rs. 37	.0385 considered
.476	7 as.	as English money
	7 ps.	gives 37q. and hence
.0385		7 ps.
	Rs. 37, 7 as. 7 ps.	

To reduce Rs. 4.9236 to Rs., as., ps.

Rs. 4.	.9236	
14 as.,	.875	Since .9375 is greater.
9 ps.		
	.0486	considered as English
Rs. 4, 14 as. 9 ps.		money gives 47q.

To find correct to a pie the dividend on Rs. 1567, 14 as. 6 ps. at 9 as. $4\frac{1}{2}$ ps. in the rupee.

	Rs.	
Rs. 1567, 14 as. 6 ps.	= 1567.875 +	
	.03125	
	1567.90625	
9 as. $4\frac{1}{2}$ ps. =	.5625	$7\frac{1}{2}$
	.0225	$2\frac{1}{2}$
	9375	$2\frac{1}{2}$
	.5859375	8

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The dividend required = Rs. 1567.90625 $\times$.5859375
 = Rs. 918.69502
 11 as. .6875

1567.90625		1 pie .00752
	0.5859375	= Rs. 918, 11 as. 1 p.
78395312		
12543249		
783953		
141111		
4703		
1096		
78		
91866502		

A book-seller sends for books worth £17, 13s. 9d. He is allowed a discount of $33\frac{1}{2}\%$. The expenses amount to 10% of the gross cost price. What should he pay in Indian money for the books if 1 Re. = 1s. $4\frac{1}{2}$ d.?

Gross C. P. = £17 13s. 9d.	= 17.6875
Expenses = 10% of the C. P.	= 1.76875
Commission allowed	= 14.10417*
	13.56042

And 1s. $4\frac{1}{2}$ d. = .05
 .017708
 .067708.

$\therefore$ The net C. P. in Indian money
 = Rs. 13.56042
 = Rs. .067708

2002779	
67777]1356042	= Rs. 200 2779
188200	4 as. .25
52784	
5389	5 ps. .0279
650	
	= Rs. 200, 4 as. 5 ps.

The inverse process may be extended to reduce a given amount in Rs., as., ps. to pies. We proceed as in the case of English money but divide by 5 to get the number of pies.

Reduce Rs. 4375, 13 as. 9 ps.
 4375.8125
 .046875
 4375859.375
 4200825.001
 840165
 840165 pies.

* Since commission allowed is subtractive, we take the 'nought complement' of a third of 17.6875.

In the next article I shall deal with Decimalization of English weights and Indian weights.

(To be continued.)

S. CHINNASAMI AIYAR.

CAN TEACHERS GUARD YOUTHS AGAINST EVIL INFLUENCES?

BY KRISHNA DAYARAYA.

"Let no reckless language pass unchallenged. Find out what your youths are thinking of; guard them against evil influences and lead them to think right. Fearlessly and sternly condemn the written and the spoken word which may direct others into the path which leads to crime."—H. E. LORD SYDENHAM, 7th January 1913.

THESE are the latest utterances of H. E. Lord Sydenham in which he has exhorted the public to guard their youths against "evil influences." And no one will deny that amongst the guardians of youths against "evil influences," teachers as a class occupy—or ought to occupy—a very prominent and respectable position. It may not be, amiss therefore, to consider in what manner and to what extent teachers can guard youths against evil influences and in what manner and to what extent they are actually allowed to do so under the now-existing disciplinary regulations and circulars.

The public (including teachers of course) are exhorted "fearlessly and sternly (to) condemn the written and the spoken word which may direct others (*youths under their charge especially*) into the path which leads to crime." And doubtless, if teachers had no fear of losing their bread for following this advice in the class-room, they would heartily endeavour to the best of their abilities to dispel evil ideas from the head of youths, whenever occasion arose, not only in the

class-room but wherever they should see them reading or listening to the word which may direct them into the path which leads them to crime. But alas! Disciplinary regulations and circulars have made them powerless to do their duty in this direction! They are not to attend political meetings; they are not to read newspapers which adversely criticise and misrepresent the general policy and particular administrative measures of Government; above all they are not to speak on political questions or discuss with boys or inform them about current political affairs, in the class-room or out of it. In a word, they are expected to be quite innocent and ignorant of the very words—spoken and written—which may direct youths into the path which leads to crime. How then are they to guard them against evil influences, and WHERE, IF NOT IN THE CLASS-ROOM, are they to lead them to think right? If they themselves do not know what evil ideas, what evil influences, boys have in their minds, how are they to combat the situation? For, be it remembered, that teachers, whether in Government schools or recognised schools under private management, are ignorant, nay, they are *ordered* to keep themselves ignorant, about what is written by the press or spoken in the public on political affairs, whereas youths, whom they are expected to lead to think right, are not infrequently reading or listening to misrepresentations of Government policy and measures, in their homes, in public places, in the streets, and elsewhere. They are not to attend political meetings; how are they to know if any of their boys attend them? Thus it happens that although they have the ardent desire to guard youths against evil influences, the very disciplinary restrictions which Government have thought it wise to impose on them, prevent them from following the advice

embodied in Lord Sydenham's latest exhortation quoted above. Do Government think that teachers, who have received higher education and have chosen to spend their life in an ill-paid profession, in preference to better-paying professions, are so bad, so disloyal, and intellectually and morally so obtuse that they will easily fall victims to the false logic of the anti-Government papers or to the specious arguments of an insinuating and intriguing speaker in a political meeting? If not, would it not be a *wiser* policy to take them into confidence, to look upon them as loyal guardians of youths against evil influences and to give them the liberty of reading papers and listening to speeches which spread discontent and disaffection, in order that they might be better informed as to the nature of the evil influences from which they may, from time to time, guard their boys, and lead them to think right? To expect teachers to follow the advice given above without giving them such liberty, is to expect physicians to deal with patients about the nature of whose ailments these physicians are *strictly ordered* to keep themselves quite ignorant.

It often happens that a boy, who has read or heard something written or said against the actions of Government, asks the teacher a question which often *puzzles* him, (for the boy himself is too young to think of asking such a question); and very often the teacher is full of indignation against the writer or speaker of the words which have prompted the boy to ask the question; always, the teacher feels on such occasions an irrepressible desire to dwell on the question and to set the boy right. But it is a sin to talk on political matters! So the poor teacher, chafing under restrictions which defeat their own end, has (1) to

order the boy to sit down, remain quiet, and never to ask such questions; (2) or to tell him that the writer or speaker who prompted him to ask the question was weak in the upper-story and hence unreliable; (3) or to ignore him altogether and proceed with the lesson; or (4) to say that boys ought not to bother themselves with such questions.

In the first case the boy looks upon the teacher as a "tyrant and no gentleman;" surely it is not desirable that boys should have such an impression about their master. In the second case, the boy will be far from being convinced that his master's opinion is correct. In the third case, the boy will leave the class under the impression that his master is perhaps of the same opinion as the writer or speaker who prompted him to ask him the question, for silence shows consent, and the boy knows that his master is forbidden to talk on political matters. In the last case also, the boy will have a similar impression. Enough has been said to indicate how unsatisfactory is the situation into which teachers, the guardians of youths (for six hours at least out of every twenty-four), have been left by some of the disciplinary orders of Government. Let us now briefly indicate how this situation requires to be altered.

The knowledge that many teachers possess about the administrative machinery and the political problems of the country, is often not commensurate with the knowledge of those who vehemently attack Government's policy and measures every now and then. If they had that knowledge, they might perhaps be better able to answer any questions based on adverse criticism.

(i) The Government should, therefore, supply to school-libraries, such official papers, blue-books, reports and other publications as are supplied to newspaper editors. There should also be a selection of books bearing

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on the administration of India under the pre-British and British periods and also books showing how India has steadily prospered under the fostering care of England.

(ii) Teachers should not be disallowed from attending political meetings, in order that they may have an idea of the views expressed in such meetings—views which no Government measures can prevent from being discussed in the homes, in streets, and in other public places, and which are sure to reach the ear of boys in some place or other.

(iii) They should have the liberty of discussing in the class-room, any current political question or questions about which wrong and pernicious views are likely to be expressed in the press or from the platform.

In a word, teachers should be taken into confidence as loyal supporters and faithful adherents of the British supremacy in India, and be treated as such, instead of being looked upon with great suspicion, as they appear to be, judging from the nature of the restrictions imposed on them. Of course, let the Government admit into its service only such men as can be trusted; let it also require the managers of recognised private schools to appoint none but trustworthy persons on their staff; but once trusted, let teachers have that liberty which alone can enable them to guard youths against evil influences, as long as there is no reason to suspect that they are misusing or abusing the liberty granted to them.

S.S.L.C. EXAMINATION—GROUP C: PHYSICS—DETAILED SYLLABUS.

Headings.	Subject in detail.	Books of reference, apparatus, etc.
Measurements—Length.	1. Meaning of a unit, British and metric units, multiples and sub-multiples, use of the foot and metric rules, calculation of mean values, use of dividers, for measuring for scale, cannot be directly applied. 2. Length of curves, measured with a flexible material, as a piece of string and with dividers, by means of a disc having a mark scratched on the rim. 3. Diameters of spheres and cylinders, hollow and solid with calipers, with metre rule and blocks of wood. Internal diameter with a wedge of curve paper. 4. Relation between the circumference and diameter of a circle, the number of times the diameter is contained in the circumference, calculation of either in given cases. 5. Comparison between British and metric units, conversion of units.	(1) Sinclair: First Year's Course in Practical Physics. (2) Introduction to Physics and Chemistry: Parkin and Lean. (3) Elementary Practical Physics; Watson. (4) Gregory and Hadley. (5) A class text-book of Physics. (6) First Year's Course in Practical Physics, by Jackson.
Area.	Instruments used in exact measurements: vernier, construction and its use; slide caliper; examination and its use; screw gauge; description of the parts; use for finding the thickness of wires, rods and sheets of metals; measurement involved in two dimensions; units in area; area of triangles, parallelograms and circles—use of formula and verification on curve paper; of irregular figures by triangulation and verification with squared paper; determination of areas by weighing.	
Volume.	1. Measurement involving three dimensions: units of volume; examination of some regular solids and calculating their volume, i.e., cube, prism, box, cylinder and cone; application of formula and verification by displacement. Comparing (1) the volume of a cube and a cone having the same height; (2) the volume of a prism and a pyramid; graph connecting British and metric units of length, area and volume. 2. Capacity of a hollow vessel: units of capacity measuring jars and flasks; Pipettes, burettes, their uses; advantage of using narrow-necked vessels for measuring capacity; precautions to be taken in reading them. 3. Finding the volume of liquids and irregular solids with graduated vessels. 4. Calibration of a long test in c.cm. for use in practical classes; use of a float in the burette.	
Measurement of mass.	The balance; description; how to use it and precautions to be taken in using it; meaning of mass	

Headings.	Subject in detail.	Books of reference, apparatus, etc.
Density.	and weight simply explained; use of spring balance for comparing weights. (indirectly mass). i. Of liquids: To find the weight of 100 cc. of water at a temp. of the room; to find the weight of 100 cc. of brine, copper sulphate solution, etc. Equal volumes of different liquids contain different masses. Equal masses of different liquids occupy different volumes. Idea of density developed; relative density; absolute density. Difference between absolute and relative density. Sp. gr. of liquids from volume and mass. Specific gravity bottle and description, its use, precautions to be taken in its use. Influence of temperature on relative density. ii. Of solids: From mass and volume; of soluble and insoluble powders	
Hydrostatics	1. The idea of pressure—the pressure of a liquid and the containing vessel; the weights of liquids compared; the definition of pressure of a liquid at a point. Increase of pressure with the height of a liquid. Practical application of the principle in tank bunds. 2. Pressure in the interior of a liquid—shown with an open cylinder, disc and a string; upward thrust, downward and sideways; a simple manometer for measuring roughly the internal pressure of a liquid shown with a U-tube of different arms (the bend being filled with mercury). Pressure in several directions at the same depth (shown with a Y-shaped tube); conclusion; all kinds of pressures increase with depth; graph connecting pressure and depth. 3. Resultant thrust on immersed bodies—the whole thrust (total pressure) on a body—the tendency of several forces composing it—the resultant pressure in the upward direction. 4. Effect of the resultant upward thrust—body weighs (appears) less in the liquid than in air. The Principle of Archimedes deduced. Expts. to prove the above (socket and cylinder expt.) Application of the principle for finding the sp. gr. of solids and liquids. 5. Flotation—when the upward thrust is greater than the weight of the body placed in the liquid the body floats. The principle of flotation, i.e., weight of the floating body = weight of the displaced liquid. Experimental verification of the principle; Laws of flotation; use of the principle of flotation to find the sp. gravity of floating bodies (for example a wooden cylinder). 6. Hydrometers—simple ones; construction and use; Nicholson's Hydrometer, description; now used for finding the sp. gr. of solids and liquids.	(1) Gregory & Simmons: Practical Physics, Vol. I. (2) Gregory & Hadley: "A Class Text-book of Physics."

Headings.	Subject in detail.	Books of reference, apparatus, etc.
Gases.	1. Their characteristics; pressure of a gas; a U-tube with mercury to measure pressure. Liquids in a U tube; calculation of densities of liquids that do not mix with a U tube (balancing columns); of liquids that mix with, Hare's apparatus. 2. The pressure of the atmosphere; to show that air exerts pressure—to make a barometer-record of daily observations; variations of atmospheric pressure; variations with altitude; variation every day; graphical representation of variations in pressure. The standard pressure. 3. Density of the air near the earth varies from time to time; so winds caused; calculation of pressure of air on 1 sq. cm. in grams. 4. Gases perfectly elastic. Density and pressure increase when gases are compressed. They diminish when gases expand. Boyle's law. Experimental verification for pressures (1) above one atmosphere, (2) less than one atmosphere. Graphical representation of Boyle's law. 5. Balloons; how they work; principle of flotation applied. 6. Pumps—air pump; water pump; force pump; fire engine; use of air chambers; syphon; syringe.	
Measurement of time and Pendulum.	Modes of measuring time (sand glass, sun-dial); unit of time; the sidereal day; the solar day; the pendulum; properties of the simple pendulum (1) time of vibration constant; (2) time independent of the amplitude; (3) time independent of the mass of the bob; (4) time directly proportional to the square root of, the length of the pendulum; (5) time, value of gravity. Experimental verification of each relation. The seconds pendulum. Getting the length of the seconds pendulum by calculation and verification of the same by expt. Graph representing the relation between the length and time of vibration of a simple pendulum.	

(To be continued).

B. NARAYANASWAMI.

THE STUDY OF FOSSILS.

REMOVE the incrustations of the earth and you can see a valuable treasure hidden underneath it in the form of a book, the leaves of which are represented by the different strata and the bold characters therein—the keep-sake of the past history of the world—are the well-known relics of animals and plants, the owners of which once flourished on the face of the earth and most of them are at present snatched away from us by the hand of time. Mother-nature, not being unmindful of this catastrophe, has with her slow and steady course preserved those organisms carefully and those sheets will be unfurled only to those who have whetted their desire for a keen and genuine interest in attaining true knowledge.

The remains of animals and plants either in the form of actual organisms or as casts and moulds, such as shells and impressions left behind as foot-prints, burrows of worms, insects, etc., are known as fossils. The term comprises any trace of form or structure of organisms, sometimes with all the delicacy of form entombed in different layers of the stratified rocks.

The solid crust of the earth, having been formed at successive periods by the deposition of rocks, can be divided into igneous and sedimentary rocks. Igneous rocks are produced by the internal heat of the earth and are mostly unstratified, as in granite and basalt. Organic remains are not met with in these rocks. Sedimentary rocks, otherwise known as stratified or aquatic rocks, are formed by the debris of the previously existing rocks, carried by streams and rivers and deposited in lakes and seas. The chalk cliffs of England and the Kadappa slabs of the

Madras Presidency are examples to these. They really represent the catacombs of animals and plants which formerly existed on the surface of the earth. These rocks can be divided into different groups or epochs, each group having fossils peculiar to itself. Geologists have divided these rocks into three groups, each group representing a period of unknown duration. These groups are again sub-divided into systems of lesser periods of time. Most of them contain the fossils of some species, which no longer exist; but they belong to the primary sub-divisions of animals and vegetables which are known to us.

When a species has once become extinct, it never re-appears. The recent strata contain the skeletons of animals, which do not differ greatly from the existing ones. The lowest stratified rocks are the oldest formations. The older the formations, the greater will be the differences between the fossils they contain and the living animals and plants. They contain fossils which are so different in character that we cannot readily say to which of the existing orders they really belong. Such creatures as aquatic reptiles as great as whales, birds with teeth, some molluscs, crustaceans and pisces, exhibit such great differences that we cannot without difficulty classify them. Such evidences tend to show that there is a direct continuity of succession of the forms of life in time. It is also possible in certain cases to trace the history of living forms to the extinct ones.

The chance of preservation of all animals and plants is not the same. The marine creatures take a lead in this. They are in a more favoured position and are likely to be preserved in numbers, for the fine particles of sand, mud and other sediments are sus-

pendent in water and the organisms that happen to die and drop to the bottom are safely preserved among these deposits. In such cases the hard parts either in the form of endo-skeletons or exo-skeletons stand a better chance of preservation than the soft parts. The chitinous coverings of crabs, prawns, the skeletons of corals, the shells of molluscs, the scales of fishes, calcareous plates of cuttle-fishes, and the bones and teeth of animals are generally met with in the sedimentary strata with little or no change. In order that animals and plants might be preserved, they must possess a skeleton of some kind or other, inasmuch as the soft parts will soon be decomposed and may not leave any trace of their existence. We cannot expect a jelly-fish to be preserved as such, unless it be its fossil in the form of an imprint. The second requisite is that the organisms must be covered up with some deposit. All marine creatures do not stand the same chance of preservation. Sometimes it so happens that the whole organism decomposes for want of sediments in the water. A large portion of the vast expanse is devoid of the sediments. The immense area of the ocean shows a bright blue tint and this bespeaks its purity. If an organism is left on the surface of the earth, exposing to the air, the action of the sun, wind and rain, we see practically that oxidation sets in and the whole thing is crumbled down to powder. Even the remains of animals which are imbedded either in sand or gravel will be dissolved by the percolation of water during the upheaval of certain regions of the earth. In the tertiary deposits bones, shells and hard parts of crustacea and other creatures are found in their natural state without undergoing any modification.

The hardening of soft moist clay into freestones and the like agencies has bequeathed to us the foot-prints of animals and has thrown light on the external conditions of those past days. The impressions left behind by tortoises' feet and the foot-steps of lizards, nay, the impressions made by some shower, have been miraculously preserved to us by ages.

Fossilization depends greatly upon the composition of the organism and the material in which it is embedded. There are different types of fossils and the leading ones shall be cited below :—

(a) The organism is preserved as a whole. In this the skeleton as well as the delicate parts suffer very little change. It must be understood that if an animal is kept free from the action of the air by a thick packing of ice and other impermeable substances, the animal will not undergo putrefaction and for ages it can be kept unchanged. For this knowledge we are to a great extent indebted to Peter Simon Pallas, who in his journey through Siberia in the latter half of the eighteenth century found out the entire specimens of extinct animals, such as the woolly rhinoceroses and mammoth. Even poets have been struck with these wonders of Nature and we have seen Lord Tennyson harping on these themes :

"Or like an old-world mammoth bulk'd in ice
Not to be molten out."

Flies buried in certain resinous products of vegetables, known as amber, have also been found.

(b) The skeletons of certain animals are preserved almost unchanged. This form of the fossil has its skeleton in its original form. Sometimes they lose their organic matter and are replaced by lime, making them little

heavier. The fossils in the recent formations and the skeletons of the extinct animals differ in having the latter, lighter and more porous.

(c) The original substance becomes carbonised. The chitinous coverings of some animals as well as plants having been decomposed, their oxygen and nitrogen are liberated and thus the percentage of carbon is increased. Similar action takes place in the conversion of ancient trees and plants into coal.

(d) A cast and a mould may be found. In this type only the external form is preserved, the internal structures and the original substances are entirely removed. Moulds are marks or impressions left behind by animals or plants, whereas the cast of an animal is the representation of the animal in stones or muds. These kinds of fossils are by far abundant in the porous strata. When the organism, say, a mollusc is surrounded by a mineral deposit, it takes a mould of the shell, and the interior organism decays and the space is filled up by the same mineral material. Water containing carbon dioxide percolates through and the shell is dissolved and carried out as bicarbonate of lime, so that a mould of the external and internal forms of the shell is formed. Sometimes it so happens that as the shell is dissolved and carried away by the percolation of water some other mineral substances get in and occupy their place. In such cases a cast of the shell is formed. It may also happen that in some instances both a cast and a mould are produced. Beautiful instances of this kind of fossilization are seen in the molluscan fossils of the secondary rocks of Portland. The imprints, the foot-prints of animals and the impressions left behind by

some soft-bodied animals as jelly-fishes can be included under the type of moulds.

(e) Fossilization is also effected by some molecular displacement, when it is known as petrification. Specimens of this sort are met with only very rarely. The petrified fossils show all the delicacy of their structure. In these fossils the animals and plants have their organic matter replaced molecule by molecule by mineral substances. The process goes on so slowly and wonderfully that even the minute parts are nicely preserved and no change occurs to the structure of the organism. Petrification occurs either by silicification (by the agency of silica) or by calcification (by the agency of carbonate of lime). Even the cells and vessels of certain wood have been fossilized in a similar way.

In order that we may have a clear idea of the particular system or systems of rocks in which these fossils can be met with, the study of the distribution of animals and plants is quite inseparable from the study of fossils. The fauna of a country is to a large extent independent of the climate and we also see that the animals of adjacent countries vary to a considerable degree. It is more advisable to study the distribution of the present fauna of the world from a zoo-geographical point than from a mere geographical point of view.

To study the distribution of the past fauna and flora of the world, we shall transport ourselves to the lowest layer of the stratified rocks and examine the records left to us by ages and ascend stratum after stratum, surveying the traces of the animals and plants, which peopled the earth's surface at such remote periods. In the lowest rocks where we find the traces of the habitation of animals,

we meet with the remains of numerous invertebrates. Later on we discover fishes and amphibia and these are followed by reptiles, which precede the creation of birds and mammals.

The fossiliferous rocks can be divided into three great distinct geological epochs.

The primary epoch, the oldest formation, contains undoubted remains of land-plants. We find there the traces of dense forests, the stems of some trees towering a height of 80 to 100 feet. In this epoch the vegetables predominate and it is here that we have the first remains of land-plants. The countless tons of coal, that are being excavated from under the earth is supposed to be the remains of those antique forests. A considerable number of millipedes and scorpions of various sizes have been preserved in these rocks. Besides these, land-snails, insects of different types, size and colours, corals, sea-lilies, molluscs and lamp-shells are present. The earliest organisms possessing notochord occur in the middle of this epoch and none of these has been found to possess a lower jaw or true paired limbs. The remains of typical fishes, their oldest known teeth, spines, etc., also appear here, but later on they become abundant.

In the secondary epoch the scene rapidly changes, the thick and promiscuous growth of plants vanishes and the 'leviathans' appear. Probably this age has supplied mythology with the description of wild monsters and animals, whose habitats we had not even dreamt of. The poet himself is astonished to find,

"Dragons of the prime,

That tare each other in their slime."

The lowest strata in this period show the

presence of a few reptiles, but they dominate later on. This age has deservedly been called the reptilian age. "The reptiles astonish us by their number, their gigantic size and their unwonted form; antique and incomprehensible inhabitants of the globe reproduced in all their parts to our wondering eyes by the genius of a Cuvier and an Owen."

The epoch denotes the existence of a throng of frightful lizards. In 1821 Charles Konig, the first keeper of the mineralogical collection in the British Museum, described *Ichthyosaurus* as a veritable fish-lizard. This reptile is supposed to have been the terror of the seas. These animals sometimes attained a length of about thirty-three feet. Their organisation is one of the most complex of all organisms. Their vertebrae resemble those of a fish, while their fins are like those of a dolphin. Their jaws are armed with strong teeth, which resemble those of a crocodile. They have a pair of eyes the mechanism of which is quite unprecedented. The optic lobe roughly represents the flower of a chrysanthemum and is sometimes as large as a man's head. With the help of this pair of magnificent eyes, the animal can find out its prey at the greatest as well as the shortest distances. The structure of their intestinal tubes has been like an Archimedean screw and they lived upon fishes and occasionally their own species.

The remains of such dreadful animals are abundant in this period. The presence of a monstrous newt, *Labyrinthodon*, a most extraordinary creature of the size of an ox with teeth "as the windings of a maze," is not the less dreadful. The *Masasaurus*, an immense marine lizard, attaining a considerable length of more than 75 feet has been

discovered by W. Daniel C'onybeare in 1822! G. A. Mantell in 1848 announced the discovery of *Iguanodon*, an herbivorous dinosaur. This animal aided by its powerful tail walked on its hind legs. The total length of the animal is more than thirty feet long and the head is about fourteen feet from the ground. A gigantic American dinosaur has been described as the happy possessor of three powerful horns.

The impressions of three-toed feet have been discovered. Some geologists consider that these indicate the primary existence of birds. The oldest known birds belonging to the genus, *Archæopteryx*, flourished in this period. They first appeared in the upper strata of this system and retained conspicuous characters even in the beginning of the tertiary epoch and at last disappeared.

A few mammals also appeared for the first time. They resembled the pouched animals that are found at present in Australia.

The vegetation of this period closely resembles the present flora of Australia. M. L. Figuier remarks that "the state of vegetation in the cretaceous period might be looked upon as the vestibule of the vegetation of our day." A good many dicots have also grown in the closing period of this epoch.

With the close of the epoch of the terrible creatures, we enter on a new era in which peaceful animals predominate. The fecundity of the distribution of viviparous animals of the tertiary epoch has given it the name of the epoch of mammals. Monkeys, bats, genets and marmots have taken the place of the ferocious giants of the last epoch. Whales, a mammal with naked skin appeared for the first time in the sea. The gypsum

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quarries of Paris abound in the fossils of *Palæotheria* and *Anoplotheria*, a kind of thick-skinned animals. The former resembled the tapirs and according to Cuvier, they lived in herds on the banks of rivers and lakes; and the latter could be compared to the otter, but were little larger and they dived with ease and sought for the roots and swollen stems, which formed their food. *Anoplotherium* discovered by Cuvier has also been proved to be intermediate between the pig family and the ruminants, which at the present day have distinct distinguishing characteristics. *Palæotherium* connects together the apparently different animals as the horse, the tapir and the rhinoceros. This species of animals was not happy enough to survive the epoch.

This age reveals also to us the existence of *Dinotheria*, a terrestrial mammal, resembling our elephant in shape, but larger in size.

Mastodon, which has excited in us so much interest and curiosity, was a worthy specimen restored to us from "time's tyrannic claim." It was known as "the elephant of Ohio," for it had the resemblance of an elephant and was discovered in numbers on the banks of the river of Ohio. They are found in Europe and North America. A perfect specimen in standing upright posture was obtained in the State Missouri in 1840, and this at present adorns the palæontological section of the British Museum. They were found imbedded in sandy deposits, with their stomachs loaded with food just then taken up and buried at the spots by some sudden floods and the deposition of alluvial mud. It has been proved beyond a doubt that their food consisted of herbs and small branches of trees.

Owen remarks that the frightful *Sivatherium*—the name was derived from the

God, Siva—found in India “is one of the most gigantic and extraordinary of the extinct races known to us.” This was only a stag, as huge as an elephant, endowed with four horns.

Ancient molluscs have perished and new ones appeared instead. Only very few reptiles are met with in this region.

The great similarity in the flora of this epoch to the present day is evidenced by the presence of oaks, elms and various other contemporary genera. “Looked at as even in Europe,” says M. A. Brongniart, a learned botanist, “this vegetation displays in particular a great analogy with the present flora of the temperate regions of the northern hemisphere.”

From the earliest times two theories had been in existence. Few people rightly conjectured that the fossils were parts of some living organism. The mass of the people could not go along the same line. Fine skeletons of animals even with their thin bones, shells with their ancient colourings and other marks, birds with their beautiful feathers, insects imbedded in glues with their transparent wings, leaves with their network of veins, woods with all their delicate vessels could not convince the people that they were the faithful records of the past fauna and flora of the world. They even believed that these fossils occurred as a result of the ‘plastic force’ within the earth and considered them as the ‘Sports of Nature.’ Mediæval people even went to the length of saying that they were ‘the freaks of Nature.’ This idea, *lusus naturæ* was held up to the sixteenth century.

The crust of the earth is subject to many convulsions and the Plutonic force within disturbed its surface from time to time. As

a result of this, the fossiliferous rocks from the beds of the deep were brought up to the top and the portions fractured occupied the position of mountains.

It required the genius of Bernard Palissy, the real founder of geology, born of poor circumstances with an abundant endowment of superior intellectual faculties, to dispel this superstitious belief from the minds of ancient people.

The skeletons of elephants and mastodons were considered by the ancients as the faithful remains of the famous warriors of old. A large knee-cap of an elephant was imagined by some to have belonged to Ajax. The remains of some mammals found in Sicily were worshipped by many people in the firm conviction that they belonged to Polyphemus. The conception of the existence of this valuable treasure hidden underneath the earth was so meagre that many persons fabricated unintelligent stories and mythologies according to their turn of mind.

For the inception of the science, we can go as far as three centuries and more before the Christian Era. Among the Greeks, Aristotle, Xenophon and Strabo knew the existence of fossils and they made a crude surmise of their own. In the sixteenth and seventeenth centuries, the pioneers of science tried to throw some light upon this, but the heavy stumbling block of religion and tradition stood in their way.

The study of these ‘medals of Creations’ was again taken up in right earnest only in the beginning of the nineteenth century. J. B. Lamarck (1744—1829) was the founder of invertebrate palæontology. The marvellous discoveries and the remarkable researches of Cuvier (1769—1832), the founder of vertebrate palæontology caused a rapid progress in the

science. Charles Darwin lubricated the wheels of action by the expounding of his new theory. His theory on ‘descent’ stimulated the people to search, to fortify and if necessary to verify this newly avowed theory. Scientists in all continents engaged themselves in finding out some new specimens or other so that they might grapple with Darwin’s theory of evolution. In the first half of the nineteenth century the extinct reptiles of the world were brought to light. They were so varied and different in structure that they required a great scientist to classify them. Attempts by many did not prove fruitful until the great anatomist and the direct successor of Cuvier appeared on the stage in the person of Sir Richard Owen (1804—1892). He re-arranged and classified them on his own model. The master-works of Leidy, another adherent of Cuvier, stirred the scientific world from America. “In discovery the theatre of interest shifted from continent to continent often in a sensational manner. After a long period of gradual revelation of the ancient life of Europe, extending eastward to Greece, Eastern Asia, and to Australia, attention became centred on North America, especially on rocky mountain exploration. New and unheard of orders of amphibians, reptiles and mammals came to the surface of knowledge revolutionising thought, demonstrating the evolution theory and solving some of the most important problems of descent.”

The advancement of the science of animals was effected chiefly by the ardent endeavour in the research of fossils. Evolution from the lowest to the highest can be discerned if all the animals past and present have been placed before us. On account of various reasons the record of the succession of life is very imperfect. The only resource on which

we can rely and which can supply us with some missing links is the fossils. Hence we find the extreme use of palæontology.

South America and Northern Africa give us the descent of elephants. In India there were eleven species of elephants, out of which only one has survived to the present day.

The evolution of bird was causing great anxiety in the mind of some scientists. The noteworthy discovery of birds of the genus *archæopteryx* in Europe and *hesperornis* in North America by Prof. W. A. Marsh, has been a wonderful boon to the supporters of the theory. The bird is of the size of a rook. It bears a great resemblance to the reptiles and is the possessor of a number of teeth unusual in birds. Its lizard-like tail is also long and jointed, each joint possessing a pair of quill feathers. The wings of this bird have not been specialized as birds. This animal is supposed to be a connecting link between the birds and the reptiles. An almost complete specimen of this animal was discovered in 1877 and it has been preserved in the Berlin Natural History Museum. It has a skull containing teeth and exhibits three digits in the fore-limb, all ending with claws. The British Museum also possesses a fairly good skeleton of this curious bird, but it is unfortunately wanting in the skull.

By the help of the study of fossils we can trace the life-history of animals and plants with certainty. The modifications of a certain organ through different strata can be traced successfully. We find a good illustration of this in the present horse. The earliest horse had five toes and this was followed by fewer toes until it diminished to the present form with a single toe, which we call the hoof.

Their grinders also exhibit similar striking features.

Geological records reveal to us that the life-history of an individual is but a rapid and sometimes incomplete repetition of the history of its race. Ontogeny (evolution of the individual) is a recapitulation, in miniature, of phylogeny (evolution of the race). Evidence to this is well furnished by morphology and embryology. For example, a frog begins life as a single cell. This unicellular oosperm undergoes a series of modifications, until at last it assumes the form of a tadpole and enters the stage of a worm and thence a fish. This animal is afterwards metamorphosed into the more highly organized being, the frog.

Fossils indicate the changes in the geography of the earth. The presence of terrestrial fossils in a strata, where marine organisms are found in abundance, leads us to infer that the land was not far off. Probably the animal that was grazing was dead and among the havocs done by sudden floods, plants must have been uprooted and these were carried by currents to the sea to be buried there. The stumps of trees in position show the presence of land. Innumerable pieces of stones of various sizes, whose corners have been knocked off and are scattered over a particular region will certainly remind us of the existence of a river at a remote period. Skeletons of littoral animals sometimes help us to know the depth of the sea.

The climatic condition of the past ages can also be known from examining the remains of animals, and more especially of plants. The fossils of a tropical region very closely resembles the existing animals and vegetables. The same rule holds good in a cold country. The true nature of the climate of a region

cannot be judged by the existence of the fossils of animals alone. The mammoth, resembling an elephant, was found entombed in the deeper layers of Northern Siberia. From this we cannot infer that the place belonged to the tropical region. Analogies are often-times dangerous. Mammoths were well adapted to live in cold climates. The main principle of the science of fossils is the study of adaptation. The remains of molluscs, characteristic of tropical and sub-tropical seas are even now found in London city!

The fossils serve a useful purpose as the indicator of geological chronology. Each system of rocks contains a particular species of animals and plants. It has been found that the latest formed strata have the organic remains, which closely resemble the existing organisms. The order of the succession of formations has been effected, not by a sudden replacement of one set of animals and plants by another, but by a slow and gradual process by means of which some of the older ones have perished and a few new ones have come into existence. This definite succession is the same in all parts of the globe. The fossiliferous rocks of a certain epoch of Europe bears a close comparison to those in Asia, America and Africa. This is applicable not only to epochs, but to each succeeding series of rocks. Therefore this helps us to fix with accuracy the relative position of rocks in the geographical formation. It also enables us to understand that, although two strata show some slight variations in their formations, they can be grouped under the same name and age, if they have the same fossil remains.

The study of fossils has already supplied us with the knowledge of the traces of animals and plants, which are not flourishing

on the surface of the globe at present. They furnish us with the missing links in the chain of progress. Fossils of animals also help us to discern whether they lived upon vegetables or other animals. If the edge of the teeth are pointed and conical in shape, they are known as canine teeth and we meet with canine teeth generally in carnivora. The stomach of the carnivorous animal is small. In herbivorous animals we meet with comparatively large stomachs. They also possess teeth, which are flat and rough outside. A combination of these two qualities indicates that the animal is omnivorous.

It may also be mentioned that some fossils are supposed to possess medicinal properties. Pouchet mentions that "the bones of bears which were obtained from the caves of Franconia passed in Germany for a sovereign antidote and were sold in all apothecaries' shops as the remains of fabulous unicorn."

The fossils of creatures like ammonites are used in many parts of India, as an object of worship. They are known by the name *Saligramam* and can be obtained from the river Guntak, a tributary of the Ganges. It has an oval shape and possesses a very small hole. The interior space as well as this hole, which leads up to it, are the work of a tiny creature belonged to an extinct genus of molluscs. The animal afterwards finds its way inside and utilizes the new abode as its lurking place.

The fact that certain kinds of earth are used as nutritive meal may seem astounding. The Negroes living in the forests of Carolina and Florida, the Ottomacs on the mouth of the Orinoco, and a few people settling on the banks of the Amazon, do feed upon a kind of clay at certain seasons of the year.

Moreover, it is well-known that an edible clay is a marketable commodity in Bolivia. These clays have been examined and found to consist of innumerable fresh-water infusoria. It is evident from this that the value of these clays is due to the presence of these microscopic shells. It has also been found that in times of dearth Laplanders substitute a kind of white mineral dust for cereal products in preparing bread. Retzuis examined this meal under microscope and found out to the astonishment of many that it contained about nineteen species of diatoms.

V. KRISHNA MENON.

THE TEACHER AS CRITIC AND CRITICISED.*

Mr. Ramanatha Iyer in opening his lecture remarked that when he was asked by the Secretary of the Association to deliver an address he was wondering what to speak about when a young friend who had ventured upon some criticism, complained that criticism had its penalties. That made him think of criticism in general and of the relation of the teacher to criticism. A great part of the work of a teacher was connected with criticism. He had to criticise his pupils' work. He had to assign marks for the various studies, and day by day they had to make a record of the progress made by a student in his studies. There had been felt a great deal of difficulty in assigning these marks and as to the exact estimate that could be formed as to the progress of the pupils, and this difficulty was one which had been greatly disturbing teachers in Madras in connection with the School Final Scheme. A great deal of criticism had been levelled at the question as to whether the estimate of pupils' work had really

* The substance of a lecture delivered by Prof. K. B. Ramanatha Iyer, M.A., B.L., L.T., of Pachaiyappa's College, under the auspices of the Teachers' Association, Teachers' College, Saidapet, with the Hon'ble Mr. P. S. Sivaswami Aiyer, C.S.I., C.I.E., in the chair,

any real worth. It had been contended that it was merely an approximation that they arrived at. In some subjects it was easy to mark the pupils' work according to the lecturer, and he described how the marking system was carried on in such subjects as mathematics, and in such subjects where they had to judge the work actually done. It was difficult even there to estimate whether the matter taught in such cases had been properly assimilated, or whether it had been merely mechanically memorised. He suggested that in matters of composition and translation and kindred subjects, they could arrive at a fair estimate of the work of the student by giving them test papers on subjects which had not formed part of the immediate class work. If this were done to a few of the students in a class at a time, the teacher or headmaster would be able to arrive at a correct estimate of the pupils' proficiency. Such a test would be much better than the matriculation test, the non-existence of which was lamented loudly. It was not possible for a pupil to answer such test papers by mere memory work and he thought that the teachers could be said to arrive at a fair estimate of the intellectual capacity of the pupils in this manner. They could also judge of the kind of moral training the pupil had received because to be able to answer such questions properly the student would have had to avoid the temptations of idling and passing his time in other than serious study. The question of how the teacher was to gauge the moral character of the pupil was often a puzzle to most of them. It was difficult in the High School with its forty students in a class and it was still more difficult in a college where classes were very much larger, sometimes 150 students being in one class. In the smaller classes the teacher had more opportunities of contact with his pupils, though even there it was a matter of considerable difficulty to come into contact with all students. He had heard complaints from headmasters that the instructions of Inspectors were difficult to carry out and that

these instructions tended towards a mere mechanical account of the work from day to day. If the residential system were extended to the high schools it would afford a better method of arriving at a decision regarding the pupils' moral qualities. At the present time there was very little opportunity of so doing. At the same time a teacher did have opportunities of studying his pupils and their characters, and that should be of great aid to him should he feel tempted to enter the field of experimental psychology.

CRITICISM OF EDUCATIONAL ADMINISTRATION.

He would now deal with another and a more ambitious kind of criticism. That was the criticism of the Educational Administration. They had to work under certain systems and they knew where the defects were, and the more adventurous of them might venture to state those defects. He thought it should be a matter of duty with them to give frank expression to their views. If the better informed with regard to these defects did not come forward, then the worse informed would do so and the complaints would be discredited. If there were freer criticism and more criticism there would not be so much sensitiveness among people who administer affairs. The reason there was not enough criticism and of well informed criticism was that the critics were very much denounced. It was bad for the teachers not to judge and say what they thought about the matter. It was only by criticism that the educational authorities themselves would be able to progress in the proper manner. Therefore, he said, it was their duty as teachers to criticise in this manner. The lecturer next dealt with the necessity of strong and influential teachers' associations all over the Presidency, so that through the associations, they would be able to criticise with greater weight. Teachers must keep themselves acquainted with the movements in the larger world outside the narrow limits of school life. They

should be acquainted with the progress made in other walks of life and anything that might help toward educational progress. With regard to criticism of things outside educational matters, the value attached to this was dependent upon the knowledge and competency of the critic. If they criticised any matter it must be taken for granted that they had duly qualified themselves by learning all that there was to be known about the subject.

PENALTIES OF CRITICISM.

They must realise that there were penalties attaching to criticism. If they offered their opinion in regard to matters of administration, even though it be as well considered and as correct as they could make it, they could not expect the criticised to warm up to them. Human nature did not encourage criticism and it was only when criticism came to be pretty common that the penalties would be avoided. If they offered criticism they would be marked men and would have to put up with ensuing difficulties. The critic would be a very bad observer of human nature if he expected anything else.

THE TEACHER CRITICISED.

He thought that outside the school the teacher was generally supposed to be narrow, inexperienced in the larger world of affairs, doctrinaire and conceited. He supposed that the idea of conceit arose because a teacher is so often engaged in teaching that he sometimes forgets that he is outside the school and that the man he is endeavouring to teach is not his pupil. It was sometimes said that he relied solely on books. This was hardly a just criticism. A teacher must necessarily get a wide knowledge of the world from contact with men. This was especially necessary because it was said, and teachers themselves frequently made the claim, that they were producing the future citizens of the Empire. They should see therefore that they were not inexperienced and they got that larger experience of the world

necessary for so important a work. They should utilise their spare time to make themselves acquainted with work and movements of various kinds. With regard to their being doctrinaire this was always more or less of a fault with people who had to put a great degree of faith in books. But they were not content to accept all that was said in books. Books contained generalisations and they must see how actually these generalisations worked out.

What was the function of education? Milton said: "Education fits a man to perform justly, skilfully and magnanimously all the offices of life, both public and private, of peace and war." The teacher should fit himself to carry out this his great task. They had heard a great deal of late about eugenics, but he thought of the question from the point of view of eugenics of the mind, i.e., the higher development of the mind. They were not getting recently for the teaching profession the same high type of men as they used to get in the older days. This was partly due to great inducements held out to the best men in other walks of life. Taking the average teacher, he did not think that they took sufficient advantage of their opportunities for self-culture. The teacher should be physically fit and try to keep up a high level of health. With regard to the kind of culture it should be as thorough as possible in the teacher's particular line of work and he should be as well informed as possible on general matters. The lecturer concluded by asking teachers to take a more active interest in public and political matters.

THE CHAIRMAN'S REMARKS.

The Hon'ble Mr. P. S. Sivaswami Aiyer in concluding the proceedings said: "One of my reasons in accepting the invitation to be present this evening was the prospect of hearing Mr. Ramana Iyer. It has been an excellent address and I am sure that that has been the feeling which has been produced in your minds. He

has a large experience of education and with his fine culture what else could you have expected? He has dwelt upon the teacher as an active critic and as a subject of criticism. He has pointed out the various tendencies which have been the subject of unfavourable criticism in a teacher and he has pointed out to you how this criticism may be obviated. Gentlemen, I do not look upon criticism as an end in itself. After all, criticism is only a guide and a means to the real understanding of men and things, and I have a dislike of criticism for the sake of criticism, the object of which is not to elicit truth or to state truth. Now, in your profession you have abundant opportunities for cultivation of the capacity for criticism in the spirit in which, I think, it ought to be employed. Unlike others, you have the privilege of compelling people to submit to your criticism and listen to it and even to follow it. With such abundant opportunities for the exercise of the faculty of criticism you have to see that your criticism is not unjust. There are two things which seem to me to be necessary elements, in any sound and just criticism of men or things, and they are sympathy and imagination. If a pupil makes a mistake and you wish to criticise it, I don't think you will have discharged your duty as a critic adequately if you merely point out that his answer is wrong, or that he ought to have given a different answer. You must try and put yourself in his place and find out why he committed the mistake, what it is that led up to his proceeding along that particular line of thought, or working at his question in a particular way, or expressing a particular opinion. You must put yourself in his place and the exercise of imagination and sympathy is absolutely necessary to enable you to perform the part of a critic with justice. It is only by so doing that you will be able to form a true and accurate estimate of the capacity and worth of your pupil,—that you will be able to convince him that you are right and he is wrong. It is not enough to tell him that he is

wrong, you must tell him why he is wrong. And in assigning marks—that favourite function of a schoolmaster—and appraising worth, you must see that you have made all allowances for the unfavourable influences that have led your pupil to do a particular thing, or give a particular answer.

NEED FOR A SENSE OF PERSPECTIVE.

"Another thing which seems to me to be also necessary in cultivating the faculty of criticism is a knowledge of perspective, I mean, intellectual and moral perspective. Very often we miss the real position or importance of things or subjects. It may be that the needs of the hour or the exigencies of our duty for the time being may require that we should appear as if we were obsessed by a particular idea. But you should never yield to any particular obsession. A man obsessed is incapable of sound judgment of men or things. Very often people fail to realize the real proportion of things, the importance of various objects, the place to be assigned to different institutions, movements or things. It is only by a process of constant examination, by a process of analysis, that you can arrive at what I may call the true perspective of things. Almost every day you will find that the tendency to neglect perspective is exemplified in public affairs. There are men connected with different movements who exhibit this trait. If you hear a temperance preacher he will tell you that there is no other virtue in the world so cardinal as temperance, that the salvation of the world will be brought about and the millennium reached by temperance or teetotalism. The sanitarian will probably tell you that sanitation is the most important thing in the world and that it should be carried out at the expense of all other objects. If, on the other hand, you turn to another who concerns himself with the gospel of education he will tell you that there is nothing more important than education and that all things must yield in importance to it. Very often we

have evidence of these things in the way in which people and particular departments urge their claims to grants from Government. Each official, or non-official, who identifies himself with a particular object, puts forward a particular claim or object, as if that object or claim were the most important. To show you that my remarks are not altogether of an academical character, I may give you another example. Which is the more important, elementary education, secondary education or University education? Now the advocates of elementary education will tell you that elementary education should have precedence over every other, because it is the most important. If we are to follow this advice it will mean that until the many crores of Rupees which may be necessary to satisfy the demands of elementary education are found for that purpose, no money may be provided for higher education. Are we then to shut up our Universities and close our secondary schools and colleges? The usual temptation of a man who has identified himself with one particular thing is to become a faddist. This tendency to exaggerate is one which I think we have to guard against. I know it has been said that the world is moved by faddists but most faddists are men without a sense of perspective or proportion. It seems to me if you make it your end as a teacher that your judgment shall be true and sound, and if you train your pupils to exercise their faculty of judgment correctly and justly, you will have discharged a most important function. It is all the more your duty to train boys and young men to form a correct judgment, because it is part of your duty to train up the future citizen and you cannot possibly do it unless you qualify yourselves for the task.

"Gentlemen, my friend has pointed out that criticism is attended by penalties. I hope that if any of my remarks have been critical they may not to be followed by any penalties. If, however, any penalties are to follow, I am quite prepared to face them.

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TEACHERS IN PUBLIC LIFE.

"The lecturer has already dwelt at considerable length upon the importance of your acquitting yourselves in such a manner as to obviate certain criticisms. I know it is often urged against teachers that they are doctrinaire and impractical, that they are not men of affairs, and so on. For my part I am quite prepared to make allowances for all of them. If they show any such failings it is partly due to causes which reflect credit on the teachers. The teacher is a man who, I believe, often holds high ideals. If with these high ideals he works himself up into a belief that these ideals are realised or he becomes unduly optimistic, and so does not make adequate allowance for the shortcomings and failings of humanity outside, it is an amiable defect. I should consider myself a very harsh critic, if I did not make allowances for such tendencies. At the same time it is necessary for the teacher to avoid every defect that it is possible for him to do. I do not see why members of your profession should not have a broader outlook than that obtainable within the four walls of the class-room. There is nothing to prevent you from attaining it if you will only follow the excellent advice the lecturer has given you. You will thus find yourselves less and less open to the reproach of being unpractical. Quite recently you know we have had instances of men distinguished in the educational field making their way in politics and other members of the profession may follow the same example and cultivate a spirit of thoroughness and earnestness and a desire to acquaint themselves fully with the difficulties of the problem before expressing an opinion upon it. The lecturer has warned you about trying to impose immature or uninformed opinions upon others and expecting them to accept such opinions readily. This does not however debar you from forming provisional opinions and discussing them with others."

EDUCATION IN THE MAGAZINES.

(INDIAN.)

"Civic Virtues."

Under the auspices of the Teachers' Association, Madras, Mr. J. N. Farquhar, M.A., of Calcutta, delivered a lecture on the "Civic Virtues" before a crowded audience in the Sethupathi High School Hall, with Mr. A. Raja Rama Iyer, B.A., in the chair. The following is a summary of his speech:—

The State is the union of all the people of the country for the highest welfare of each of them. Three functions are necessary for a healthy State. First is the protection of person and property of the citizens for which Army, Navy and Police are needed. The second is the administration of law and justice. The third has reference to trade and communications. No State could be healthy unless the Government looks after the roads, bridges, harbours, &c. It has also to control over Railway, Post and Telegraph offices. The fourth is the undertaking for the benefit of the people miscellaneous pieces of work. Departments to gather information are necessary for the growth of Commerce and Industry. In all these four functions the modern state as well as the ancient state are at one but on two aspects they differ. The ancient state was static whereas the modern is progressive. In all ancient States the idea was that the laws had been given by God in a body, clearly stated and final which under any circumstances could not be altered. To propose a change of law or to seek to modify the Government was treason and disloyalty to the Government. But in the modern state the conception is that the human life is constantly changing and naturally the state should change along with the human life. It is impossible for a modern man to think of a healthy Government otherwise than changeable. In every modern state there is the legislative constantly active for making laws and there is also a serious endeavour to better the social conditions of the people. The

second point of distinction is that in a modern state the idea is that the people should govern themselves, the executive merely being the servants of the people. The idea of Self-Government is a modern one and meant not that a body of educated men should take the Government into their own hands but the people should govern themselves. No Government is perfect and even republics are not completely self-governing. To attain Self-Government is a most difficult thing, and it could be only secured by gradual process whereby methods should be used for bringing the ideas of the people to bear upon the Government by careful device of machinery and the success would depend upon two factors, the sincere desire of all those who are at the centre of Government to actually put the Government under the hands of the people and the real capacity of the people to guide the Government. Self-Government is the ideal of every Government and the civic virtues are of almost importance. The first duty of a citizen would be loyalty—loyalty to one's own country and people. Loyalty to one's country means loyalty to the highest welfare of all the people of the country, which also implies loyalty to the constituted Government.

The second virtue of the citizen is courage. There are several classes of courage—courage of a soldier, courage in a man of authority and courage of a reformer, civic. Courage is essential and must be bred and it is necessary for the success. The third virtue is patriotism—love of one's own country and love of the people, it is not the sentimental love but practical love for the welfare of India, that is true patriotism. This spirit is spreading throughout India at the present day. Loyalty, courage and patriotism are the three prominent civic virtues which are of extreme value and importance to the modern state.

Influence of English Literature

Mr. J. S. Chakravarti, the Comptroller and Financial Secretary to the Government of Mysore, presided at a lecture given by Prof. F. W. Quinton-Anderson of the Central College, on "English Literature." The following forms part of the closing remarks from the chair:—

There are four reasons why the study of English literature is necessary and important for the rising generations of India. English literature must be studied for its own sake, for its great beauty and richness; it should be studied so that we may fully understand the English people—the qualities they possess and the stuff they are made of; it should be studied to improve and enrich our own vernaculars; and it should be studied to impart new elements of invigoration and emancipation into certain aspects of our own social and moral character. There is yet another reason why English literature should be freely and extensively cultivated throughout the length and breadth of the Indian continent. It is a valuable and powerful unifying force towards the realization of the goal of making Indians a solid and united people. If ever the three hundred and odd millions of India are to have a common medium of expressing their thought, that will be connected in some intimate way with the English language; and if ever the three hundred and odd millions are to form a united people with common ideals and a common culture, which should, of course, be essentially Indian, the influence of English literature will be invaluable in the shaping of those ideals and in the evolution of that culture.

Advice to Students.

HIS EXCELLENCY LORD CARMICHAEL in his speech at the Dacca College gave the following piece of advice to Indian students as regards their future career:—

"I cannot help being struck here in India by the fact, which I find very hard to understand, that so many young men seem to look to Government service as the profession which they most wish to follow. I suppose it has its attractions or perhaps it is that other careers are more difficult to enter upon, but the number of posts in Government service is very small and must always be small as compared with the number of students who leave our colleges every year, and it seems to me most desirable that students should realise this more fully than they do. I hear almost every day of young men whose fathers have given them good education, who have had a creditable career at the University, but who have gone to their homes and are waiting there in hopes of finding Government employment and who are suffering bitter disappointment because it is not possible to get that employment. I do hope that that will not be the case with any of you, but that you have, even though you want Government posts, thought of some second string to your bow."

The *A. B. Patrika* writes as follows:—

Lord Carmichael would have conferred an eternal obligation on the people of India if he could have shown a career for our educated young men. The commerce and trade are in the hands of foreigners. It is absolutely impossible for them to compete with these enterprising capitalists. All our industries have been killed. Agriculture does not pay; even the produce of the fields are in the hands of European merchants and traders. The future of our hopefuls is thus dreary in all conscience. It is starvation, pure and simple, that awaits them; for they have absolutely no second string to the bow, and the only string left to it is threatened to be snapped. University education may expand the mind, but it does not allay hunger. We think His Excellency will now understand why our young men worry the authorities for employment under the State.

Certain aspects of the Dacca University.

The following views of Sir Gurudass Bannerjee on certain aspects of the Dacca University Scheme, will be read with interest:—

"It (residential University) is less adapted for moral and religious education by reason of that very excess of help, assurance of comfort, and regularity of supervision, which are less helpful in training men for the rough world outside the College walls, where they have to be resourceful in emergency, to struggle patiently and cheerfully with adversity, and to accept the inevitable with calm resignation to a will that is inscrutable and supreme. Living with parents or guardians, or in small messes under suitable occasional supervision, is far more elastic, gives students far better opportunities of mixing with human beings as human beings and not merely as students, and is far more conducive to the growth of those moral and spiritual qualities so necessary for the world, than the rigid routine and dead level uniformity of life in a large hostel, where the largeness in the number of boarders must make discipline to a great extent more mechanical than personal."

"The establishment of a College for the well-to-do classes as a part of the University is open to grave objection. In the first place, there is no necessity for such a College in connection with the University, as it is not proposed (see Report, p. 94) that students of that College should all read for University Degrees, and as the classes for whom such a College is intended have ample means to establish a special College themselves.

In the second place, the inclusion of such a College in the University will impair the integrity of University discipline by the unequal treatment of the rich and the poor side by side, and will give rise to unhealthy feelings in each class towards the other.

In the third place, those for whom it is intended will benefit far less by studying in such a College than they would by becoming students of an ordinary college, and joining in the competition with a better though poorer class of students.

To introduce distinction between the rich and the poor into the temple of learning would ill accord with one of the noblest and most cherished of human sentiments."

Education in Bombay.

In presiding at a formal ceremony connected with the inauguration of a High School in the town of Larkana in Sind, His Excellency the Governor of Bombay delivered the following interesting speech:—

"I have taken the deepest interest in all educational matters during my period of office, and I am sure that the Presidency is advancing on the line which leads to the general welfare for which much remains to be done. What is called and often misnamed Technical Education needs reform and development which Government have under consideration. Agricultural training, both theoretical and practical, must be extended, and the useful experimental work which the Government are carrying on must be brought closer to the people by means of demonstrative Farms, and other ways which the spread of literary education will greatly assist. I do not think that the Primary Schools can undertake any teaching of agriculture with advantage, but indirectly they will greatly facilitate the diffusion of useful knowledge and will stimulate new interest in the vital industry of India. Similarly, we hope that our sanitary primers will help to promote acquaintance with the elementary laws of health which are now widely disregarded. Higher education leaves much to be desired, but the two Science Institutes, and the College of Commerce which the wise patriotism of Indians has enabled me to start, will in time play an important part in training Indian brains to seek the solutions of Indian problems, to appreciate the logic of facts and to avoid the too narrowly speculative habit of mind which has hampered Indian achievement. Education, believe me, is a very difficult subject which is not yet perfectly understood in most countries. Earnest thinkers are beginning to tell us that great mistakes have been made in the past, and that the present ideas need extensive revision. The education of the masses may be said to be still in the experimental stage, and the results so far have disappointed expectations, which were too sanguine. India must be ready to move with the times and to welcome the reforms when they can be proved to be necessary. Among the Muhammadans of Sind, education has been far too much neglected, and the result is plainly visible in the disproportionate number of them employed in the administration. I earnestly hope that they will correct this weakness and that the High School of which I have the honour to lay the foundation stone will be turned to full account by the parents of the rising generation."

Education in the Madras Presidency.

We take the following from the speech of His Excellency Lord Pentland on the occasion of the distribution of prizes to the students of the Madras Medical College:—

"The advancement of Medical science must be one of the first aims of such an institution as this, if it is completely equipped for the work which is expected of it. We live in an age of invention and discovery. The earth has been transformed in the last two or three generations, but amongst all discoveries which have affected the lives of mankind, discoveries of science which have been applied to the practice of medicine have perhaps done most for the progress of humanity. Then also this is a training ground for those whose noble calling it will be to endeavour to relieve human suffering which surrounds birth. Proud as we may be of what has been seen here in this city of Medical Institutions and facilities for this high purpose, still of course there remains a great deal to be done. However well-equipped this city may be, considering all the difficulties which have had to be faced, we are only touching the fringe here, the merest fringe of the work that has to be done in the years to come over great tracts of country which are to be found in this Presidency and in this part of India. Here in Madras we have a reminder in the death-rate itself that we have much to do. However, that is a wider question than a purely medical question. I think those who know will agree with me that if Medical Education is to have its full effect, if the work of those who are working in this College is to bear full fruit, there must be a general and persistent endeavour to raise the level of general education throughout the Presidency. For the appreciation of what is being done there must be a faculty of appreciation and power of appreciation must be increased. I feel quite sure that as years go on, better times, as Col. Giffard says, will come. I join in all that he says and so wisely says. I think with him in regard to the importance of this work not being left wholly to the agency of Government and I sincerely trust that in that direction also his hopes may, as time goes on, be justified and that increasingly there will be private recognition of the value of the work which is being done here. So far as Government is concerned Colonel Giffard and those who are working with him here may be sure that we shall not fail to recognize our duty towards this branch of administration and we shall do our utmost to support and advance the work which he and his colleagues are doing."

Sanskrit Study in Calcutta.

The Inaugural Convocation of the Board of Sanskrit Examinations, Calcutta, was held in the quadrangle of the Sanskrit College for the purpose of conferring titles on the students who had passed the Sanskrit title examinations in various branches of Sanskrit learning. The keen interest which His Excellency takes in Sanskrit learning will be seen from the following extract which we take from his speech:—"I would like to tell you how much I appreciate your having invited me to preside here to-day over this large gathering of learned Pundits from all quarters of the Province and I would like each Pundit to take back to his own *Tol* a message to his scholars telling them that the Government of Bengal at any rate will extend to them that sympathy which Sir Asutosh asks for. We listened with delight to the Vice-Chancellor's eloquent address, but I can imagine how much more enthusiastic you would have been, how much more you would have appreciated his words, had he been speaking to you in Sanskrit, and I feel that we would all have been brought together much more closely if we had all been able to understand him when so speaking. However, I feel highly complimented that Sir Asutosh took pity on my ignorance and enabled me to grasp the inner meaning of this Convocation by addressing you in my mother tongue instead of in his own."

Sanskrit language and literature receive much more attention in Europe now than they used to receive. Within the last few weeks people in London have been flocking to see a Sanskrit play. I am afraid it was acted in a translation, but nevertheless it shows that there is an awakening of interest which is all to the good. I have no knowledge of Sanskrit, and I fear I am not likely to learn it now, but I spent a good deal of my time as a boy in learning the classical languages of Greece and Rome, and I hope I can appreciate the point of view of the classical scholar. In that at least we are in sympathy. Civilization in the past owed much to the ideas expressed in your language. You have every right to be proud of those ancient ideas; and I have no doubt that a closer and more familiar study of them would prove a great gain to those who have to deal even with the most modern problems of life.

Perhaps some day the dream of an Oriental University to which Sir Asutosh referred may be realised. I feel sure that Convocations of the Board of Sanskrit Examinations, such as that which we have inaugurated to-day, will help much to attain this end."

(FOREIGN).

Need of a simple Curriculum in the Teaching of History

The Annual Meeting of the Historical Association was resumed at the University of London, Professor A. F. Pollard presiding.

Mr. G. G. Coulton (King's College, Cambridge) read a paper on "The Standardization of History Teaching." What, he asked, had ruined the Army examinations for so many years?—A congested curriculum and a want of scientific proportion. Headmasters insisted that the boy could not dispense with certain subjects. The War Office, from an opposite point of view, insisted upon other subjects; and the pupil fared like a hospital patient whom the doctors fed on one diet while his friends smuggled in another. Was not this, in more or less degree, the admitted fault of all modern education? Too many subjects were taught, and they were taught too well. Experience and common sense proclaimed the imperative need for a simple curriculum. An honest carefully selected half would prove far greater than our present heterogeneous whole. If we took by chance any dozen admittedly educated Englishmen mature citizens doing good work in the world whose education enabled them to make the best use of their daily practical experience, it would be found that while each individual knew a great deal the greatest common measure of their knowledge was startlingly small. Why, then must we necessarily aim at providing a dozen schoolboys with a greater common measure of education than we found among a dozen confessedly educated men? Everywhere the unessential Much was a deadly enemy to the essential Little. He believed that by careful selection and standardization they could instil what he would still call the existing common greatest measure of knowledge in far less than half of our present school hours, or even in less than a quarter, if only we would face the facts.

They should plan to divide the school hours into two parallel sets of compulsory and of voluntary work. In the compulsory hours the

task must be limited to that which nearly all the pupils could thoroughly master in the allotted time. Then should follow the voluntary lessons, and the student should specialize very much at his own choice. This choice of subject for half their school time would mean for most boys intellectual salvation. Could they not effect an enormous saving of energy by comprehensive and orderly schematization? In the first place, there must be a definite and official syllabus drawn up by some body of sufficient authority to secure its general recognition. They must know roughly how much English history, European history, and world history they were expected to teach. The syllabus would, of course, be graded. Next, in view of the eternal dispute whether history was a science or an art, they would do well to recognize that, as taught in schools, it must partake of both characters, yet without confusion between the two. A great deal of history could be swallowed whole and as rapidly as possible. Of this kind were dates, maps, and so on, and even to a certain extent the characters of great men and the contributory causes of great movements. They must make up their minds what were the essential facts; and if no existing set of books presented them, a set must be written. Boys into whom such a compact body of historical facts had been gradually rammed would be in a very different position from the average modern pupil, or even the average educated man. If they had only two hours a week for history they could easily build up this backbone in half the time at their disposal or less, leaving all the rest for different work—easier for the dull boy, more exacting for the clever boy, and therefore more suitable and congenial for both. Side by side with the memory-work they could work through the same period with a book like Green's Short History. They could even approach history through the literature of the period, and they could suffer no boy to leave school without having studied and compared sources for himself. For the sake of examinations, even more than for class teaching, it was necessary that our historical ideals should be standardized.

The value of the Teacher and the real kind of Education.

In the course of a lengthy article on the subject in the *Daily Chronicle* Mr. A. C. Benson writes:—

The average man has a vague sense of the benefit of education, as a process whereby it is possible to better oneself; but he wants to get it cheap. He talks about the market value of a teacher, and he does not see that it is worth his while to pay a great deal to get the right kind of teachers, while it is hardly worth his while to pay anything at all for the wrong kind of teachers. Of course, whether the teaching is good or bad, the process itself by which children are kindly and sensibly disciplined, taught order and obedience, supervised and guided at an impressionable time of life, is of the utmost value; but the real end and aim of all education is the training of citizens. What one desires to develop in all children is some consciousness of being a part of a great whole, a sense of duty of work, a feeling that life is not simply a scene where one gets all the comfort one can, without any reference to the comfort of others, an ideal in fact of subordinating self-interest to community-interest.

All this cannot be communicated by normal lessons. It would be of little use to draw up a sort of civic catechism and make children repeat by heart the most virtuous and high-minded sentiments. It can only be taught by men and women who feel it themselves, people with a real sense of duty and brotherhood. The first necessity, then, is to enlist such moral energy in the training of the young, and this can only be done by making the teaching profession one which offers not only influence—it does that already—but civic advantages of an obvious kind. A man who desires to marry and bring up his children well must provide himself with a situation where this is possible. One cannot demand that all teachers should, for the sake of the benefit to the State, sacrifice prospects at every point. It is mere sentimentalism to suggest this and all who have any strong interest in the future of the State should take every opportunity of urging the necessity of making the teaching pro-

fession into a real career. There is no political or social reform which would have anything like so great and far-reaching effect on the well-being of the country as this.

And then the question arises as to what type of education is the best for the children of the nation. Everyone who knows anything of elementary education must feel that our system is at present a very imperfect one. Very little attention is paid to special aptitudes, and still less attention is paid to the kind of work for which children are being prepared. Whenever it is urged that education ought to be utilitarian, one is met by an outcry from high-minded persons who talk vaguely of culture. But what is culture? It is a pity that the word has got rather priggish and unpleasant associations because it is a very real thing indeed, and there is no other word for it. What culture really means is an interest in ideas, in things which are not purely material, a susceptibility to higher and finer influences. But what the advocates of culture too often think is that it is an intellectual thing which can be handed out to people in packets, and which consists of reading the right books and knowing a quantity of facts. But culture is not an accomplishment, it is a quality and it is based upon imagination and emotion. The real thing which one wishes to develop in men and women is what I can only call imaginative sympathy. Imagination by itself cannot do much, because one can have a great deal of imagination of a purely selfish kind which is just a satisfaction to the possessor, because it adds a pleasure to life; sympathy pure and simple is a higher quality still but sympathy without imagination tends to make one offer to other people not what they really need and desire, but what one thinks they ought to need and desire. But imaginative sympathy is a very high and fine quality indeed, because it gives one the power of seeing into the minds and hearts of others as well as the desire to help people along in their own way, and not merely on the lines which one prefers.

One who has imaginative sympathy is moved by the beauty of fine, generous, courageous, noble qualities, and desires that others should be and feel what is so obviously beautiful and desirable to oneself; and thus the culture which ends in this sort of sympathy is the only kind of culture worth having, because it is at once seeing what is best, and desiring that others should share it.

Take such a subject as History. It is of very little use either practically or intellectually that people should just know a string of facts and dates. What is important is to understand the slow growth of social virtues, to feel patriotic, to realise how the rights of men are slowly defined, that politics are but an attempt to include more and more individuals in an ever-widening circle of peace and order in virtue. History is only inspiring in so far as it gives some notion of the aims of mankind, and shows how the hopes and aspirations of one generation translate themselves into the welfare of the next.

It may be said that this is a very transcendental view of education. The so-called sensible man may pooh-pooh it, and say that the only object of education is to enable a man to fight efficiently for himself and to secure as large a share as possible of this world's goods; but it is plain that if that were the only end of education, we are no better of than before because we should only end by educating everyone into efficient selfishness without in the smallest degree increasing the resources of the world—the world would still be a battle-field, and the only change would be that the combatants were better armed.

The Position of Science and Literature in Schools.

The General Meeting of the Association of Public School Science Masters was held at the London Day Training College. Sir Archibald Geikie, President of the Royal Society, who is also President of the Association, gave an address in which he dealt with the advance of science to a recognised place in the public schools and the universities during the last 60 years.

Sir Archibald Geikie said that 60 years ago it was quite possible for a man to have carried off the most valuable prizes at a public school and to have taken a good degree at the end of his university career and yet to be ignorant of even the rudiments of any branch of natural science, and consequently without the knowledge and training that would enable him intelligently to appreciate the nature and interconnection of the discoveries in science which were working such changes in the modern world and throwing such a flood of new light into our conceptions of the universe. He remembered meeting on one of his geological rambles in the West Highlands, in his early youth a man who had taken a degree in arts at Cambridge, and distinguished himself more especially in classics. In the course of their conversation he alluded to the Gulf Stream, in an endeavour to explain some of the main causes that were believed to determine the climate of these islands, when his companion broke in with the exclamation, "Gulf Stream, what in the world is that?" While strongly in favour of assigning an adequate place to the teaching of science in public schools, he had always not less strongly felt that the literary side, from its manifold human interest, ought to remain predominant in any wise system of education. No amount of training in science could compensate for an inadequate training in literature. It was to its literary education that Britain owed the breed of public men who through the centuries had built up her greatness, and nothing ought to be done to injure the noble

work which the literary side of education still carried on. But in the course of time men had come to realize the interest and importance of science in the modern world, and to comprehend that there were faculties of the human mind which it was highly important to develop, but which were comparatively little affected by a literary training. Those faculties were best reached by a study of science. Thus the combination of the two sides, literary and scientific, provided scheme of education which, in the present state of our knowledge, was the most perfect that could be devised.

While he was of opinion that they had cause to rejoice over what had already been accomplished for science in the public schools and the universities, he did not wish to draw too roseate a picture of the present state of the science-teaching in this country, or of the position and prospects of the science masters. He well knew that those teachers were in many cases confronted with serious difficulties which hampered them in their work. They were, so to say, newcomers into the educational system of the country, and the subjects which they taught had consequently neither the prestige nor the position held by the long-established literary studies. Such a state of affairs was obviously one that could only be changed by the lapse of time. Meanwhile, boys who showed a special aptitude for science should have the opportunity given them to cultivate it further. He attached great importance to this matter, and believed that such a provision should be made in every great public school. When boys with an evident eagerness for science reached the higher forms, their time-table should be so adjusted as to allow them to carry on practical research work in the laboratory under the guidance of one of the science masters. An arrangement of that kind was already in operation at Harrow and worked very well.

The Value of the Plain Text in the Literature Lesson.

The English Association held a Conference at University College recently on the teaching of English literature. The Rev. Dr. Nairn, Headmaster of Merchant Taylor's School, presided.

Mr. Percy Simpson read a paper on "The Value of the Plain Text in the Literature Lesson." He said that after 20 years' experience he had, with the single exception of work, with the sixth form, discarded the annotated text from his class-room. Of all the difficulties which combined to check effective progress with the average boy, he believed the first and most formidable to be his lack of a proper vocabulary. A powerful factor, in producing this ignorance was the number of boys' magazines filled with short and exciting and amusing stories, carefully written down to the level of boy readers, and often full of slang. A boy read these without the slightest call upon his intelligence or judgment, and the phraseology was that to which he was accustomed out of school hours; but when he quitted these shallows he was sunk hopelessly out of his depth. The time which could be devoted to preparing any one subject was strictly limited, and the attention of children was quickly tired; they would not submit to the double burden of dictionary and notes. It was much better that they should concentrate on the actual text, keep in close relation with the author, and obtain from the teacher any further elucidation which they needed. Careful use of the dictionary, even in the early stages, he considered all-important. He would confine preparatory work to this, and would depend for the chief effect of the literary lesson on reading aloud in class. Reading, followed up at once by oral work, ought in any case to be the first step, for the child; then the dictionary was, he believed, more effective for solving difficulties of vocabulary. But when the children were old enough they should take notes, supervised as far as possible by the teacher. Did we realize how ignorant the mass of our countrymen were in regard to the great national heritage of our literature? He was referring to educated people who would keenly resent any suggestion that they were ignorant. For instance he tried to consult three doctors about certain points in Shakespeare's treatment of insanity in *King Lear*, and they all replied that they had never read the play. The gross neglect of English literature which formerly prevailed in our schools was no doubt responsible for much. The subject was not neglected now, but did they teach it on sound lines?

How I became an author.

Mr. Frederick Harrison writes:—

I must have been well on to thirty at least before I ever saw a line of mine in print. "How did I learn to write at all?"—you ask; for I admit that I have been an arrant scribbler of late years, and have two books now on the stocks. Well! I learned to write just by writing, as fishes learn to swim by swimming, and birds learn to sing by singing. Only, I did not pour out my effusions on the public, but on my friends! That is to say, by writing them letters by the post ever since I could hold a good pen, pointing straight to the shoulder-blade, and thus became the only living calligraphist—isn't this "copy" itself, a record of beautiful penmanship in a man entering his 82nd year?—ever since the year 1841. Whenever I saw a clean sheet of paper, a new pen, and a full inkstand—none of your fountain abominations for me!—I began to scribble away automatically. Never mind sense, nor object, not even grammar. Write—write—write—as Hood's shirtmaker went stitch—stitch—stitch. It's a sort of tarantella. I must write as a dancing dervish must dance. But I did not want to get it printed. I packed it off by post to a parent, a relation, a friend—some time to an enemy—and did not care a fig whether my correspondent liked it or not. No? nor what he did, or answered back. There are piles of my private and family letters in that invaluable historical work, my own Memoirs, as you may see.

Well! after about twenty years of this epistolary scribbling, I got able to indite passable English—at least well enough to satisfy a public which is not particular about style. How did I begin public authorship? Why, of course. T. P., I began—as you and all eminent authors since Moses began—by journalism. Alas! you will say, as a blackleg. I will tell you how. I was a Barrister of Lincoln's Inn with some practice and good prospects of much more. My father, a business man of fortune, intended me to become a Judge, and regarded literature as a fatal trap for a young lawyer—and so it was, and is. It would be a cruel disappointment to him to see me dabbling in any kind of literary by-play. Nor did I need it. I had a Fellowship of £300 a year, an allowance from him, and certain prospect of a modest fortune. Again, I was a pupil of Richard Congreve, and by the year 1860 more or less of a Positivist. Now in the ideal of Comte, and ideal, I believe only carried out in practice by Congreve himself, it was positively

wicked to publish anything either anonymously or for pay. The literature of the future—and I agree that it is a noble aspiration—is to be gratuitous and signed. That is how I slid into letters, late in life, by accident, and as a blackleg—and that as journalist.

In 1859 there was the war of France against Austria to free Italy; and I, who had been trained by Mazzini and Saffi, became furiously keen for the Italian *resorgimento*, and devoted my Long Vacation from July to November to see it all in Italy. I volunteered to the *Morning Post* and to the *Daily News* to act as their correspondent in Italy. I went all through Piedmont, Tuscany, Romagna, and the Duchies, interviewing statesmen, governments, and popular leaders in each town, and sending home to the two papers, then organs of Lord Palmerston and of Lord Russell, a mass of letters. Determined to be quite free, I insisted on paying my own expenses, and declined payment for the letters. Horrid blackleg!—you may well say. Once leave the path of virtue, and one step downwards leads on to another. So in 1860 I was fairly launched on the periodical press—again as an amateur and blackleg. When "Essays and Reviews," was published by Oxford theologians I was deeply stirred by it, and urged by Jowett's friends to criticise it. I knew Dr. Chapman, Editor of the *Westminster Review*, and I offered him the article with the title "Neo-Christianity"—a word which I coined and have added to the language. Again I was a blackleg, declining payment, as for some years I continued to do in the *Westminster Review*, the idea being that the *Review* must be assisted by free contributions.

Every now and then, whilst in active practice at the Bar from 1858 to 1870, I occasionally fired off letters, articles, or reviews, to various periodicals—and, on principle, gratuitous. I did not in the least want any casual douceur, and as I felt bound to my father to stick to law—and felt it to be good for me to write only when I could not keep it bottled up in me—the habit was, both morally and intellectually useful, and conduced to good work. When the *Fortnightly Review* was started in 1865, I found it open to me on all sorts of topics for which I cared, and that not anonymously, but still as a casual volunteer. When I married in 1870, began to have a young family about me, quitted law practice and became professor of jurisprudence, there was no reason to prevent my publishing what I liked, and also pocketing any trifles which a benevolent public cared to drop into my money-box.

Universities and the People.

Mr. Joseph King, M.P., writes to the *Times*.—"For some time past the Prime Minister has been urged, from various sides, to appoint a Royal Commission to consider the position of the ancient Universities, Oxford and Cambridge. Recent answers to questions in the House leave no doubt of the probability of the Government deciding to do this. In this connection a few statistics of the population, scholars enrolled in elementary schools, and university students in the three great European nations, Germany, France, United Kingdom are of interest. We find it here disclosed that we have 30,000 fewer university students than Germany and 3,000 fewer than France. The figures are—

	Population.	Elementary scholars.	University students.
German Empire	60,641,275	10,224,125	57,300
France	39,376,000	5,629,906	40,000
United Kingdom	45,005,833	7,587,276	27,000

The proportion of university students to population and to scholars in elementary schools is shown by the following figures:—

University students in	Students per 10,000 of population.	Students per 10,000 of Elementary scholars.
German Empire...	9.4	56
France	10	71
United Kingdom.	6	35

The stationary birth-rate in France is qualified by the quality of the population intellectually and technically, being superior to that of other nations. But the serious fact for us is that, in proportion to our population, we have six men at the universities where France has ten, and in proportion to our elementary school children we have one university student where France has two. Compared with Germany we stand only slightly better.

There are other facts in connection with this great question which need to be remembered—our very small number of university men teaching in elementary schools; the small proportion of our university students enjoying the ancient endowments and great advantages of our ancient English universities; and the reluctance of the ancient universities to adapt themselves to the wider demands for higher education. But the figures which I have quoted above—the chief of which are supplied by the Board of Education—are sufficient to cause earnest thought among all those desiring to maintain the leading position of Great Britain among the nations of the world.

Modern Languages and the Universities.

At the annual meeting of the Modern Language Association. Miss Surgeon read a paper by Miss Tuke, Principal of Bedford College, London, in which she declared that the study of modern language, even with medieval thrown in, had not proved equal to that of the classics in producing a scholarly habit of mind. But she was not convinced that this defect was inherent in modern languages as a subject of study. It was probably due to the fact that the training had been far from careful and thorough. Possibly there was a conflict between academic and utilitarian aims which did not exist in the teaching of classics and history. What she desired from the study of language, ancient and modern, was that it should widen the outlook, and train the intelligence and the reasoning powers. A language taught with those ends in view would avail, whether it was needed for business purposes or not. The study of a language trained the mind by demanding accuracy and by the use of reasoning powers in the understanding of the grammar and history of the language. The outlook was widened by the acquaintance afforded with the life and thought of a race other than our own, and by the study of its literature, history, and social customs. She would prefer that German should take the place of French as the modern language most generally taught in schools, because German afforded a better training for the child's mind and its literature was more easily appreciated by young persons. Latin should come second. French should begin late in the school course, and should be taught only to those children who had a foundation of Latin. Failing this change they should demand that a student who entered a university with the intention of making French his study must have a good basis of Latin. It was essential for a student of literature to know something of the historical events which formed the back-ground of that literature; and he could not appreciate any one period of literature unless he had some idea of the general chain of literary development. In the honours examination in literature the student should be required to write his answers in the language he was studying. In composition a sufficiently high standard was not set in regard to accuracy and nicety of expression. That criticism held good not only in regard to foreign languages, but also to English. It ought not to be possible to obtain high honours in English at a university, and yet write ungrammatically. The standard set was still less adequate in regard to the spoken language. The oral test should be concerned only with excellence of expression.

THE UNIVERSITIES.

MADRAS UNIVERSITY.

Nomination of Ordinary Fellows.

The Chancellor of the University of Madras is pleased to nominate the following gentlemen to be Ordinary Fellows of the Madras University:—The Right Rev. Paul Perini, S.J., D.D. Yakub Hasan Sahib Bahadur; Mr. R. G. Grieve, M.A.; Rao Bhadrur A. C. Pranatarthihara Aiyar, B.A.; Mr. S. Swaminathan, M.A., LL. B. & B.Sc., Ph.D., Bar-at-Law; Mr. G. V. Appa Rao Pantulu, B.A.

L. T. Degree Examination 1913, Practical Test (Old Regulations.)

The undermentioned candidates have passed the above examination in the 2nd class:—

Anantasubba Row, Periyapatan Krishnamachar, Sirangam Sundaram Aiyar.

Cambridge Local Examinations.

Mr. Wm. M. Theobald writes:—The Cambridge Local Examination certificates are not at present accepted as an entrance to the Madras University work or Government service.

The Senior Examination certificate is accepted, under certain restrictions, by all the Home Universities and by the Board of Education, Medical Council, Law Society, Institutes of Civil Engineering and Architects, etc., so that to students who will be going to England for professional work the examinations are of value.

I am expecting a further supply of Regulations, and candidates who intend to appear either next July or December can have a copy on application with stamp to cover postage.

Agenda for the next Meeting.

The Senate of the University of Madras will meet on Friday, March 7, next at 4-30 P.M. Among the more important items on the agenda are the following:—

Taking Degrees.

The Syndicate has recommended that among the reasons for which graduates for degrees may be exempted from attendance at the Convocation [Regulation 68] the following be added "or who from some unavoidable cause is unable to be present in person."

The fee for this exemption is proposed to be raised from Rs. 10 to Rs. 25.

Instead of the 5 days' notice required from candidates for degrees who intend to be present at the Convocation it is proposed that 10 days' notice should be given to the Registrar.

University Lectures.

The Syndicate has recommended the following list of lectures:—

Mr. P. V. Sesbu Aiyar, B.A., L.T.—Fourier's Series and Integrals and Spherical Harmonics with application to Physics—3rd Year of Honours Course—20 lectures.—July to September 1913.

Mr. R. Ll. Jones, M.A.—Electrical Oscillations and Wave Propagation.—2nd and 3rd Year of Honours—25 lectures.—December 1913 to Feb. 1914.

Rev. A. Moffat, M.A. B.Sc., F.R.S.E.—Conduction of Electricity in metals, Electrolytes and gases—30 lectures.—July to September 1913.

Rev. E. Gombert, S.J.—The wave theory of light.—20 lectures.—Oct. to Dec., 1913.

Mr. W. Erlam Smith, M.A.—The History of the Determination of Atomic Weights.—3rd Year of Honours Course.—20 lectures.—July to Sept. 1913.

Mr. J. L. Simonson, D. Sc.—The Chemistry of Synthetic Dye Stuffs.—3rd Year of Honours Course.—20 lectures with Practical work.—July to Sept. 1913.

Mr. P. F. Fyson, B.A., F. L. S.—The Geographical distribution of Plants with special reference to India.—2nd and 3rd Year of Honours Course.—12 lectures with 12 or more Practicals.—Jan to Mar. 1914.

Mr. W. Rae Sherriffs, M. A., B. Sc.—The Parasitic Protozoa or Parasitology.—2nd year of Honours Course.—10 lectures of one hour each with 10 Practicals of two hours each.—Oct. to Dec. 1913.

Mr. Murray Sturat, D. Sc.—The Oil-fields of Burma; recent advances on our knowledge and their structure and relationship; their yield and the probable supply of oil still available; oil-field problem; improved fields; other oil-fields in and around the Indian Empire and their importance.—2nd and 3rd Years of Honours Course—20 lectures.—July to Sept., 1913.

Mr. Ferrand E. Corley, M.A.—Ancient Federations.—2nd and 3rd Year of Honours Course.—20 lectures.—Jan. to Mar. 1914.

Rev. P. Carty, S.J.—Modern Taxation and India.—20 lectures.—Oct. to Dec. 1913.

Mr. Mark Hunter, M.A.—Indo-Germanic and Germanic Philology with reference to Gothic and old English accidence.—2nd Year of Honours Course.—20 lectures.—July to Dec., 1913 (10 lectures a term.)

Mr. J. H. Mackintosh, M.A.—The History of Criticism.—1st, 2nd and 3rd Year of Honours Course—20 lectures—Oct. to Dec. 1913.

Mr. S. J. Crawford, B.A., B. Litt.—Old English Poetry.—1st, 2nd and 3rd Year of Honours Course.—20 lectures.—July to Dec., 1913

Mr. S. Kappuswami Sastry, M.A.—Hindu Philosophy with special reference to Nyaya and Vaisesika systems.—20 lectures.—Oct. to Dec., 1913.

The Place of Vernaculars in University Studies.

The Syndicate places before the Senate the Report of the Committee of the Senate appointed on March 2, 1912, to consider and report upon the position occupied by languages other than English in the various courses of study and frame and present to the Senate any proposals for alterations in the regulations that may be considered desirable in order to ensure more attention being paid to such language.

University Studentships.

Mr. S. Srinivasa Aiyangar has given notice of his intention to move the following resolutions—

1. That Regulations 401 to 411 be revised so as to provide for the grant of University studentships of higher value and of longer terms of years and not limited to subjects in the Faculties of Arts, Medicine, and Engineering only.
2. That a Committee of the Senate be appointed to frame and submit set of draft regulations in place of the existing Regulations 401 to 411.

BOMBAY UNIVERSITY.

Changes in Fees.

At a recent meeting of the Senate of the Bombay University, Mr. Justice Heaton, Vice-Chancellor, presiding. Dr. Mackichan moved the adoption of new regulations regarding the fees for admission to the Arts and Science examination. This, he explained, was necessary owing to the recent changes in the curriculum, for it was felt that if the equilibrium between income and expenditure was to be maintained certain changes were necessary in the fees to be levied.

Briefly, the Syndicate's proposal was to establish the fees as follows:—Previous examination, Rs. 10; Intermediate examination in Arts, Rs. 20; B. A. degree examination, Rs. 30 for pass examination, and Rs. 40 for honours examination; M.A. degree, Rs. 60; Intermediate in Science, Rs. 25; B.Sc. degree, Rs. 30; M.Sc., Rs. 100. The proposed increase in the examination fees, said Dr. Mackichan, would bring the fees on a level with the fees charged by other Universities.

Prof. O. V. Muller seconded and the proposition was carried after a long discussion.

University Convocation.

Lord Sydenham, Governor of Bombay, presided at the University Convocation held on the evening of the 18th instant. The hall was crowded. After the conferring of the degrees His Excellency delivered a lengthy address from which we give extracts on another page.

CALCUTTA UNIVERSITY.

Lord Carmichael confers Honorary Degrees.

A special Convocation of the Senate of the Calcutta University was held at the Senate House, College Square.

In the absence of His Excellency the Chancellor, Lord Carmichael as Rector, presided at the function and delivered the diploma of the Honorary Degree of Doctor of Science to Dr. Andrew Russel Forsyth and the diploma of the Honorary Degree of Doctor of Literature to Professor Hermann Oldenberg.

Sir Tarak Nath Palit, Kt., upon whom the Honorary Degree of Doctor of Law was conferred, was absent and unable to receive the diploma from His Excellency.

The hall was decorated as on the occasion of the usual Annual Convocation. The seats were arranged in the same way and a procession was formed of the Registrar, the Members of the Syndicate, arranged two and two in order of seniority. His Excellency the Rector, the Vice-Chancellor *ex-officio* Fellows arranged two and two in order of seniority and the ordinary Fellows arranged in the like manner, the procession entered the hall. Her Excellency Lady Carmichael arrived accompanied by the Hon. Mr. Gourlay, who was in Military uniform and an Aide-de-Camp. The Registrar presented to her a bouquet.

Annual Meeting of the Senate.

At the close of the Convocation, the annual meeting of the Senate was held with the Vice-Chancellor in the chair. A large list of formal business was disposed of, including the constituting of the different faculties for the year 1913, of the Board of Accounts, adopting of the annual report of the Syndicate and so on. Dr. Brojendra Nath Sil, M.A., was elected University reader in Philosophy, and Dr. D. E. Rose and Mr. G. F. Shiras, representatives on the Syndicate.

ALLAHABAD UNIVERSITY.

Courses of Studies.

Courses of studies for the preliminary scientific examination for the Degree of Bachelor of Medicine and Bachelor of Surgery, to be held in Allahabad from Monday, the 8th September 1913, and on the following days.

Chemistry:—The Modes of Occurrence, Preparation and General Characters of Methane, Ethane, Ethylene, and Acetylene, and their derivatives, *viz.*, Haloid Compounds, Alcohols and Etheral Salts, Ethers, Aldehydes, Ketones, Acids, Amines, Starch, Sugar and the processes of Fermentation, Urea, Benzines, and its more important derivatives, Glycerine and Saponification, Boron. A brief description of the following metals, outlines of the most important metallurgical processes, important compounds, Use and Tests: Sodium, Potassium, Ammonium, Calcium, Magnesium, Zinc, Mercury, Aluminium, Copper, Silver, Iron, Tin, Lead and Antimony. The Nature of Combustion, Structure of a flame, Cause of Luminosity, Oxidation and Reduction, Blowpipe Flame and its Use, Acids, Alkalis, and Salts, Neutralisation.

The general methods of the preparation and purification and the Principles of the Ultimate Analysis of Organic Substances.

Students shall also be required to pass an additional practical examination in Elementary Volumetric Analysis, *viz.*, Titration of Acid and Alkalis, Estimation of Ferrous Salts by means of Potassium Permanganate, Estimation of soluble chlorides and carbonates.

The following book is suggested:—

Ramsen's Organic Chemistry (Macmillan.)

Biology.—The Syllabus prescribed in general Biology for the Intermediate Examination of 1913 in addition to the practical work of the dissection of the rabbit.

For the preliminary scientific examination in 1914:—

The examination will be held in Chemistry only and the course of study in that subject will be the same as in 1913.

THE PROPOSED HINDU UNIVERSITY.

The Hindu University Deputation headed by the Maharaja of Darbhanga and Pandit Madan Mohan Malaviya has visited various places during this month. Big donations have been promised. The following are some of them:—

H. H. The Maharaja Sahib of Nabha—one lakh. The Maharaja of Bikanir Rs. 20,000 and the Maharaja Kumar Rs. 5,000, in addition to Rs. 4,36,000 already subscribed. H. H. The Maharaja of Jodhpur, Rs. 2,00,000 in lump and 24,000 annually to found a chair to be named after His Excellency Lord Hardinge. This is the largest individual contribution hitherto made to the funds of the University. H. H. The Maharaja of Indore, 5 lakhs.

TECHNICAL EDUCATION.

TYPEWRITER TOPICS.

The writing machine industry has very rapidly developed and the spirit which now prevails in Europe in the manufacturing as well as the selling end, is a sign that the business therein is fast moving towards the stage it has reached in America. There are now two big manufacturing countries actively working in all markets, and these two are the United States and Germany. A huge number of makes have flooded the markets and it is our purpose to give some interesting notes about the mechanism of the various machines which may be of some interest to the typewriting student, illustrated wherever possible.

The following machines are represented in the Madras market:—The Remington, The Yost, The Underwood, The L. C. Smith & Bros., The Oliver, The Armstrong, The Smith Premier, The Empire, The Imperial, The Blickensderfer and the Royal Bar-Lock.

There are various other makes too numerous to mention. But we shall give the names of some of them:—The Monarch, The Secor, The Victor, The Visigraph, The Corona, The Triumph, The Triumphator, The Torpedo, The Urania, The Perkeo, The Royal, The Fox, The Visible Stoeper Record, The Mercedes, The Continental, The Zal. G. Sholes Visible, The "Stoeper Elite," The Senta, The Hammond and The Erika (Bijou).

Mr. Albert J. Sylvester (lately of the staff of the Underwood Typewriter Co., London), who was in Madras in connection with the Public Services Commission, gave a demonstration of high speed typewriting on the Underwood Typewriter in the Anderson Hall. There was a very large gathering, and Mr. V. V. Srinivasa Iyengar presided. Mr. Sylvester typed an unseen passage, selected by the Chairman, at the rate of 89 words a minute, and he typed a second passage at 97 words a minute. Then he typed a passage from memory at 176 words with only a very small percentage of mistakes. In the blindfold test which followed Mr. Sylvester succeeded in typing a passage dictated by the Chairman with scarcely any mistakes.

INDUSTRIAL EDUCATION IN BELGIUM.

About twenty-five years ago the first trade school was opened in Liege; its purpose was to teach the principles of dressmaking. Since that

time the growth and development of trade schools has been most rapid. At present almost every existing trade has its training school for the young artisan. Schools exist for training the iron-worker, the wood-worker, and the workers in zinc, lead and leather; the decorative arts, plumbing and house-painting are also taught. If the present rate of development in this direction continues, Belgium will soon rival Germany, in which country these branches of instruction are probably superior to those of any other European country. In the matter of trade schools in Belgium the province of Liege, according to the American Consul there merits particular attention, as it is especially in advance in this direction. The long list of existing trade schools has lately been added to, through the opening recently of an institution for teaching printing, book-binding, lithography, etc. It has been organised under the patronage of an association known as the *Okambre Syndicale des Patrons—Imprimeurs del' Arrondissement de Liege*. This institution is to produce first-class printers, lithographers, and book-binders, giving them sufficient general instruction to enable them to become efficient and up-to-date artisans. The school is under the control of the executive committee, consisting of three members, representatives of the Government, the province, and the city of Liege respectively. The staff of teachers comprises twelve members, namely, one director, one professor of ornamentation, seven of typography, one of book-binding, one of lithography, and one of French. Five years are required to complete the course.

BENGAL TECHNICAL SCHOLARSHIPS, 1913

The Government of Bengal are prepared to receive applications from statutory natives of India for a State Technical Scholarship tenable in Europe or America for two years, of the value of £150 a year, exclusive of fees payable to the institution where the scholar will study, and travelling expenses. The scholarship will be awarded for Mechanical or Electrical Engineering, and preference will be given to those who have already received the best technical education available in Bengal in one of these subjects.

MADRAS TECHNICAL SCHOLARSHIPS, 1913.

It is notified that a State Technical Scholarship will be awarded in the Madras Presidency during the current year for the study of the leather goods industry. Candidates desirous of prosecuting the technical study of this industry should submit their applications for the scholarship to the Director of Public Instruction, so as

to reach him on or before the 1st March 1913. Other things being equal, preference will be given to graduates in arts who have specialized in Chemistry.

COCHIN TECHNICAL SCHOLARSHIPS, 1913.

The Dewan of Cochin considers it absolutely necessary to constitute a separate Mechanical Department with a well-qualified, full time Engineer at its head. He is to be in "professional charge—(1) of periodical supervision of the Tramway, (2) of the workshop at Chalakuddy to be called the Central State Workshop, (3) of all electric and telephone plants, and (4) of all motor-cars, boats and machinery, *e.g.*, pulso-meters, pumps, dredgers, etc." He is to get a salary of Rs. 400 to 500 a month and his headquarters will be at Chalakuddy. For this post of Mechanical Engineer a new man is to be appointed for a period of three years within which time the Durbar hopes to get one of their own men trained in Europe to take "responsible charge of the department." A scholarship for the study of Mechanical and Electrical Engineering in Europe is now offered for which applications should be submitted to the Dewan not later than the 1st of April, 1913.

EXAMINATIONS IN MYSORE.

The institution of the Entrance Examination, Accounts Branch, Public Works Department, as one of the Local Service Examinations, has been sanctioned by the Mysore Government. The rules proposed for the conduct of this examination have been approved.

SHORTHAND ASSOCIATION, TRIPPLICANE.

At the second anniversary meeting of the Shorthand Association, Triplicane, held recently in the Presidency College, interesting speeches were delivered by the Hon'ble Mr. V. S. Srinivasa Sastriar, and the Hon'ble Sir Harold Stuart on the reporting profession.

SOME OF THE GRIEVANCES OF SECOND-GRADE COLLEGES.

That, in the existing state of education in this Presidency, the second-grade Colleges are fulfilling a useful purpose has been recognised. These institutions have, of late, advanced considerably in efficiency, and, in spite of the disabilities under which they labour, are doing good work. It would, therefore, be just and proper that they are recognised to be as much integral

parts of the University as the first-grade Colleges.

The statement recently issued by the Committee appointed to consider the question of the Vernaculars shows that there are now in this Presidency 28 second-grade Colleges with 2618 students (in the first and second year classes) as against 14 first-grade Colleges with 3193 students; and they can, therefore, legitimately claim a larger and more intimate share in the administration of the University than they are at present allowed.

The first-grade Colleges seem to have a monopoly of the seats on the Boards of Studies; they also furnish almost the entire body of examiners. The second-grade Colleges are thus completely shut out from participation in a work in which they are as much interested as the first-grade Colleges. It is certainly not fair to make the first-grade Colleges appropriate to themselves the sole right to regulate the courses of studies and fix the standard of examinations. These are questions in which the second-grade Colleges have equal voice.

There is yet another matter in which the second-grade Colleges are practically ignored. One searches in vain the recent list of nominated Fellows for any recognition of these institutions. Of the eight appointments made this year not one goes to a second-grade College. First-grade Colleges are represented on the Senate by more than thirty nominated Fellows, while the second-grade Colleges have but five to represent them.

What is more bitter is that busy lawyers who have no breathing time to spare and men in the street without any qualification or claim are nominated in preference to the legitimate claims of the second-grade Colleges, who by their position, education and other qualifications are eminently fitted to partake in the administration of the affairs of the University.

In the true interests of higher education we would plead for greater confidence in the second-grade Colleges and closer union of the University with them. It would be sound policy to regard them not as aliens with no privileges, but as members with the full rights of citizenship and treat them accordingly.

MADRAS STUDENTS' ADVISORY COMMITTEE.

Circular No. XVII.

ADMISSION OF INDIAN STUDENTS TO THE INNS OF COURT.

The attention of Indian students is drawn to the modifications which have been recently adopted in regard to admission to an Inn of Court.

I. The examination list set out in the Handbook (13th Edition) has been amended in two respects—

(a) The Preliminary examination for the Degree of M.A. conducted by the Joint Board of Examiners of the Universities of Edinburgh, Glasgow, St. Andrews and Aberdeen is only accepted for students whose native language is English.

(b) The Oxford or Cambridge Senior Local Examination is only accepted when two of the Sections in which the candidates passed are certified to be—

- (i) *English Language and Literature.*
- (ii) *Latin.*

II. In lieu of the certificate from a Collector or Deputy Commissioner or Political Officer hitherto required from a Native of India a *Certificate from the Secretary for Indian Students* appointed by the Secretary of State will have to be obtained.

It will therefore be necessary for an Indian student in the Madras Presidency who desires to be admitted to the Bar to apply in the first instance to the Secretary, Madras Students' Advisory Committee, and to furnish to him—

(i) Testimonials of good character from his Professors and Teachers, whether in a college or a school, and

(ii) A certificate signed by one or two responsible persons, whether Government officials or otherwise, who can speak as to his character and standing.

These will be forwarded to the Secretary for Indian Students at the India Office, who will also require to see the student in person. If the Secretary for Indian Students is then satisfied that he can recommend the student for admission to the Bar, he will give his certificate to that effect.

ARTHUR DAVIES,
Secretary,

February 1913. Madras Students' Advisory Committee.

Reviews and Notices.

AN INTRODUCTION TO ENGLISH INDUSTRIAL HISTORY,
BY HENRY ALLSOPP, B.A. (G. BELL & SONS.)
2s.

The study of this important branch of History was hitherto felt beyond the reach of most young people, partly due to the fact that the available text-books were far too learned and academic and also expensive, but this book is intended to supply a long-felt want. It is undoubtedly an interesting, simple and suggestive introduction to Industrial and Economic History. It presents only the essential features. The author attempts to answer the questions "In what ways do men get their incomes now? How have Englishmen obtained their living from the earliest times? How did their various trades arise? How is that great industries like the Woollen Industry are settled in certain definite districts? What is the history of the working classes?" The author has admirably succeeded in tracing the process by which England has become so vast, so wealthy, so powerful as she is at present. The growth and decay of the English Manorial system with the parallel growth and decay of the guilds, the growth and decay of the domestic system which succeeded it are all portrayed in simple language. The rise of the trading companies, the age in which factories and large scale production prevailed, the age of wages, of rent, of profit and of interest are lucidly described. Thus children are helped to know something of the age in England when the lives of the people were regulated by local organizations like the Manor and the Guild, next of the age in which the State regulated trade and industry by means of what was called the Mercantile system and next of the age when it was held wrong for the State to interfere, when individual liberty and free competition were glorified. The children are helped to realize that in the present age people have once again begun to believe in State Regulation and that they think at the present day less of the nation as a whole than of the well-being of each of the individuals comprising the nation and that the conviction is gaining ground that "if only all Englishmen are healthy, well-fed, well-clothed and decently housed, if all Englishmen have leisure for education and recreation, then England will be wealthy, have many ships and prosperous industries and be very powerful." We heartily commend the book to every teacher of History.

JUNIOR SCHOOL HISTORY OF INDIA, BY E. W. THOMPSON, M.A. (CHRISTIAN LITERATURE SOCIETY, LONDON AND MADRAS.) 4s. 1s.

The second edition of this book is before us. The aim of the author in writing this Junior History is to make it a "truly scientific introduction to the study of Indian History so as to enable the beginner to pass on without a dislocating shock to those standard works which deal more fully with men and events so briefly noticed in these pages." The book which aims at this ideal is no doubt a good one but we are sorry to notice that this otherwise excellent book is marred by number of defects. The history of South India during the "Hindu" Period (it may be noted in passing it ought be called the Pre-Mussalman Period) is disposed of in about 24 lines. On the other hand many obscure names and events are mentioned. Why worry children in the Lower Secondary forms with Alptigin, Boscawen, Adayar Battle, Gaharwar, Gubilas, Enthydemos, Kalusha, Lakhnabbi, Battle of Tazin, Visaladeva. We are surprised that a number of facts calculated to interest children and fill their minds with feelings of patriotism are altogether omitted. One looks in vain to know something of the extent of Asoka's Empire and of Samudragupta's; of the system of administration in Northern India in the days of Chandragupta and of South India in the days of Rajaraja Chola. Passing on to the Mahamadan India, we find that even the name of Krishna Devaraya is not mentioned. Sivaji's "murder" of Afzal Khan is graphically described but not one word is said about the statesmanship of the Maharatta chief. The author, with true missionary spirit, has taken very kindly to the Brahmins in India! Not only does he tell cock-and-bull stories about priests and their multiplying sacrifices for their personal aggrandizement, he wants the school children to believe that the Indian Mutiny was caused by the "mischievous" priests who did not want the people of India to change old customs, however bad they might be "going about telling lying tales that the Government was trying to spoil caste." We have the undoubted testimony of Lord Roberts himself to say that the greased cartridges were wrapped in paper smeared with the fat of the pig and the cow and yet we have it stated seriously in this book that a story went round that the cartridges were so greased. We sincerely trust that these defects will be removed in the subsequent editions.

AMERICAN INDEPENDENCE AND THE FRENCH REVOLUTION (1760—1801)—COMPILED BY S. E. WINBOLT, M.A. (GEORGE BELL & SONS, LTD.) 1s. net.

This book belongs to a series of English History Source Books published by Messrs. Bell & Sons. History teachers all over the civilized world are called upon in these days to use Source Books as an adjunct to the History lesson. The kind of Problems and Exercises that may be based on the documents are admirably illustrated in Keatinge and Frayer's History of England (A. & C. Black). It is urged that source books enable the pupils to take a more active part in the History lesson. The volume before us contains extracts from the correspondence of Catham, Home Office Papers, Letters of Junius, Cowper's Letters, 'Task,' London Magazine, Gentleman's Magazine and Annual Register. The majority of extracts are living in style and are arranged in chronological order. We regret that the book is not illustrated.

HIGH ROADS OF GEOGRAPHY: ROYAL SCHOOL SERIES, EDITED BY EDWARD PARROT, LL. D. (THOMAS NELSON & SONS).

As companion volumes to High Roads of History the enterprising firm of Messrs. Nelson & Sons have brought out these volumes on Geography and six books of this series are before us. They maintain the high level of excellence of Messrs. Nelson's books. The introductory book contains about thirty letters supposed to be written by a father touring round the world to his children at home whom he left behind. These letters have an attraction quite their own. Ten of these letters are devoted to India, Burma and Ceylon and Indian children in the Lower forms will be delighted to read them. They will be glad to be told that foreigners think that Indian children are always bright and merry and that they are very clever indeed and that they are much fonder of their lessons than English boys. The descriptions of scenery, towns and of people are throughout true to nature. The books are all graded and the authors have taken great pains to put in them just those things which best appeal to children and leave a permanent impression in their minds. Another striking feature of these books is that casual relations are very clearly explained. In Book III. the lesson on "The Heart of Empire" is actually a lesson on the growth and development of towns. After explaining the statement that London is a

nation and not a city, the author points out in charming and simple language what it was that contributed to its greatness. Book V. which deals with Britain Over-seas contains several chapters devoted to India. It is gratifying to note that it is a very faithful account of the country and its people and is written by one who not only knows the country well but understands her people and their minds. Indian children's heart will be filled with pride when they read that their sacred Ganges is the most important river in the world and understand the causes for it. The lessons on 'Life in India' is delightful reading. The influence of geographical phenomena on life is clearly brought out. Children are told why it is 'that there is in this country no great incentive to exertion which obtains in Europe,' and that though custom in India is stronger than law, life becomes a kind of gamble breeding improvidence. Speaking of Madras the writer says "the other parts of India are fond of referring to Madras as 'the benighted province;' nevertheless it shows better than any other part of India the results of civilized Government and in education it takes the first place. Nowhere in India are the natives more eager to attend the schools and colleges than in Madras." Page 188 contains the picture of a temple and it is called 'Parthas Urith temple.' Such a name we never heard of before in Madras! From the picture we can easily see that it represents the Parthasarathy temple at Triplicane! The books are all profusely illustrated and some of illustrations are the finest, rarely met with in school books. The maps in the books are faultless.

PREPARATORY ARITHMETIC, BY C. PENDLEBURY. (GEORGE BELL & SONS). 1s. 6d.

The book is written in accordance with the recommendations of the Mathematical Association on the Teaching of Arithmetic in Preparatory Schools. The principles of the subject are explained clearly, the exercises are taken from the life of young men and must consequently be interesting to them. Approximations are introduced early and the verification of results is insisted upon. We should like to see more of correlation of Algebra and Geometry with Arithmetic than is indicated in this book.

EXAMPLES IN ARITHMETIC, PART II, BY HALL AND STEVENS. (MACMILLAN & CO.). 2s.

These examples are taken from "A School Arithmetic" written by the authors, and are

published separately because of the growing feeling among teachers that it is better to place a book of mere examples in the hands of students and to give their own oral explanations of principles than to put a complete 'text-book' into their hands. We are glad to note that this book is not a mere collection of examples but a certain amount of the text has been reproduced wherever the examples would not be intelligible by themselves. Also some examples which are intended to be worked by special methods are worked as models in the text.

MATRICULATION GRAPHS, BY HUKAM CHAND, M.A., B.Sc., FIRST PROFESSOR OF MATHEMATICS, KHALSA COLLEGE, AMRITSAR. (PRINTED BY SRINIVASA VARADACHARI & CO., MADRAS). Price 4 As.

This is an elegant and well got-up little volume of 46 pages and is intended for the use of candidates preparing for the Matriculation examination of the Punjab University. The linear graph of $y = mx + c$ is exhaustively treated and amply illustrated. The illustrations consist of (1) solution of simultaneous equations, (2) application to Arithmetic and Statistics. There is also a small chapter on simple quadratic graphs in which the equations $(x - a)^2 + (y - b)^2 = r^2$ and $y = x^2$ are beautifully explained.

The book is in every way satisfactory and will certainly put into the minds of beginners the right ideas and uses of graphical methods. We unhesitatingly recommend the book to all students preparing for the School Final Examination in the Presidency of Madras and elsewhere.

DOMESTIC ECONOMY, BY MRS. CATHERINE F. DEIGHTON. (HIGGINBOTHAM & CO.) Price Re. 1-8-0.

The instructive and interesting publication of the *Domestic Economy* by Mrs. Catherine F. Deighton, the well-known author of *Practical Housewifery*, *The Hospital in the Home*, etc., and formerly Domestic Economy Teacher, London County Council, consists of three parts dealing with (1) General and Personal Hygiene, Foods and Food Stuffs; (2) Home Nursing, and (3) Needlework, etc.

The author begins with a clear description of the composition and structure of the human body, a most wonderful and complex organism, a thorough knowledge of which would give the readers a lot of valuable information regarding the useful functions the human body is performing. The learned author then gives a long and fairly con-

nected account of the functions of the important organs of the human body such as the heart, stomach, the lungs, etc. The uses of food, the different food stuffs, the objects and different methods of cooking food, uses of water, composition and purification of water are then dealt with in minute detail. The second part of the book relates to the infantile management, children's ailments, malaria, cholera, dysentery, etc. In the third part the author gives some interesting hints on laundry work and the teaching of cookery. Mrs. Catherine Deighton has selected a fascinating and almost fresh field of instruction and has successfully striven to give excellent education with great discretion. It is certainly to her credit that she has compressed a huge mass of information on very many important matters of daily experience into a compact and fluent narrative. Much of the information collected by the author is valuable. The chief merit of the book lies in its educating mission. The author has really done a distinct service to her fellow-beings who hunger and thirst after the knowledge of *Domestic Economy* by placing within their easy reach this praiseworthy publication. The book is well turned out and made attractive through the care bestowed upon its production by the well-known Publishers in Madras, Messrs. Higginbotham & Co.

INDIA STRIRATNANGAL, BY C. S. RAMASWAMI AIYAR. (PUBLISHED BY THE AUTHOR: TRIPLICANE, MADRAS.) Price 8 As.

This small book is a collection of the biographies of eminent Indian women who were famous in the history of our land on account of their having been the ornaments of virtue, heroism, learning, philanthropy or patriotism. It contains mostly the lives of Rajput queens, viz. Padmini, Samyukta, Tara Bai, Rani of Jodhpur, etc. Although the work is a translation from the '*Heroines of Ind'*' in English by Mr. Manmatha Nath Dutt, M.A., of Calcutta, the style is homely, popular and pleasing, and Mr. Ramaswami Aiyar has spared no pains to make the language run smoothly and has drawn the moral towards the conclusion of each story. The illustrations are a noteworthy feature of the book and it may be used with considerable advantage in girls' schools, while it is bound to be entertaining and instructive for the '*Zenana*,' in the cause of whose education Mr. Aiyar has been doing excellent work as editor of the *Tamil Zenana Magazine*.

THE WINTER'S TALE: A TAMIL DRAMA, BY K. VENKATARAMA AIYAR, B.A. (PUBLISHED BY THE HINDU EDUCATIONAL TRADING CO., KUMBakonam). Price 8 As.

Mr. K. Venkatarama Aiyar has already been known to the Tamil world of letters through his many translations and adaptations of English works, such as Milton's *Samson Agonistes* and Lamb's *Tales from Shakespeare*. This drama is another of his contributions to Tamil literature. It is an adaptation of *Winter's Tale*, one of Shakespeare's comedies. The style is felicitous and charming and the author has been eminently successful in preserving the spirit of the original; the various characters have the same seriousness or geniality as in the English drama. The names given to the characters correspond to their qualities; the language used is quite in keeping with the society to which the characters belong.

LITERARY NOTES.

"Roget's Thesaurus" is a new and cheap edition of the well-known "Thesaurus of English Words and Phrases" of Dr. P. M. Roget, improved and enlarged, partly from the author's notes and with a full index, by Mr. J. L. Roget and his son, Mr. S. R. Roget. (Longman's, Green and Co., 2s. 6d.)

Mr. T. Fisher Unwin announces among other works a life of "Allan Octavian Hume, C. B.," and an account of his work in India, by Sir William Wedderburn.

Among the books and pamphlets registered in Assam during the quarter ending December 31, 1912, was a historical research work on the Assamese language by Mr. Debananda Bharali of Dibrugarh.

Messrs. Macmillan announce that they will begin in April the publication of the Bombay edition of the works of Mr. Rudyard Kipling in prose and verse, newly arranged and corrected by the author. This edition will be limited to 1,050 copies, and will occupy twenty-three volumes, two of which will appear every two months. The price will be one guinea net per volume, and the edition will be sold in sets.

The total of publications issued last year amounts, according to the statistical table contained in the *Bookseller*, to 12,886. Fiction accounts for 2,290, to which may be conjoined 821 publications of children's books and minor fiction. The next largest figure is that of theology, which is responsible for 934.

The Adhyatma Ramayana, or 'The Esoteric Ramayana,' translated into English, by Rai Bahadur Lala Baijoath, has been published by the Panini Office, Allahabad, 1913. (Price Rs. 3.)

Messrs. Nelson have published an attractive new edition of Captain Marryat's prime old favourite for boys, and indeed girls also, 'Masterman Ready' (3s. 6d.) It has eight good coloured illustrations, and a large number of ingenious drawings in the margin of the well-printed pages.

The Library Miscellany, Baroda, is a unique monthly edited by Mr. J. S. Kudalkar, M.A., LL.B., being the first and only one of its kind in India. Its pages are full of interesting and instructive articles. It gives us a vivid account of the work of the Free Travelling Libraries of Baroda.

The Dacca Review for December is full of references to the glorious prospects of the "Model" University at Dacca. "Educational Ethics" by Professor N. C. Banerjee, "The Oil Pressing Industry in Bengal" by Prof. Radha Kamal Mukherjee, the "Glories of Sanskrit Literature" by Mr. G. C. Mukherjee—each deserves notice.

Messrs. Hodder and Stoughton offer prizes of £250 to India and each Dominion for the best novel. The well-known novelist Mr. A. E. W. Mason will adjudicate in the case of India.

The Home papers make the interesting announcement that the Syndics of the Cambridge University Press propose to publish a comprehensive history of India, from the earliest times to the present day, on the model of the Cambridge modern history. The work, as projected, will be completed in six volumes of about six hundred pages, two volumes being devoted to each of the main periods. Ancient India, Muhammadan India and British India under the editorship, respectively, of Professor E. J. Rapson, Lieutenant-Colonel T. Wolseley Haig, I.S.C., and Sir Theodore Morison, K.C.I.E. The various chapters in these sections will be entrusted to scholars who have made a special study of the period or subjects; and the Syndics hope, in this way, to produce a history of the nations of India, past and present, which shall take its place as the standard work. They are indebted to the generosity of Sir Dorab Tata who has provided the means for additional maps and illustrations, which will add greatly to the value and interest of the volume.

Messrs. Jack announce another twelve volumes of "The People's Books" to be published immediately. These will include an "Atlas of the World" in full colour by Bartholomew of Edinburgh. This will be

the first time that an Atlas in colour bound in cloth has ever been offered at this price. Other volumes include "Turkey and the Eastern Question" by John Macdonald, "Zoology" by Professor E. W. MacBride, F.R.S., "Cecil Rhodes" by Ian Colvin, "Psychology" by H. J. Watt, M.A., P.H.D., "Nietzsche" by M. A. Mugge, P.H.D., "The Bible in the Light of the Higher Criticism" by Rev. W. F. Adeney, M.A., and Rev. Professor W. H. Bennett, Litt. D., and others.

"The Indian Constitution" by Mr. A. Rangaswamy Iyenger, B.A., B.L., Second Edition, considerably enlarged and revised, (Demi Octavo, over 500 pages) has just been published and can be had of the Hindu Office. (Price Rs. 3.)

Captain James Cunningham Grant-Duff occupies a prominent place among the authors of the History of India and of the Indian People. His History of the Maharattas has been written under circumstances that very seldom present themselves to those that desire to record the stirring events of a notable period. The work is dedicated as a humble tribute of gratitude and veneration to Lord Sydenham by Mr. T. D. Kerr, Proprietor, R. Cambray and Co., Publishers, Calcutta.

Mr. Maurice Hewlett has a new volume of verse appearing with the Macmillans under the title 'Helen Redeemed and Other Poems.' It will be welcome, for he writes poetry with as much force and polish as he writes prose.

"Wordsworth" by E. H. Sneath is an elaborate study of Wordsworth as a poet of nature and man, tracing out the influence of heredity and environment upon his works. Wordsworth's attitude towards science long scouted, now accords with the views of modern scientific philosophy, which now-a-days becomes transcendental.

"Auditing, Accounting and Banking" by Frank Dowler and Mardinor Harris, is an authoritative book of real value. Diagrams, figures and explanations make the auditing part quite clear; also the author has referred where necessary to legal cases. The banking section is lucid and practical, being far clearer than in books which one remembers having studied. It should be in every business or banking library and would be helpful as a text-book for examinations. The book is published at 5s. by Pitman.

"The Education of the Women of India," by Minna G. Cowan. The increasing attention which is being devoted in this country to the problems of female education renders a book of this character peculiarly welcome. (Messrs. Oliphant, Anderson, and Ferrier, 3s. 6d.)

"Adam Lindsay Gordon." This is a striking tribute by Edith Humphris and Douglas Sladen (Constable and Co., London) to the genius of the Australian poet, Adam Lindsay Gordon. Adam Lindsay Gordon is the hero and poet of Australia; before his fame even that of Kendall, who occupies a proud place in English literature, pales into insignificance.

"Domestic Economy." This is a valuable work produced by Mrs. Catherine F. Deighton who has thoroughly mastered her subject, and writes with firmness and authority. (Higginbotham and Co.)

Indian Educational Notes.

MADRAS.

PRIZE DISTRIBUTIONS.

European Girls' School, Royapettah.—The annual distribution of prizes and treat to the pupils of the European Girls' School, Royapettah, took place in a spacious shamiana erected for the purpose in the compound adjoining the Church of the Purification of the B. V. M. There were a good number of priests of the Archdiocese and the San Thomé Mission present as also the Assistant Inspector of Schools, Doctor and Mrs. T. Gibson, Mr. Burrard, Mrs. D. M. De Silva, the Misses DeSouza and all the parents and guardians of the pupils. The children sat to a sumptuous tea after which followed the function of the distribution of prizes, at which the Rev. Father Merkes, Vicar-General, presided. The Manager, the Rev. W. G. Hood, and his able staff, are to be heartily congratulated on the success of the evening entertainment.

W. M. Sunday School.—The distribution of prizes to the pupils of the Wesleyan Methodist Sunday School, took place in the Wesleyan Chapel, Popham's Broadway, Georgetown. The Rev. J. Cooling was in the chair, and Mrs. J. R. Henderson distributed the prizes.

The proceedings commenced with the singing of a hymn and was followed by a prayer. After an interesting dialogue by the pupils on "The prevention is better than cure" the Superintendent read the Annual Report.

Mrs. J. R. Henderson then distributed the prizes to the pupils, and gave an interesting speech. Rev. Mr. J. Cooling congratulated every one connected with the institution and the interesting function terminated.

Madras Christian College School.—A pleasant meeting was held at the Anderson Hall, when Rao Bahadur A. C. Pranatharibhara Iyer, Inspector of Schools, presided at the annual distribution of prizes to the students of the Madras Christian College School. All the teachers of the School, including the Principal and most of the professors, were present in their academical robes. The students were marched to the Anderson Hall in order by their respective class teachers, and when all were assembled in the hall, Dr. Skinner began the proceedings with a prayer. After the reading of the Report for the last year by Mr. F. D. Henderson, Acting Superintendent of the School, Mr. Pranatharibhara Iyer

distributed the prizes, after which he asked them to work steadily and spoke about the responsibilities of students. The meeting terminated with a vote of thanks to the Chairman proposed by Dr. Henderson and supported by the Rev. G. Pittendrigh.

State Secondary School, Banganapalle.—The Prize distribution ceremony of the above school came off on the 9th instant under the presidency of the Hon'ble Khan Bahadur Nawab Mir Asad Khan Bahadur. The school was decorated with ever-greens, flags and festoons for the occasion and presented a very delightful appearance. The ceremony commenced with the reading of the reception address by the Headmaster. The reading of the annual report by the Supervisor of Schools of the State, next followed. He gave a detailed work of the Secondary School, Village Elementary Schools, Girls' School, Mission and Private Schools under the aid of the State and the figures showed the marked improvement effected in all the schools under his supervision during the past official year. The prizes were then given away to the boys, and after an interesting speech by the Chairman the proceedings terminated.

St. Joseph's High School, Calicut.—The Parents' Day celebration and prize distribution at St. Joseph's European Boys' High School came off in the presence of a large number of European and Eurasian ladies and gentlemen, the chair being occupied by Mr. Norton-Fagge, Principal of the Zamorin's College. The school was very tastefully decorated and a very nice stage had also been put up, two dramatic pieces *The Blind Beggars* and *The Mock Doctor* forming prominent items in the programme. The Rev. Fr. Repetto, S.C., the Head Teacher, to whom the school very largely owes its present efficient condition, presented a very interesting and encouraging report.

Having distributed the prizes, the Chairman made some appropriate remarks and the meeting terminated.

The Madras Medical College.—The distribution of prizes and certificates of honour to pupils of the Madras Medical College was performed by His Excellency Lord Pentland. There was a large and distinguished gathering of visitors present including a few European ladies, and prominent among those assembled were Sir J. N. Atkinson, Sir Ralph Benson, Surgeon-General W. B. Bannerman, Dr. T. M. Nair, Dr. A. Rungappa, Dr. M. Krishnasami Iyer, Dr. M. C. Nanjunda Rao, Rev. Mr. E. M. Macphail, and Messrs. J. C. Rollo, Paul Appasami and Captain Stagge, I.S.M.D.

P. S. H. School.—The celebration of the Founder's Day and annual distribution of prizes of the Pennathur Subramaniam High School, Mylapore, took place at Madhava Bhag, Luz, Mylapore. The Hon'ble Mr. Justice T. Sadasiva Iyer presided. The sports in connection with the celebration of the Founder's Day were held at the School play grounds between 7.30 A.M. and 10 A.M. In the evening the invited guests assembled in the beautifully decorated pandal specially put up for the occasion on the eastern side of the Madhava Bhag compound to witness the evening function. There was a very large gathering of the gentlemen of the locality present on the occasion. The proceedings of the evening began with the prayers by two students of the School,

The Annual Report was read by Mr. M. B. Doraiswamy Iyengar, B.A., B.L., Manager and Joint Secretary. The Chairman then distributed the prizes to the prize-winners in all the forms of the High School and to the boys who competed successfully in the morning sports. The juniors of the Institution then staged a drama *The Two Sergeants*. The Chairman made an interesting speech and Mr. T. R. Ramachandra Iyer then proposed a vote of thanks to the chair, and the proceedings came to a close.

English and Sanskrit College, Vizag.—The distribution of prizes to the students of the Maharajah's English and Sanskrit College took place on the 11th inst. in the former institution. The function was presided by Mr. F. C. H. Fowler, I.C.S., Trustee to the Samasthanam. The elite of the town, including the officials and the members of the Bar were present on the occasion, Rao Bahadur K. Ramanujachari, the Principal, read the reports for 1911-12 which bore testimony to the good and substantial work done by the institutions during the year. The numerical strength of the English College including the Secondary department during the last academic year was 872, which increased to 958 on the 31st of January last. The receipts of the institution showed an increase of from Rs. 26,412-2-0 to Rs. 35,121-6-8 while the charges also rose from Rs. 41,402-6-10 to Rs. 45,710-11-11 during the year under review. The College produced brilliant results in Mathematics and Philosophy, all the candidates sent up for these branches, having passed the examination. The results in Chemistry, Sanskrit, Telugu and English were also satisfactory. Respecting the Sanskrit College the report states that the examinations for which the institution is authorised to train candidates are (1) the Siromani examination in Vyakarana, (2) the Vidwan examination in Sanskrit and Telugu, the former being taken as the principal language.

Mr. F. C. H. Fowler, in bringing the proceedings to a conclusion, paid a high compliment to the Principal and the staff for the excellent work turned out by them during the year under review. Mrs. Fowler who graced the occasion presented prizes to the pupils of the colleges. Rao Bahadur K. Ramanujachari, the Principal, then rose and thanked the Chairman and the Samasthanam authorities for their kind and sympathetic attitude towards the colleges. The meeting dispersed amidst loud cheers.

The A. M. College, Madura.—The annual distribution of prizes of the American College, Madura, was held on the 17th instant in the Assembly Hall of the College. Mr. S. R. M. A. Annamalai Chettiar of Kannudukattan presiding. The hall was tastefully decorated with flags of British as well as American nation and also festoons. There was a large gathering of the elite of the town. Those present included Sir Samuel and Lady Chisholm. The proceedings opened with prayer in Tamil. The High School students entertained those present with humorous dialogues and farces. Rev. W. M. Zumbro, the Principal of the College then read his report for the year 1912 which was a record of success. After reading of the report Lady Chisholm kindly gave away the prizes to the successful students. The Chairman in his concluding remarks thanked Mr. Zumbro for the excellent entertainment he provided, particularly the Malayalam Boat song and the Mock Doctor and said that the report had showed that very good progress was made during 1912. Mr. Zumbro proposed a vote of thanks to the Chairman, to Lady

Chisholm and to all those present. The function was brought to a close with the singing of the National Anthem.

The Sowrashttra High School, Madura.—The Sowrashttra High School, Madura, presented a gala appearance on Saturday the 15th instant, when the 9th Anniversary and the Distribution of Prizes to the deserving pupils of the institution was celebrated, with Mr. A. Fotheringham, I.C.S., Collector, of Madura, in the Chair. The premises of the School and the Hall were well decorated and near the dais a small stage was erected for the students to enact their several parts. An interesting programme had been arranged for the occasion by the energetic Headmaster; and there was a large and representative gathering of gentlemen present, besides the students of the various schools.

There was Public Speaking by four pupils of the Sixth Form on (1) The Dignity of Labour, (2) Female Education, (3) The British Rule in India, and (4) Loyalty to the British Raj. The Lower School Pupils recited short action songs on "Play Time," "The Train," &c., and these were much appreciated. The Primary School Pupils enacted a Tamil Drama—"The Lost Camel." Then a farce entitled "The Cadi and the Robber" was performed by the Third Form students. Lastly, but by no means the least appreciated of all was the enacting of a short Drama "Alfred" by the pupils of the Fourth Form. Mr. A. Govindaraja Mudaliar, B.A., L.T., the Headmaster of the High School, announced that for Prize-Speaking, T. S. Ramasamy, who spoke on "The British Rule in India" had been awarded the First Prize, and M. Sivagurunathan, who spoke on "Female Education," the Second Prize.

This over, the Headmaster read his Report for the year ending 31st March 1912. From the Report we learn that it was chiefly through the exertions of Messrs. Venkatachalapathi Aiyar, Seshia Bhagavathar and others, that the Managing Committee realized a Permanent Endowment of Rs. 25,000, which now adds greatly to the stability of this popular institution.

The Chairman, after giving away the prizes to the various Prize-winners, addressed the audience in an interesting speech. He congratulated the Sowrashttra Sabah for having successfully managed the institution for 27 years, and more and more successfully every year. Though the Sowrashttras were a traditional weaving class, they, instead of restricting their sons to that profession, had rightly begun to give sound education in order to enable them to enter into other walks of life also.

The Chairman and Dr. Marsden were garlanded. Mr. J. Ramier, B.A., B.L., Secretary of the High School, proposed a hearty vote of thanks to the Chairman and to Dr. Marsden.

The Headmaster proposed cheers to His Majesty the King-Emperor and to the Collector and the gentlemen present on the occasion, which were lustily responded to. With the singing of "God Save the King," the interesting function came to a close.

Elementary School Gardening.—The Government have approved the distribution proposed by the Director of Public Instruction of the grant of Rs. 10,000 for the provision of elementary school gardens. The amount has been distributed as follows:—

Ganjam, Rs. 400; Vizagapatam, Rs. 400; Godavari, Rs. 400; Kistna, Rs. 350; Guntur, Rs. 400; Nellore,

Rs. 400; Bellary, Rs. 450; Anantapur, Rs. 400; Cuddapah, Rs. 400; Kurnool, Rs. 400; Chingleput, Rs. 400; The Nilgiris, Rs. 350; Coimbatore, Rs. 400; Salem, Rs. 400; North Arcot, Rs. 400; Chittoor, Rs. 400; Tanjore, Rs. 450; Trichinopoly, Rs. 400; South Arcot, Rs. 400; Ramnad, Rs. 600; Madura, Rs. 250; Tinnevely, Rs. 450; Malabar, Rs. 600; South Canara, Rs. 400; Bezwada Municipality, Rs. 70; and Masulipatam Municipality, Rs. 30.

Physical Training School.—The Director of Public Instruction reported in November last that the Imperial grant of Rs. 52,000 sanctioned for the education of Europeans and Anglo Indians in G.O. No. 204, Educational, dated 2nd March 1912, is proposed to be utilized for the following purposes during 1913-1914:—(a) for giving supplemental aid to European Schools to enable managers to improve their teaching staff, (b) for starting manual training and physical training centres for European pupils, (c) for compensating Managers of European Schools for remission of school fees to deserving pupils in Primary classes and for payment of the cost of class books of poor pupils, and (d) for meeting fully, as far as possible, the demands for boarding grants under articles 40 and 42 of the Code of Regulations for European Schools. In regard to the proposals (a), (c) and (d), the Inspector of European and Training Schools and the Inspectresses of Girls' Schools have been asking to obtain and submit applications of deserving schools. With regard to the proposal (b) the Inspector of European and Training Schools stated that improvement was much needed in the physical training now given in the majority of European Schools. It was also reported that the exercises now taught were usually old fashioned and unsuitable for children and that the instructors were generally incompetent. With a view to removing this defect and to introducing modern methods of physical culture, the Director proposed to start a central class for physical training in Madras under a competent instructor. The Government have approved generally of this proposal the institution being placed under an instructor on Rs. 200 per mensem on a temporary footing for a period of five years from the 1st March 1913. It will be interesting to know whether this school will be open to pupils other than those belonging to the class of European and Anglo-Indians.

Ramnad S. P. G. School.—The Government are pleased to sanction a grant of the sum of Rs. 5,400 towards the cost of the construction of an additional building for the S. P. G. High School, Ramnad.

High School for Girls at Vizag.—On the recommendation of the Inspectress of Girls' School, Northern Circle, Waltair, the location of a High School for Girls at Vizagapatam was sanctioned. Owing to non-arrival of the European Headmistress said to have been indentured from England the School has not yet been opened. As a High School for girls in the Northern Circars under Government management is the nature of an experiment, it is deemed desirable to open it at Vizagapatam which is the headquarters of the Inspectress, so that the school might be under her close personal supervision. The people of Godavari petitioned that the School might be opened in that district owing to its central position and the somewhat favourable progress which female education had made among them. They were informed that the establishment of similar schools

would be considered on the experiment at Vizagpatam proving a success.

St. Joseph's School, Bellary.—The authorities of the St. Joseph's European Boys' School, Bellary, have been permitted to adopt the alternative site proposed for the school asylum and the revised estimate has also been approved. Sanction has been accorded to the payment, when funds are available, of an additional grant, not exceeding one-half of the actual expenditure not exceeding Rs. 4,800, towards the cost of converting a portion of the existing building into staff quarters, subject to due compliance by the management with the suggestions of the Chief Engineer and with all the conditions prescribed in the Code of Regulations for European schools. The Government have also sanctioned the payment of an advance.

Training Students.—The Government of Madras have sanctioned the proposal of the Director of Public Instruction to extend the payment of the special allowance of Re. 1-8-0 sanctioned already to the students of the elementary grade under training in Government training schools, who are in receipt of a stipend of nine rupees.

Silver Jubilee of Mr. K. Ramanujachariar.—The past and present students of the Maharajah's College assembled in large numbers in the College premises to celebrate the Silver Jubilee of the Principalship of Rao Bahadur K. Ramanujachariar, M.A., B.L., F.M.U. The Venerable Principal was taken in procession from his house to College and his arrival there punctually at 4-15 P.M. was the signal for much enthusiasm among the audience. Mr. N. Subba Rao Pantulu presided. After a few songs and verses were recited by Pundits, an Address was read on behalf of past and present students by Mr. V. Venkataraja Sastri, B.A., a Professor of the College. After a few speeches by some past students, Rao Bahadur K. Ramanujachariar replied in fitting terms. Mr. N. Subba Rao Pantulu next made an interesting speech and prayed Almighty for long life to Mr. Ramanujachariar. With a vote of thanks to the Chairman the meeting terminated.

A farewell entertainment.—The students, past and present of the Hindu High School, Triplicane, assembled on Saturday, the 15th instant, in the School Hall, to present a farewell address to Mr. A. Tiruvengadatha Aiyangar, B.A., L.T., the Mathematics Assistant of the Sixth Form on the eve of his departure to Pattamadai, to take up the post of the Headmaster in the local High School, with the Hon'ble Mr. V. S. Srinivasa Sastriar in the chair. The proceedings began a little after 4 P.M. The Chairman then asked the addresses to be read. Poems were composed for the occasion by the Vernacular Masters of the school. As a souvenir the students presented Mr. Iyengar with a watch. Mr. Iyengar rose amidst cheers and in a short and touching speech thanked the students for the honour done to him and gave some advice to the students. The Chairman wished Mr. Iyengar long life and a brighter future so that he might continue to work in the cause of education. Both Mr. Sastriar and Mr. Iyengar were then garlanded and the pleasant function was brought to a close with the usual vote of thanks proposed by Mr. K. Mangesh Rao, B.A., L.T.

The S. P. G. College and Schools, Trichinopoly.—The 150th Anniversary Festival of the S. P. G. College and Schools at Trichinopoly took place recently in a manner quite befitting the unique occasion. The Principal's 'At Home' from 4 to 6 in the afternoon formed the first part of the evening's proceedings. A large number of guests, European and Indian, representing all classes of the different communities of the city, were present. The Rev. A. F. Gardiner M.A., read the Annual Report which is a record of steady progress in every department. The Hon'ble Mr. J. H. Stone delivered a most inspiring address and the meeting terminated.

The Presidency College Malayalam Samajam.—The Anniversary of the Presidency College Malayalam Samajam, Madras, was celebrated with great éclat in the Presidency College Hall. The Hon'ble Justice Sir C. Sankaran Nair presided.

After the annual report of the working of the Samajam during the past year was read, the Hon'ble Mr. K. P. Raman Menon delivered a lecture on "Caste." The Hon'ble Mr. Raman Nayanar also spoke on the same subject. After an interesting speech by the Chairman on the improvement of Vernacular literature, the meeting terminated.

Nurani High School.—The Hindu High School, Nurani, founded in 1904, is doing creditable work reflecting great credit on Mr. N. R. Ramaswamy Iyer, B.A., L.T., the Manager and Headmaster and his able staff of Assistants. The students of the above institution enthusiastically celebrated the Anniversary of their Literary Societies with Mr. V. K. Desikachariar, B.A., B.L., the subordinate Judge in the chair. The school hall was tastefully decorated and there was a large gathering present. The programme began with prayer and the singing of the National Anthem after which the Chairman of the evening made a short introductory speech. This over, the Secretary read the Report for the last year. Mr. T. X. Ramunni and Desikachariar gave interesting speeches and the meeting terminated.

The Muslim Literary Association.—There was a large attendance, mostly of Mahomedans, at the fifth annual meeting of the Muslim Literary Association, which was held at the "Lyric Theatre." The Hon'ble Mr. Justice Tyabjee was in the chair, and among the others present were the Hon'ble Mr. Haji Ismail Sait, the Hon'ble Mr. V. S. Srinivasa Sastriar, Mr. K. B. Ramanadha Aiyer, Khan Bahadur Gulam Mahomed Mahajir, Khan Bahadur Dr. Mahomed Ismail, the Rev. Canon Goldsmith, Khan Bahadur S. M. V. Oosman Sahib, Mr. Sultan Mohideen Sahib Bahadur, Moulana Abdus Subhan Sahib, Mr. Mir Sultan Mohideen Sahib, Mr. Yakub Hussain and Mr. Hassan Ally. The Report of the last year was presented by the Secretary and was adopted. Mr. Mir Zynuddin, Bar-at-Law, spoke at length expressing his sympathy towards the Association. With the Chairman's concluding remarks, the meeting terminated.

The Doveton Protestant College and Girls' High School.—The Annual General Meeting of subscribers of these institutions was held in the Doveton College Hall, Vepey. There were present Captain V. J. Staggs, I. S. M. D., (retired), Messrs. J. R. Atkinson,

(Honorary Secretary), J. W. Hay-Ellis, James Short, George Maddox, R. C. Thomas, R. T. Tacher, W. B. Staggs, E. L. Taylor, C. W. Viegas, F. Lewin, A. J. Rebeiro and J. R. O'Neill and Assistant Surgeon J. St. C. Bartley, I. S. M. D. On the proposition of Mr. George Maddox, seconded by Captain V. J. Staggs, Mr. J. W. Hay-Ellis was voted to the chair. The business of the meeting opened with the consideration of the Report on the working of the institutions for the year 1912.

The next subject was the election of three members of Committee in the place of Messrs. James Short, E. L. Taylor and Captain V. J. Staggs, who retire in rotation but were eligible for re-election. It was proposed by Mr. F. Leuri, seconded by Mr. R. C. Thomas and carried "That the three members of Committee who retire in rotation be re-elected."

The Tamil Academy, Madras.—At the meeting of the Academy held in its premises, Satavatanum Krishnaswami Pavalar delivered a lecture on *Sangapularar*. Mr. C. R. Namasivaya Mudaliar presided over the meeting.

The Madras Teachers' Guild.—A meeting of the History and Geography Section was held at the Hindu High School, Triplicane, with Mr. K. A. Viraraghavachariar in the chair, when a lively discussion on the present position of English History in the S. S. L. C. scheme was carried on for nearly two hours. Resolutions were passed against too early specialisation and the too disproportionate importance paid to the special portion to the detriment of the outline knowledge of the subject as a whole. It was also resolved to request the Board to fix and publish the proportion of marks allotted in the public examination for the outturn and special portions of the subject and also to request the publication of the report of the Chief Examiner of every year for the information and guidance of the teachers. With a vote of thanks to the Chair, the meeting terminated.

Corporation Model Elementary Schools.—The first of the Elementary Schools of the Corporation of Madras was opened on the 4th instant at Vallabha Agraharam, Tiruvatteswaranpet. The rates of fees are almost nominal: 1 anna for the Infant, 2 as. for the 1st and 2nd Standards, 3 as. for the 3rd Standard, and 4 as. for the 4th Standard. Instruction in manual training (chiefly carpentry) is a special feature of these Model Elementary Schools. The private and indigenous schools in the neighbourhood will be absorbed in these schools.

The Council of Native Education, Madras.—The Council of Native Education, Madras, formulated a scheme for the spread of elementary education in this

Presidency and submitted to the Government certain proposals for the furtherance of the scheme together with replies received by the Council of Native Education from District Taluk Boards and mofussil Municipalities. The Government, in reply, state, while appreciating the interest taken by the Council in the matter they consider that its proposals besides being premature are too ambitious, having regard to the magnitude of issues involved and to the limited nature of agencies at the disposal of the Council. On these grounds they regret that they do not feel justified in making the grant applied for. They will be glad to avail themselves of advice and assistance of the Council in educational matters when suitable opportunities occur.

The Assistant Masters' Association, Trichinopoly.—An ordinary meeting of the Association was held recently in the premises of Aryan Secondary School with Mr. P. A. Ganesa Iyer, B.A., L.T., of the St. Joseph's College, in the chair. About thirty members attended. The proceedings of the meeting commenced with a resolution to send a congratulatory letter to the Hon'ble Mr. V. S. Srinivasa Sastriar, B.A., L.T., on his elevation to the Madras Legislative Council and a letter of thankfulness to H. E. Lord Pentland for his nomination. This was followed by a very lively discussion lasting for more than two hours on the desirability of limiting the working hours of teachers in Lower Secondary forms and Primary classes, in which many members took an active part. It was pointed out in the course of the discussion that teachers in the lower classes have a very real grievance and work for long hours, the sixth period being a *slow suicide*. They are not now in the same footing as they were ten years ago, their work and responsibilities having increased considerably, owing to the introduction of the School Final scheme, which, with its marking system and preparation of notes of lessons, has been taxing their time, energy and patience. Besides, there is considerable overstrain in the lower classes, detrimental to the interests of boys and teachers alike. School work for lower class children should not be the same as that for the higher. Their curriculum should be simplified; nor does elementary science or geography require any elaborate syllabus. Simplicity and thoroughness must be the aim. The school fees have been enormously raised; but this has not resulted in a proportionate improvement in the salary or leisure of teachers who are at present all but neglected, though they form the key-stone of the school organisation. Public opinion must be created against this grave injustice and the Government should be requested to liberally help the managers. This long and interesting discussion was brought to a close by the unanimous adoption of the following resolution:—The Assistant Masters' Association, Trichinopoly, is humbly of opinion that pupils and teachers in Primary classes and Lower Secondary forms are over-worked and begs respectfully to submit to Headmasters, Managers and

Educational authorities that the working hours of Primary classes and Lower Secondary forms be reduced to 4 and 4½ respectively and that the teachers be not given more than 4 hours daily work.

BOMBAY.

Poona Agricultural College.—His Excellency the Governor in Council has decided that there should be a standing advisory committee in connection with the College of Engineering, Poona. The function of the committee will be to advise Government on questions of policy, organization, staff, buildings, equipment, formation or reconstitution of classes, curriculum, rules of admission and any other subject connected with the College regarding which Government may require its opinion. As the Committee will be closely associated with the College and will visit it periodically, it will be in a position to take the initiative in suggesting improvements and reforms in respect of the above matters. The committee will consist of nine members as follows:—
Official members:—The Chief Engineer and Secretary to Government, Public Works Department; the Director of Public Instruction; the Secretary to Government, Educational Department; the Principal, College of Engineering, Poona; Lieutenant-Colonel W. V. Scudamore, R. E., Superintending Engineer, S. D. Non-official members:—The Locomotive Superintendent, G. I. P. Railway; the Engineer in charge of the Tata Hydro-Electric Works, Lonavla; the Principal of the Victoria Jubilee Technical Institute, Bombay; and the engineer of a selected Bombay Cotton Mill.

Bombay Educationists' Conference.—A three days' Conference of Educationists was held in Bombay. The meeting was arranged by the Bombay Teachers' Association. Mr. J. L. Rieu, Secretary to the Government, Education Department, presided at the opening meeting and inaugurated the proceedings in a complimentary speech. Numerous subjects of particular educational character were discussed, in particular the new Secondary curriculum.

The Alexandra Girls' Institution.—The following letter has been received by Mr. C. M. Cursetji from Sir W. Wedderburn who at Mr. Cursetji's request had a copy of the Jubilee prospectus of the institution in question placed before H. M. Queen Alexandra:—

Marlborough House, January 4th, 1913.

DEAR SIR WILLIAM WEDDERBURN,

I have submitted to Queen Alexandra your letter of the 24th instant (?) forwarding copies of the report of the "Alexandra Native Girls' English Institution" at Bombay and the Jubilee prospectus of the school and I am desired by Her Majesty to say that she hears of the Jubilee which is to be celebrated in March next with much interest. Queen Alexandra fully recognises the useful and successful work which the institution has carried on during the past 50 years and I am to ask you

to be good enough to convey to Mr. C. M. Cursetji and the Directors her sympathetic approval of the project which is in contemplation to develop female education in India and to express to them and to those who are so generously supporting the movement Her Majesty's sincere hopes for the future success of the school.

I remain, etc

HENRY STREATFIELD, Colonel,
Private Secretary.

Bombay Matriculates and Special Tests.—Persons who have passed the Matriculation examination of the Bombay University and are in the Public Service on or before 31st July, 1913 will be eligible to appear for any Special Tests to which Bombay Matriculates are now permitted to appear.

Scholarship donation.—His Highness the Thakore Sahib, the ruler of the Limbdi State, with a view to commemorate the memorable visit of H.H. the Aga Khan made a donation of Rs. 5,000 to be utilized by Aga Khan in giving scholarships to any Moslem or Hindu youth studying in either the Aligarh Moslem, or the Benares Hindu University. H. H. the Aga Khan thanked the Thakore Sahib for the generous gift and said he would give scholarships out of this sum to any Moslem post-graduate going to a Hindu University for his M.A. course.

CALCUTTA.

Women's education in Bengal.—The *Calcutta Gazette* contains the following Resolution on the subject of a "Female Education Committee for the Bengal Presidency":—

It is of great importance for the future of the Bengal Presidency that a well-considered and progressive policy for the education of Indian girls should be framed and afterwards systematically and energetically carried out. The methods and practice of the two portions of the province, re-united on the 1st of April last, differ at present in some important respects. The best features of each system require to be carefully selected and the experience of the past to be supplemented by a review of recent developments and changes in conditions. This important and difficult task can be successfully accomplished only with the considered advice and active co-operation of persons who are employed or are otherwise interested in the education of girls. The Government of Bengal have decided with a view to secure this co-operation and advice, to appoint a committee, which, after considering the subject in all its main bearings, will frame a general scheme as a basis for future progress. His Excellency in Council further proposes that the members shall ultimately form a standing committee which, like the similar committee which formerly existed in Eastern Bengal and Assam, will meet annually for the purpose of advising the Government on the progress of the scheme and on its modification and development.

The composition of the Committee will be as follows:—Mr. R. Nathan, C.S.I., C.I.E., President; the Director of Public Instruction, Bengal; the Hon'ble Mr. J. G. Cumming, C.I.E., Commissioner, Presidency Division; the

Hon'ble Nawab Saiyid Nawabali Chaudhri, Khan Bahadur; the Hon'ble Dr. Devaprasad Sarbadhary, M.A., D.L.; the Hon'ble Babu Ananda Chandra Ray; Mr. P. K. Sen, Bar-at-Law; Khan Bahadur Absanullah, M.A., Inspector of Schools, Chittagong Division; the two Inspectresses of Schools; the Lady Principal, Bethune College, Calcutta; the Lady Principal, Eden Girls' School, Dacca; the Lady Principal, Government Training School, Calcutta; Sister Mary Victoria, Lady Principal, Diocesan Girls' School, Calcutta; Miss Dyson, Lady Principal, United Mission Training College, Ballyganj, Calcutta; Miss Owles, Lady Principal, Training College, Krishnagar; Miss Williamson; Miss Moore; Mrs. J. C. Bose; Mrs. P. B. Mukharji; Mrs. S. C. Mukharji; Mrs. P. Chatterji. Members other than those appointed *ex-officio* will hold office for three years and will be eligible for re-nomination. One-third of the members first appointed will be selected for retirement by ballot at the end of each of the fourth, fifth and sixth years.

Sanskrit learning in Bengal.—The *Calcutta Gazette* contains the following Resolution dated February 10th:—

Several important questions relating to measures for the encouragement of Sanskrit learning have come under the consideration of the Government of Bengal. The Conference of Orientalists, held at Simla in July 1911 made proposals for the promotion of ancient and indigenous systems of learning, to which the Governor in Council desires to give practical effect. The time has come for reviewing the constitution and functions of the Sanskrit Examination Board, which was established in 1908 and is still on a temporary footing. A scheme has been submitted to the Government for expanding the Dacca Saraswat Samaj into a more widely organized body which should aid and advise the Government in all matters connected with indigenous Sanskrit studies in the eastern districts. The Dacca University Committee have raised the question of the creation of a department of Brahmanic studies in the Sanskrit College on lines similar to those proposed for the department of Islamic studies in the new University. Lastly, the recent territorial redistribution makes it necessary to compare, and, where desirable to co-ordinate rules and practice in the two portions of the province.

The Governor in Council has decided to convene a conference to advise on the difficult and important problems which have thus arisen and to deal more especially with the following questions:—

- (1) whether separate organizations should be created for the encouragement and control of Sanskrit learning at Calcutta and Dacca, or whether a single organization with its centre in Calcutta should serve the whole province;
- (2) what should be the constitution and functions of this organization or of these organizations;
- (3) whether any substantial reforms are required in existing systems for the grant of titles, stipends and rewards;

- (4) what should be the policy of the Government in regard to the encouragement of tols;
- (5) whether a department of Brahmanic studies combined with instruction in English should be established in connection with the Sanskrit College.

The constitution of the Conference will be as follows:—

The Hon. Justice Sir Ashutosh Mukharji, Kt., C.S.I., M.A., D.Sc., D.L., Vice-Chancellor, Calcutta University—*President*; The Hon. Mr. G. W. Kuchler, C.I.E., M.A., Director of Public Instruction, Bengal; Dr. G. Taibaut, C.I.E., Ph.D., D.Sc.; Mahamahopadhyaya Satish Chandra Acharji, Vidyabhasana, M.A., Ph.D., Principal, Sanskrit College, Calcutta; Babu Bidhu Bhusan Goswami, M.A., Professor of Sanskrit, Dacca College; Mahamahopadhyaya Pandit Pramatha Nath Tarkabhasana; Mahamahopadhyaya Pandit Kamakhyia Nath Tarkabagisha; Mahamahopadhyaya Pandit Sahib Chandra Sarabhabhau; Mahamahopadhyaya Pandit Prasanna Chandra Vidyaratna; Mahamahopadhyaya Pandit Chitradhar Misra; Mahamahopadhyaya Pandit Dhireswar Bhattacharya; Pandit Pitambar Tarkalankar; Pandit Baikuntha Nath Tarkabhasana; Pandit Jagannath Misra; Pandit Sarjyakumar Tarkasaraswati; Mr. R. Nathan, C.S.I., C.I.E.—*Secretary*.

The Pandits from Bihar and Orissa and from Assam have been invited with the permission of the Local Governments concerned, but they are not official delegates, and the Conference is convened primarily to deal with the situation in the Bengal Presidency.

Ripon College.—His Excellency Lord Carmichael accompanied by the Hon. Mr. Gouklay and the Hon. Mr. Kuchler visited Ripon College. His Excellency was received at the gate by the Hon. Babu Surendra Nath Banerjee, the Hon. Rai Radha Charan Pal Bahadur, Mr. J. Chowdhuri, Principal Trevedi and the staff. As soon as His Excellency alighted from the motor car a guard of honour formed by the students saluted His Excellency. His Excellency then inspected the classes, both in College and in school departments and took special interest in the practical work which was being done in the laboratories by the students. Before leaving His Excellency kindly inquired of Babu Surendra Nath Banerjee, how the College Buildings' Funds had progressed as the Government of Bengal has promised a donation of Rs. 30,000 towards it recently.

Distribution of Prizes, Brahma Girls' School.—Sir Lawrence Jenkins, Chief Justice of Bengal, presided at the prize giving ceremony of the Brahma Girls' School, held recently in the spacious hall of the Institution in Upper Circular Road. The school hall which was tastefully decorated with foliage and flowers, was packed to its utmost

capacity with parents, guardians and friends of the pupils, including European and Indian ladies and gentlemen. Lady Jenkins who was presented with a handsome floral bouquet, kindly gave away the prizes. The programme included a series of vocal and instrumental items besides recitations in English, Bengali and Sanskrit. The Chinese lantern drill, and club drill were admirably executed and met with an enthusiastic reception. An English Action Song: "What's the matter," a Bengali action song, and instrumental music on the Sitar and Israj, were well rendered by the girls who were greeted with hearty rounds of applause.

S. C. Institution.—The fifth annual commemoration and distribution of prizes of the Shyama Churn Institution took place on Saturday the 15th instant at 4.30 p.m. at the school premises, No. 174, Manicktolla Street under the presidency of Hon. Rai Radha Churn Pal Bahadur. Many respectable gentlemen and the guardians of the boys of this institution attended the meeting. The building was tastefully decorated. The meeting commenced with welcome songs. The Secretary read the annual report of the institution, the President then distributed the silver medals and prizes. He then paid a high tribute to the efficiency of the management of the school.

Bengal Asiatic Society.—At the annual meeting of the Asiatic Society of Bengal it was reported that there had been an increase in the membership and funds during the year. Sir Ashutosh Mookerji in his address said that the condition of their building was occasioning anxiety. Experts told them that a sharp shock of earthquake would mean the complete ruin of their valuable library accumulated during a century and a quarter and their inestimable collection of Sanskrit, Arabic and Persian manuscripts. He thought the best course would be to build a new house on one portion of their land and realise the cost on the remainder.

Board of Sanskrit Convocation.—The first Convocation of the Board of Sanskrit Examinations to confer titles on Sanskrit students was held at Calcutta on January 28. The degrees were conferred by His Excellency Lord Carmichael who was in the chair. Sir Ashutosh Mookerjee, the President of the Board, delivered a lengthy address.

Director of Public Instruction.—There has been a strong agitation in Bengal against the rumoured intention of the Government to appoint some one outside the Indian Educational Service to the post of the Director of Public Instruction.

ALLAHABAD.

Prize-distribution: The Municipal Board Schools—Recently the second annual and prize-giving to the children of Municipal Board Schools came off. Children from sixteen Boys' and four Girls' schools assembled in the 'Kusru Bagh'

Park. There was drill competition and many schools entered for the same. Under the instruction of their respective drill masters, they performed kasrat and dumb-bell drills, and Mr. Milsted, Headmaster of the Boys' High School, acted as umpire. After the competition which lasted for an hour and a quarter commencing at 12 noon, the Municipal Commissioners and the school children assembled under the *shamiana*, which was specially erected, and Mr. C. A. Mumford took the chair. Mr. B. P. Mohun, Chairman, Educational Sub-Committee, presented the school report which showed that between 1912-1913, there were 1,360 children under instruction, manned by 58 teachers, and one Inspector of Schools. Rs. 18,000 was spent for the year 1911-12 and 22,000 was budgetted for the year 1912-13. The report regretted that the schools had all been in rented buildings, and they found great difficulty in getting good sites at various centres for building schools of their own. In conclusion Mr. Mohun thanked the Municipal Chairman for his interest in education and the teachers and the Inspector for their whole-hearted work during the year.

Chandansi School.—The annual prize-distribution of the Shyami Sunder Memorial High School, Chandansi, came off recently. Mr. Lupton presided and Mrs. Lupton gave away the prizes which were numerous and handsome. The *shamiana* was decorated with union jack, flags and bunting along with green foliage. The proceedings opened with the reciting of a charming Sanskrit prayer. This was followed by the presentation on behalf of school students through a young boy to Mrs. Lupton of a handsome silver vase containing a beautiful bouquet of select flowers. The Honorary Secretary read the report of the School for the last session. A few recitations in English, Hindi and Urdu followed. Medals were given to the successful competitors either at sport or in general proficiency. There were lot of petty handsome prizes besides useful books for senior and junior boys. The Chairman's address bore marks of genuine regard for the well-being of the school.

The Anglo-Bengali School.—The second anniversary and prize-distribution of the A. B. School, Benares, was celebrated recently under a big *shamiana* in the school compound. The school premises were tastefully decorated on the occasion. Rai Sahib A. C. Mukerji, Secretary to the Municipal Board, Benares, presided and there was a fairly large attendance of the local gentry to witness the ceremony. After the proceedings opened with a prayer in Bengali, Babu Hira Lal Banerji, Secretary to the School, spoke of the serious loss sustained by the School committee in the sad death of its President, Dr. Lalit Mohan Sen and its Secretary, Babu Nibaran Chandra Gupta. The annual report which he then read showed a record of good work and steady progress during the year. After recitations in English, Sanskrit, Bengali and

Urdu, the prizes were given away and the proceedings came to a close.

Government Examinations, Allahabad.—The Preliminary Scientific Examination for the degree of Bachelor of Medicine and Bachelor of Surgery will be held at Allahabad, on Monday, the 8th September, 1913 and following days, commencing at 10 a.m., each day, one paper as far as possible being given daily.

The Intermediate examination at the Allahabad centre, and the B. A. and M. A. Final examinations of 1913 will be held at the University Senate Hall, Allahabad. The B.Sc., M.Sc., Previous and Final and the M.A. Previous Examinations will, as usual, be held at the Muir Central College, Allahabad. The Law and Preliminary Scientific examinations at the Allahabad centre will also be held at the University Senate Hall, Allahabad.

PUNJAB.

A Residential College.—The Residential College which is to be built at Delhi by St. Stephen's College is to cost about £33,000.

Dr. Bose's Lectures.—Dr. J. C. Bose, the eminent Science Professor, Presidency College, Calcutta, will deliver a course of three lectures on scientific subjects in the University Hall, Lahore. The lectures will be attended by experimenters and are intended for the benefit of graduates engaged in research work or special studies.

Girls' School for Delhi.—Her Highness the Begum of Bhopal writes as follows:—My proposal for the establishment of a Girls' School in Delhi in commemoration of the auspicious visit of their Imperial Majesties, was published in the *Times of India* and several other papers sometime in April last year. I now take the opportunity publicly to thank the Begums, Maharanis, Ranis and other prominent ladies for their kind support to my scheme in the shape either of financial help or of entire sympathy with the cause. The names of those who have kindly promised financial help are given below:—

	Rs.
H. H. the Nizam	50,000
H. H. the Maharani of Gwalior	50,000
H. H. the Dowagar Maharani of Gwalior	1,50,000
H. H. the Begum of Janjira	3,000
H. H. the Rani of Rajgarh	2,000
H. H. the Rani of Narsingarh	3,000
H. H. the Rani of Dbar	5,000
Quisar Dulahin Sahiba of Bhopal	7,000
Shahryar Dulahin Sahiba of Bhopal	5,000
Shah Bano Begum Sahiba of Bhopal	5,000
Sir Valentine Chirol, of the <i>Times</i> , London	75
Myself	1,25,000

MacDonnell High School, Jhansi.—The annual prize-distribution to pupils of the MacDonnell High School, came off recently. The school hall was tastefully decorated for the occasion, and there was a large gathering of European and Indian gentlemen consisting of officials and the gentry. Mr. Silberrad, the Collector, was in the chair.

After the Report was read there was recitation by the boys. The prizes were then distributed by Mrs. Silberrad.

MYSORE.

Mr. Nanjundayya's A. V. School.—The prize-distribution ceremony of this school was performed in Uddanna Hall by the Yuvaraja, who, in spite of pressing engagements, was pleased to be present. There was a distinguished gathering on the *dais*. From the report read, it is evident that the school has been turning out uniformly good work. The school was started ten years ago, to commemorate the memorable event of the Installation of H. H. the Maharaja. The beginning was not encouraging but the founder Mr. Nanjundayya persevered in his efforts wholeheartedly and steadfastly. The strength rose gradually and in 10 years, it came up to 800. That is a record of good progress. It is no small credit to Mr. Nanjundayya, the Managing Proprietor, who had to find the means to keep up the growing institution. The school is a living example of what a public-spirited and self-denying person of the type of the founder can accomplish. The school has a Government monthly grant of Rs. 75 and a Municipal grant of Rs. 25 a month. After making the awards, the Yuvaraja gave a speech in the course of which he said: We see that this educational institution was opened by Mr. Nanjundayya, at the instance of the public of the city to meet a real want. Time has shown, thanks to the initiative and the philanthropy of Mr. Nanjundayya that the school has been a well thought out and deserving institution in that it stands today, as the largest school of its kind, in the province, with nearly 800 boys, on the roll. In the days, when education is to the front and the Government are making liberal efforts to bring knowledge to every home, private endeavours of this description cannot too highly be appreciated. The gratitude of the public is due, I think, to Mr. S. R. Nanjundayya, for his public spiritedness, in founding this school and my brothers and my own appreciation, for associating it, with His Highness' Installation. The school examination results seem to be gratifying and the general management of the institution satisfactory. The most pressing want of the school, appears to be a suitable habitation for its purposes and it is encouraging to hear that the Municipality have promised a helping hand in this direction. The institution is an enterprise that is worthy of recognition and I wish it all success. In conclusion, it has been a great joy to me, to have presided at the prize-distribution to the boys of this institution. I give them my good wishes and I thank the Managing Proprietor, the teaching staff and you all for your hearty reception.

Students' Literary Union.—Mr. J. S. Chakravarti, M.A., F.R.S., the Comptroller and Financial Secretary to the Government of Mysore, presided at a lecture given by Professor F. W. Quinton-Anderson, B.A., of the Central College, in the hall of the London Mission High School. The discourse, which was on "English Literature," took place under the auspices of the Students' Literary and Athletic Union of which an abstract appears in another page.

The Indian Institute of Science.—The following extracts from a recent report on the 1911-12 Session of the Indian Institute of Science will be read with interest:—

There have been no changes in the Court of Visitors. But as under section 13 of the Regulations, the persons first appointed by the Vice-Patrons vacate their office on the 31st March, 1912, the following fresh appointments for a further period of five years have been made by the Vice-Patrons:—

By His Excellency the Governor of Madras.—The Superintendent of Industrial Education in the Madras Presidency.

By His Excellency the Governor of Bombay.—The Hon'ble Justice Sir Dinshah Dhanjibhai Devar, Kt., Barrister-at-Law.

By His Honour the Lient.-Governor of Bengal.—The Hon'ble Maharajah Manindra Chandra Nandi of Cossimbazar.

By His Honour the Lient.-Governor of the United Province.—The Hon'ble Rai Sundar Lal Bahadur, B.A., C.I.E.

By His Honour the Lient.-Governor of the Punjab.—The official member representing the Government of the Punjab on the Imperial Legislative Council.

By the Chief Commissioner, Central Provinces.—The Hon'ble Rao Bahadur Ranganath Narasingh Mudholkar.

By the Agent to the Governor-General and Chief Commissioner, North-West Frontier Provinces.—Dr. M. A. Stein, C.I.E.

By the Chief Commissioner of Coorg.—W. M. Ball, Esq.

By the Chief Commissioner of Ajmer-Merwara.—C. W. Waddington, Esq., C.I.E.

By the Agent to the Governor-General, Baluchistan.—Khan Bahadur Burjorji Dorabji Patel, C.I.E.

Prof. J. J. Sudborough, D. Sc., Ph. D., F.I.C., has become a member of the Court of Visitors in accordance with Section 9 *eleventhly* of the Regulations.

The Senate have nominated Prof. J. J. Sudborough to be a member of the Council. The Court of Visitors elected Mr. A. Chatterton and have re-elected the Hon'ble Dr. A. G. Bourne, who had ceased to be a member of the Council in accordance with Section 16 of the Regulations.

As reported in the introduction to the Second Annual report of the Director to the Council of the Institute, the First Session opened on the 24th July, 1911, and before the end of that month 17 students were at work in the various laboratories; 2 students

joined in August, and 2 in September, and again 3 in January, 1912. Of the total number of students admitted 19 were University graduates and they may be classified as follows:—

	B.A. or B.Sc.	M.A. or M.Sc.
Madras University	2	1
Bombay "	4	7
Calcutta "	1	2
Allahabad "	2	...
	9	10

The non-graduates had received their training in the Victoria Jubilee Technical Institute at Bombay. Under Section VIII (1) (c) of the Bye-laws, all students were admitted on probation, and two were rejected as it was found that they did not possess sufficient knowledge to enable them to profit by remaining at the Institute.

The ultimate distribution of the students was as follows:

Applied Chemistry Department	...	4
Electro-technics	"	10
General Chemistry	"	3
Organic Chemistry	"	7

TRAVANCORE.

The Travancore Teachers' Union.—An influential Committee has been formed with Mr. G. Parker, Principal, Scott's Christian College, Nagercoil, as Chairman and Dr. G. F. Clark, Principal of the local Teachers' College as Secretary to organise an association to be called "The Travancore Teachers' Union." The other members of the Committee are Messrs. J. Stephenson, Professor of Physics in the Trivandrum College, K. V. Rangaswami Aiyangar, Professor of History, M. Rama Varma Tampam, Assistant Inspector of Secondary Schools, K. Venkateswara Iyer, Vice Principal, Teachers' College, R. Ragunatha Iyer, Headmaster of the Trivandrum High School, R. P. Kulandaswami, Headmaster of the St. Joseph's High School, Trivandrum, and K. C. Eapen of the S. C. Seminary, Tiruvellah. The aim of the Association is furthering Secondary School education in Travancore, by promoting each teacher's knowledge of his subject and the methods of teaching them. It is also understood that the Association desires to arrange for the publication of a magazine concerning the progress of education and modern methods in teaching.

The New Professor of English.—Mr. Duncan John Sloss, M.A., is the newly appointed Professor of English in H. H. the Maharajah's College, Trivandrum. Mr. Sloss has been prior to his appointment, holding the post of Deputy to Professor Vaughan in the University of Liverpool. The Durbar are to be congratulated on the acquisition

of a man of Mr Sloss's abilities, for the Professorship of English, in the College.

A Public Lecture.—Under the auspices of the Public Lecture Committee, Mr. L. C. Hodgson, M.A., Principal of H. H. the Maharajah's College for Boys, delivered a learned lecture on the "Reform in English Spelling" in the Victoria Jubilee Town Hall. Dewan Bahadur P. Rajagopala Chariar presided.

Foreign Notes.

GREAT BRITAIN.

Indian Students' Law Library.—Mr. Mallet opened the Indian Students' Law Library at Cromwell Road centre. The Library comprises 750 volumes of English law reports presented by Sir Thomas Raleigh, 150 text and reference books purchased by the Secretary of State and four hundred volumes of Indian law reports transferred from the India Office.

Mr. Mallett intimated that while at present the Library was confined to law, gifts relating to other branches of study would be gladly welcomed.

Sir Thomas Raleigh emphasised that the knowledge of the practising barrister must be superior to that needed for examinations.

Indian Students at Edinburgh.—A recent meeting of Indian students at Edinburgh passed a resolution strongly protesting against the reported decision of the India Office to place them under the guardianship of its official representative, as not only implying inability on their part to take care of themselves but also as a reflection on the disciplinary vigilance of the University. The resolution also expressed the hope that the University would maintain its traditional just attitude in protecting the independence of Indian students from official interference.

It was resolved to notify Lord Crewe of the Resolution.

Indian Students in England.—At the Fourteenth Annual Ceylon Dinner in London held in the Holborn Restaurant last month, there was a distinguished gathering present. Mr. G. S. Schneider of Ceylon, presided and in the course of his remarks dwelt on the disabilities of Indians in connection with their admission into the Universities and Colleges.

The English Association.—The Annual General Meeting of the English Association was held at University College, Gower-Street, Mr. John Bailey presiding. Mr. Balfour was elected President, and Lady Ritchie (the retiring president) and Professor G. L. Kittredge were added to the list of Vice-Presidents.

The report of the Executive Committee, which was adopted, stated that the Association had maintained the progress in its work during the year. The Association numbered 4,733 full members and 501 associates—an increase of 98 full members and a decrease of 24 associates. The central membership was now 792, a net gain of 60 members; and there were 11 new life members. The ten local branches in England included 612 full members and 371 associates, the Scottish branch 189 full members and 130 associates, and the branch in South India 120 full members. A branch had recently been established in Toronto.

The presidential address was read by Mr. E. G. von Glehn.

The Association held a conference at the same place, when the Rev. Dr. Nairn (Headmaster of Merchant Taylors' School) presided and papers were given by Mr. Percy Simpson on "The Value of the Plain Text in the Literature Lesson" and by Mr. A. J. Spilshury on "Prose Teaching in Schools."

Historical Association.—The Seventh Annual Meeting of the Historical Association was held at London University. Professor Spenser Wilkinson gave an address on "Some Lessons of the War in the Balkans."

SCHOOL AND COLLEGE SPORTING NEWS

The Presidency College Football Tournament.

LAW COLLEGE vs. PRESIDENCY COLLEGE.

The match between the above teams was played on the Presidency College Cricket Grounds. The Lawyers of whose real form little or nothing was known, on account of their not having competed for any of the recent tournaments, played under the auspices of the M. C. Athletic Association, and put up a splendid fight, as will be seen from the fact of their getting beaten by only the odd goal in three. Composed as the team was of men who had most of them made their mark in the several Colleges from which they respectively graduated, their creditable performance was after all no matter for wonder, but all the same, that they should have played really so well, without any the least practice was certainly remarkable. The Presidency had a distinct advantage over their opponents in having had three hardworking halves who all understood their work for while the Law Halves were merely content with defending their citadel, leaving their forwards to look after themselves as it were, the Presidency Halves not only did the purely defensive work to perfection, but made it a point to set their forwards constantly going. It was this thing that not only made the Presidency attack look really more dangerous than that of their opponents, but practically won them the game as well.

THE CHRISTIAN COLLEGE vs. THE MEDICAL COLLEGE.

The above teams met on the Presidency College Cricket Grounds the Medicoes, in spite of the several disadvantages, put up a plucky fight and were beaten by only one goal. For this they have mainly to thank their two backs, Vithia Menon and Mathulla and goal keeper Ramoo, all of whom played exceedingly well. The goal that enabled the Christians to win this match came somewhere in the middle of the first-half, being the result of a combined run between Ambrose and Narayanan. This defeat of the Medicoes was not a matter of disappointment, but was indeed a creditable performance, considering the conditions under which they had to play.

THE ROYAPURAM MEDICAL SCHOOL vs. THE MADRAS-I-AZAM.

The match between the above teams was played first on the Presidency College Cricket Grounds and ended in a draw. It was replayed again on the Medical College ground with the result that the B.M.H.S. were left winners.

PRESIDENCY COLLEGE vs. WESLEY COLLEGE.

The semi-final of the above Tournament played on the Presidency College Cricket Grounds between the Presidency and Wesleyan Colleges resulted in a victory for the former by three goals to one. The

game took a fast turn from the first. Soon after commencement the Wesleyans obtained a lead. The Presidency forwards then attacked hotly and besieged the visitors' goal and Srinivasa Rao the inner left who twice found himself in close vicinity of the goal delayed to shoot and missed the chance of scoring. After about quarter of an hour's game the Presidency equalized Siva Prasad the left half-back dropping the ball from a long range which the keeper defended after it had crossed the goal line. The Presidency renewed the attack and Srinivasa Rao receiving a well-placed centre from the right sent the ball over the goal. The Wesleyans for a time carried the game to the opposite end and the Presidency keeper was once or twice called upon to defend the goal. Close on half-time the game was confined to the visitors' end and Kumaraswami the inner right of the home team scored out of a scrimmage. When half-time arrived the Presidency were leading by a goal.

After crossing over the Wesleyans made a vigorous attack and penetrated to close quarters. Anantanarayanan the outer left getting a well-timed pass from the inner sent the ball out. The game was transferred to the visitors' area where it was kept for a great part of the time. The Wesleyan goal was constantly in jeopardy but no point resulted. Towards close the Wesleyans tried their level best to equalise and Anantanarayanan who received a good centre from the right sent the ball over the goal. Before the game drew to an end the Presidency scored the third goal Narasimma Rao being responsible for the same. The match ended in a win for the Presidency College by three goals to one.

CHRISTIAN COLLEGE vs. ROYAPURAM MEDICAL SCHOOL.

The match between the above teams was played for three days in the Presidency College Cricket Grounds. The Christians secured an easy victory by three goals to nil.

Pennycuik Tournament.

The above Tournament for which six teams had competed was played by the Wesleyan and Medical Colleges. The Medicoes who did not appear in their full strength as three of their best men were unable to take part, suffered a rather crushing defeat at the hands of the Wesleyans who were on their best form. The Wesleyans winning the toss elected to bat and compiled a total of 240 runs, the noteworthy feature of their innings being Baliah's maiden century scored in grand style. Ekambaram and Seshayya made useful contributions of 26 and 24 runs respectively. The Medicoes made 131 runs, Strickland who was the chief scorer displaying fine batting skill for an unfinished 52. With a lead of 110 runs on their first innings the Wesleyans entered on their second venture and made 133 runs of which total Baliah and Madhava Prasad were responsible for 31 and 23 runs respectively. The Medicoes who had to make 244 runs to win collapsed miserably in

their second innings being only able to put up 60 runs. Loganathan, 20, Stickland 15, and Anantaraman 11, being the chief run-getters. The match thus terminated after three days' play in a decisive victory for Wesley College by 183 runs.

PRESIDENCY COLLEGE vs. CHRISTIAN COLLEGE.

The final match of the above Tournament was played out between the Presidency and Christian Colleges on the Presidency College Cricket Grounds. There was a large crowd assembled to witness the match which was keenly contested and resulted eventually in a hard won victory for the Visitors by 2 goals to one.

The Presidency took up the aggressive from the start and by their combined efforts their forwards found their way to close quarters and Srinivasa Rao, the centre forward shot wide of the posts. The Presidency renewed the attack and Kumarasami and Gopalaswami by dint of clever passing penetrated to close proximity of the Christian goal and the former scored the first goal of the evening. Encouraged by their success early in the game, the Homesters kept up the pressure on the opposing defence and obtained a couple of corners which were not, however, turned to good account. The Christians soon began to play up and Ambrose, the centre forward, made a dashing run and carried the ball to Presidency territory. The Christians were awarded a penalty kick as Ramasamy, one of the Presidency half backs, fouled inside the penalty area and Desikachari the Christian back scored easily and thus equalized matters. Play grew more exciting thereafter and both ends were frequently visited. Towards the close of the first half Gopalaswami, the Presidency outer right, sent in some good centres which were not however utilised. At half time the score was one all.

After crossing over the Christian forwards made a vigorous attack and Ambrose, the centre forward, and the inner left gave the Home defence frequent trouble. When the game had been in progress for about ten minutes, Sriramulu, the Christian outer right, sent a finely-placed centre and a *melee* ensued near the mouth of goal and Ambrose scored. The Christians soon followed with another, but it was disallowed as one of their men was declared to be "off-side." The Presidency made strenuous endeavours to equalize and Srinivasa Rao who made a smart run shot the ball out when nearing the Christian goal. Soon after Gopalaswami their outer right sent a nicely placed centre but Narasimma Rao, who found himself before an open goal deflected the ball over the goal. Towards close the Presidency obtained some corners none of which was productive and when time was called the Christians came out winners by 2 goals to one.

WESLEYAN MISSION HIGH SCHOOL vs. S. P. G. HIGH SCHOOL.

The second match in the first round of this tournament was that between the above teams, played on the Pickwick ground. The Wesleyans, though

they failed to make much in either of their innings, having totalled up altogether in their two innings only 118 runs, managed to beat the S. P. G. who had unfortunately a poor team, by the handsome margin of 87 runs. Taking first knock, the Wesleyans put up 71 runs, Bangara Babu and Ranganaatham who contributed 17 and 13 runs respectively, being the only two to enter into double figure scores. Thillanayagam who secured 5 wickets for 22 runs was the most successful bowler on the S.P.G. side. The S.P.G. were all dismissed for 19 runs. The Wesleyans who entered on their second innings, with a lead of 52 runs, scored only 47 runs, so that the S. P. G. had to make 100 runs to win the match. Once again they fared miserably and were all disposed for just a dozen runs, so that the match ended in an easy win for the Wesleyans by 87 runs.

Senior Single Tennis Tournament.

The final of the above competition to the Havell Cup came off on the Victoria Hostel Tennis Court between the Christian and Presidency Colleges which were represented respectively by Markandeyulu and Suryanarayanan. Markandeyulu won the odd set in three. (7-5, 3-6, 6-3).

Junior Double Tennis Tournament.

As there were only two entries, the Wesley and Pachaiyappa's, for the Junior Double Tennis Tournament for the Sir Ramaswami Cup, the match between them, played on the Victoria Hostel Court, saw the beginning as well as the end of this tournament. The two pairs being evenly matched, an extremely keen contest ensued and this, we should think, amply compensates for the scarcity of entries. The match ran into three sets, the middle set being particularly long drawn.

We congratulate the Pachaiyappa's on wresting the Cup from the Wesley who, it will be remembered, have been holding it for the last four years.

Annual Sports of the Madras Medical College.

The Annual Athletic Sports of the Madras Medical College were held on the College grounds. There was a large gathering of the students and others interested in sports and these were, to as far an extent as possible, accommodated under tents specially erected for the occasion.

The sports were in charge of a Committee consisting of Major F. F. Elwes and Capt. Lorimer (judges) and Major A. Miller and Major T. H. Symons (starters.) The events were run punctually to time and the whole show was a success from beginning to end.

There were no less than 15 items on the programme, including a Consolation Race and a race for the College servants. The items were all of the usual kind and only one event, the one mile flat race was open to all the colleges in Madras.

After all the events were over, Major Donovan distributed the prizes to the successful winners. During the evening the Band of H. E. the Governor was in attendance and played selections of music.

Muir College, Allahabad.

The Annual Athletic Sports of the Muir Central College took place on the 7th and 8th instants. There was very good competition and there were some very creditable feats. The long, high and pole jumps were about the best of the lot. Messrs. Chatterji, Kaipa Shankar, Biswas and Mukerji, did very well indeed and proved to the spectators that Indian students are both mentally and physically strong. The sports were very ably conducted by Messrs. Har Prasad Misra, Stewart and Lloyd. Everything was well organised.

Canning College, Lucknow.

A new game of cycle polo has been introduced at Canning College, Lucknow. It is played on bicycles with polo sticks cut short, and a hockey ball on foot-ball ground with larger dimensions. Its rules have not yet been framed, but a committee is going to be held to draw up the rules suiting the present need. Alterations and additions would be made according to suggestions from supporters. It is a very interesting game and a good exercise for cyclists.

THE MADRAS CHRISTIAN COLLEGE.

The Annual Athletic Sports of the Madras Christian College were held on the S. I. A. A. grounds. There was a large attendance, including the Rev. Dr. William Skinner, M.A., Principal of the College. The programme was a long one, consisting of no less than 16 items, the most interesting being the hurdle race, throwing the cricket ball, the tug-of-war, the one mile race, the obstacle race, and the high jump. The events were well contested and evoked loud and prolonged cheering. Professor F. W. Henderson and Mr. D. K. Wilson acted as Judges. The Annual Athletic Sports connected with the College School took place on the S. I. A. A. grounds in the presence of a large gathering of students and friends. Mr. B. Sheriffs and Mr. J. Jaganathan, B.A., L.T., were the Judges. There were 16 events, and the students entered into the competitions with a spirit of keenness and enthusiasm. The distribution of prizes to the winners took place in the College.

*THE TINNEVELLY INTER-COLLEGIATE**ATHLETIC ASSOCIATION.*

The Annual Sports in connection with the above Association took place on Saturday, the 15th

instant on the Police Parade Ground, Palamcottah. Among those present were the Right Rev. A. A. Williams, Bishop of Tinnevely and Madura, Messrs. T. O. Hodges, M.A., Inspector of Schools for the Circle, H. R. Pate, I.C.S., D.N. Straithie, I.C.S., Nuthall, H. Lawson, Mullally, Mrs. Loam, Mrs. Cameron, Mrs. Straithie, Mrs. Dawson, Mrs. Ardil, Mrs. Ponnusami, Mrs. Kishniash Pillai, Mrs. Vaikuntam Pillai, Mrs. David, Misses Askwith, Howard, Pawson, Max Walford.

After the various items of the programme had been gone through, the prizes, consisting of many valuable trophies, medals and cups were distributed to the several prize winners by Mrs. M. Loam. Two handsome cups were then presented by Messrs. H. R. Pate, I.C.S. and T. O. Hodges, M.A. to the best Senior and Junior Athletes. In bringing this interesting function to a close, the Right Rev. Bishop Williams made a short speech in the course of which he remarked that the thanks of the Association were due to Mrs. Loam for kindly giving away the prizes to the Judges and Umpires and to the Secretaries Messrs. D. E. Cameron and Doss Kishniash who bore the brunt of the work and to whom in a great measure the success of the function was due, that thanks were also due to Mr. T. S. Vaikuntam Pillai, the Treasurer who did great service in collecting the funds and those gentlemen who helped the Association with liberal gifts. One noteworthy feature of this year's sports was that the mofussil schools were also able to take part owing to the fact that a special trophy was instituted separately to be competed for by the mofussil schools alone. He congratulated the prize winners and exhorted them to make strenuous efforts in future also and wished better luck next time to the unsuccessful among the competitors. He called special attention to the fact that the Trophies were not taken due care of and hoped there would be no neglect in keeping them clean and tidy in future.

*Junior Cricket Tournament.**PACHAIYAPPA'S COLLEGE vs. WESLEYAN MISSION HIGH SCHOOL.*

The final of the above tournament played between Pachaiyappa's College and Wesleyan Mission High School on the Pickwick Cricket Grounds ended in a win for the former.

The Educational Review.

It is impossible to rest satisfied with the curt answers which the Elementary Education Programme. Director of Public Instruction and the Member in charge of Education gave to the Hon'ble Mr. T. V. Seshagiri Aiyar's interpellation regarding the Elementary Education programme. No minimum expenditure has been fixed. Nor has any programme been drawn up to secure a steady rate of development. Everything must depend, of course, on the funds available, but that factor, we are told, is uncertain. But how long is this state of things to continue? A special officer has been sitting at it now for some time, and we were under the belief that he was elaborating a workable programme. But apparently everything is at a stand-still, and it seems as though no definite move can possibly be made in the near future. The Under-Secretary of State for India outlined his scheme for the extension of Primary Education, in his budget speech in the House of Commons in July last. He proposed to increase the total number of Primary Schools in this country by 75 per cent. and to double the school-going population. He announced that existing schools would be improved, their cost would be doubled and that the teaching given in such schools would be made practical, popular and attractive. It was also stated that the supply of better-equipped teachers would be made larger, and that elementary teachers would be better paid and better trained. Since then, there has been a pause until the Government of India Resolution issued the other day. This Resolution, which we will reprint in full in our next issue, lays down a number of principles for

guidance, which while generally applicable, are also intended to be varied to suit varying local conditions and circumstances. But we should think the stage of pronouncements and policy must give place at once to practical action. It is not known what is going on between the several Local Governments on the one hand and the Government of India on the other. There is no need for any mystery. At the meeting of the Imperial Legislative Council held last Tuesday, the Hon'ble Mr. Gokhale called upon the Government of India to produce their programme. He urged that we were entitled to the production of the programme to know at what rate progress was going to be made. He asked the Education Member to inform the Council in how many years the Government of India proposed to cover the ground. It is essential and important to have an idea of the time and cost. Several other non-official members are reported to have joined in the demand for a programme. We have not before us the full report of the proceedings of Tuesday's Council Meeting. It is not known how Sir Harcourt Butler, the Member for Education, spoke on behalf of Government and as to how he met the demand for a programme. But from the concluding remarks of the Hon'ble Mr. Gokhale, so far reported, it would appear that there is no financial programme behind the educational policy of Government. But whatever the state of affairs in regard to the whole of India, some information may be vouchsafed to us here as to what is proposed to be done in this Presidency. At all events, we are entitled to know what the Special Educational Officer deputed for this work has been doing so long. It cannot be that he has been sitting quiet. We hope Mr. Seshagiri Aiyar will

pursue his enquiries further, call further attention to the subject and compel a full disclosure of what has so far been done and what is going to be done. The memorable words of His Majesty are ringing in everybody's ears :—"It is my wish that there may be spread over the land a net-work of schools and colleges....It is my wish too that the homes of my Indian subjects may be brightened and their labour sweetened by the spread of knowledge with all that follows in its train, a higher level of thought, of comfort and of health....The cause of education in India will ever be very close to my heart." Over twelve months have passed since these words were uttered. His Majesty's Coronation boon has not so far borne any fruit. Possibly we may be characterised as impatient. But as regards education, there has been too much waiting, and any further delay would only deaden the hopes and aspirations of those who have been fighting for the cause. The only achievement since His Majesty's gracious announcement has been the knocking down of the Hon'ble Mr. Gokhale's Primary Education Bill.

The Report of the Dacca University Committee is a ponderous document consisting of about 280 folio pages of printed matter followed by no fewer than 35 plans. The Committee seem to have gone into the matter thoroughly and with a zest, and have devised so well-thought-out and complete a scheme that, if a University on the lines proposed by them becomes an accomplished fact, it will serve as a model for all future and present Universities in India. They have dealt with the question from every point of view and nothing seems to have escaped their attention. It is difficult to

choose only the salient points of a scheme in which every thing seems to be so novel and so much of an improvement over the systems now in existence in India. One can therefore, hardly do anything like justice to the labours of the Committee unless one goes through the Report chapter by chapter, and notes the special features in their recommendations.

Chap. I gives a short history of the 'Development of the University systems now existing in India' and points out their defects and says truly that the Government and the people alike have come to realise that a University, to meet the requirements of the modern times, ought to be something different from a mere examining machine and must be an institution "in which a true education can be obtained—a training of the mind, body and character; the result 'not a book, but a man.'"

Chap II gives an account of the Proceedings of the Committee. They held sixteen meetings and referred the details to as many as twenty-four Sub-Committees of experts whose advice, and the assistance rendered throughout by the Hon'ble Sir Ashutosh Mukherji, Vice-Chancellor of the Calcutta University, they gratefully appreciate and acknowledge.

Chap. III. The Committee proposes that the University should consist of seven Faculties—Arts, Science, Islamic Studies, Law, Engineering, Medicine and Teaching. The laboratories are to be common to all the colleges so as to make the laboratory teaching both economical and convenient, and with a view to bringing together a large number of able students engaged on advanced work.

The Faculty of Islamic Studies is a distinctive feature, but along with such studies the

students have to undergo a thorough course in English like other Arts students.

As regards Medicine it is proposed that at present the University is to provide instruction only in the first M.B. course along with other science students as in Cambridge, the students going to the Calcutta Medical College for the rest of the instruction required for the final M.B., thus obviating the necessity for a separate Medical College, and at the same time relieving, to some extent, the pressure on the Calcutta College.

In Law the Committee has overruled the very valid objections urged by Sir Ashutosh Mukherji against having a Faculty of Law at Dacca and has struck a middle course. The new University is to be affiliated to the Calcutta University in Law, although there is to be a separate Law Department at Dacca to enable the students of Law to pursue their post-graduate studies for the M.A. simultaneously with those of Law. This is just the contrary of the principle followed in Madras where post-graduate study for the M.A. is made impossible for a student of Law not only by the hours of attendance required in the Law College, but also by the conditions imposed upon the M.A. students who receive a Government scholarship.

Chap. IV is headed 'Colleges and Students.' The Committee propose to have three general colleges, three special colleges, viz., one for Muhammadans, one Women's college and one college for well-to-do classes; two technical colleges—Engineering and Teachers'; and two departments, viz., Law and Medicine.

The establishment of a separate college for Muhammadans can be justified on the ground that the habits and customs of the Muhammadans and the nature of the Islamic studies differ so much from those of the

other Indians. The question of including a separate töl for Sanskrit and Brabminical studies also was referred to the Sanskrit Sub-Committee, but this Sub-Committee was against it and advised that the experiment should be tried in connection with the existing Sanskrit College in Calcutta itself. For obvious reasons a separate Women's college is absolutely necessary, and its establishment would give a great impetus to female education in India. If it becomes a success, as it is sure to be, Government may induce other Universities to establish similar colleges for themselves also. The Committee rightly consider that the course of studies in such a college should include domestic economy, hygiene, nursing and training of children and also some science subjects both for the general students and for girls who propose to take up the study of medicine. The preliminary scientific training provided for in this college is likely to afford a great inducement to Indian girls to turn their attention to medical studies and this with the completely equipped medical college for women which it is proposed to establish at Delhi, must supply, to some extent at least, the great need for female medical practitioners in India.

We cannot, however, approve of the idea of a separate college for nobles. The reasons urged for it by the Committee do not seem to us to be convincing. There is no doubt that the higher training of these classes is of the utmost importance to the State. A highly cultured class of nobles will be a powerful force for the advancement of the country, and it is desirable to create in them a love of learning because it is only they that can pursue knowledge and scholarship for its own sake, and by their patronage of the fine arts can help to raise the level of taste in the nation. Nobody can dispute the urgent

necessity of fitting the nobility of India to take an intelligent part in the general uplift of the country. But the reluctance of such a class to take advantage of the opportunities for University education hitherto cannot be attributed to the want of a separate college for themselves, and no valid reason has been assigned by the Committee for the institution of such a college except that it has met with the approval of a large number of the aristocracy consulted. The experience of Madras in Newington is certainly not favourable to the opinion that the class will be improved by being educated apart from their less fortunate brethren. On the other hand there are very strong reasons against such a course. What the Indian aristocracy suffer from is swelled heads, and it is only by rubbing shoulders with the more industrious, thrifty and intelligent, though poor students, and seeing that their own wealth does not count for much in the intellectual, moral and physical plane, and that in really important matters they are in no way superior to the common humanity, that the sons of the Indian nobles can be improved and made to sympathise with the people generally and work for the common good of the country. A separate college will have the effect of keeping them out of touch with the opinions prevailing among the people generally and tend more and more to isolate them and render them incapable of sympathising with the common aspirations of the Indian people. When the greatest of the sovereigns of the world, our own King-Emperor, does not think it *infra dig.* to send his sons to work in the army, in the navy and in the University in company with ordinary young men and to learn to sympathise with their future subjects, the Indian aristocracy

can certainly have no reason to think it degrading to let their sons attend schools and colleges consisting of boys with whom their future lot will be cast. That some of them now prefer to send their sons to Oxford and Cambridge is not a fact to be deplored. The Dacca University is not intended, as we take it, to prevent those who can afford it from seeking what must, for a long time to come, continue to be the best education in the world. For these and other reasons we strongly deprecate the idea of establishing a separate college in Dacca for the well-to-do classes. If the Zamindars want instruction in 'Zamindari management' to be given to their sons, let them endow a chair in the University for that purpose, but they should in no way be encouraged by any act of Government to alienate their sons from the general public.

Chap. V deals with the question of entrance qualifications. The University is to be open to students from Bengal and Assam, but students from other provinces may be admitted by a special order of the University. The Committee recommend that the Matriculation examination of the Calcutta University should be the qualification for admission into the colleges, but the college authorities should have the power of selecting their own freshmen, and those so selected are to be formally matriculated as members of the University by some appropriate ceremony, and not quietly as is done by the Madras colleges in admitting the S. S. L. Certificate men.

Chapter VI lays down the general courses of study. As we have already seen there are to be an Arts course and a Science course, and in each a Junior and a Senior course as well as a Pass course and an Honours course as in Madras. In all the courses English is compulsory while a vernacular is compulsory only for

the pass course in Arts. The honours candidate in Arts must specialise in any one of eight alternative subjects and the pass men should choose two out of six alternative subjects.

A special feature of the courses is examination by compartments, i.e., while English is to be studied throughout the two years following the Intermediate examination, the vernacular language and only one of the alternative subjects should be presented for the first year's examination and the other alternative subject is to be reserved for the second year.

The Intermediate or Junior course, unlike in the Madras University, is to be a general one and is to include five subjects of which two—English and a vernacular—are compulsory and three alternative, qualifying for specialisation in the B.A. or leading to the B.Sc. course. A candidate for honours can appear only once, but he has a chance of taking the M.A. or M.Sc. if he fails and after an additional year's study takes the ordinary degree and is of exceptional ability.

The advocates of the re-introduction of the vernaculars as a compulsory subject in the Intermediate and B.A. courses in the Madras University may think the recommendation of the Dacca University Committee as lending support to their own contention, but we find that they cannot lay that flattering unction to their soul. The reason why the Committee recommend the inclusion of the Bengali language (and this is the only vernacular recommended) is that the Bengali language has made great progress under British rule, and not that it is rich in ancient literature in an obsolete language. "The main object of the proposed course," says the Committee, "is to enable the students to write clear and correct modern Bengali and to have an in-

telligent understanding of current Bengali literature."* They recognise the claims of the classical Bengali by the inclusion of a selection from the older books only as an alternative portion of the subject for the Senior Pass B.A. course. We think this policy of the Committee does not differ much from that adopted in the Madras University, except that the Madras University does not think it necessary to include a study of modern vernacular literature in the Senior B.A. course simply because a modern literature in the South Indian vernacular literature *does not exist*. Nor does the study of the Bengali occupy as prominent a position as the other subjects in the Dacca University scheme, inasmuch as only an hour's lecturing in a week is allowed in the arrangement of the timetable, and the Bengali language is not given a place in the Honours course even as an alternative subject.

We do not approve of the exclusion of Geology from all the degree examinations or of Indian Philosophy from the course in Philosophy. The latter is given quite a subordinate place as an alternative to the History of Greek Philosophy in the Honours course. Another notable feature is that Natural Theology forms part of the Honours course in Philosophy.

We reserve the remaining portion of our review for the next issue.

The evidence given at the numerous sittings of the Public Service Commission has been all concerned with but one aspect of the question, how shall each community secure as many of the highly-paid billets as possible. The Britisher is anxious to retain

* The Italics are ours.

the British 'tone' of the administration, by ruling out 'simultaneous examinations,' the Brahman and the Kayastha want to shut out nepotism by having every door to office guarded by the examination-dragon, the non-Brahmin of South India desires to prevent all offices from falling into the hands of one caste, by resorting to nomination, the Mussulman demands more than a fair proportion of places reserved for his community that Islamic ideals may not be lost sight of in administering the affairs of the Moslem population; but behind the back of the brains of most of the witnesses, there seems to be acting the consuming desire of—as much as possible of the loaf for me and mine. Not that this is an unnatural or undesirable motive, but it is there to the exclusion of other equally desirable ones. Not a witness has spoken about the much more important question, what kind of education makes the proper civil administrator and how to secure it. To our mind, the true interests of India demand not that there should be in the ranks of the administration a proper blend of the supposed characteristics of races, religions and castes but that given your man, Britisher or Indian, Hindu or Muhammadan, Brahmin or non-Brahmin, how to educate him for his work. At present, the special virtues of the Civil Service, Imperial or Provincial, are sought to be evoked by the memorizing of the irregular verbs of Greek or Sanskrit or Arabic, the stocking of the mind with physical constants and metaphysical theories, the puzzling over mathematical riddles and historical mysteries. All those studies that will make for a good administrator are carefully ruled out of court by the Civil Service Commissioners, University Syndicates and other similar bodies, because

these consist of men who have themselves gone through a similar grind and who have been quite safe from the touch of the fire of modernism in studies. They are all men from the older Universities, and stand up for mediæval ideals.

The first and foremost pabulum on which must be fed a budding civilian administrator is anthropology. India is a vast museum of anthropology; all kinds of cults, all degrees of barbarism as well as of civilisation are found in the country; hence an administrator is no good, unless his imagination is trained to respond sympathetically to ideals different from his own and this can be done only by a study of anthropology. He must, besides, study law, both as a science and as an art; the want of this, at present, has developed a terrific red-tapism and dependence on case-law in administration. He must also be well-grounded in modern Geography and Economics; he must clearly grasp how the life of the people of any province or district is but the reaction of men to their geographical environment; he must be able to study local economic conditions due to the geographical control of local affairs. He must have an expert's knowledge of the whole of the History of India and of all her ideals not only in the immediate present but of the remote past, for in India, the past is very much at our doors. He must have some knowledge of General Biology and Human Physiology, especially those sides of the subject that are connected with Hygiene and Public Health. The ignorance of the civil administrator in these subjects has been the cause of much waste of public revenue, witness the ridiculous plague regulations still

obtaining in the Madras Presidency. He must have a working knowledge of German and French, so as to keep in touch, if time would permit, of modern advances in that side of science which aims at the immediate amelioration of human life-conditions. Above all, he must have a thorough knowledge of two at least of Indian vernaculars; not the ability to frame half-a-dozen sentences in the learned bookish dialects and receive an honorarium for this feat, difficult alike to the native or the foreigner, but to converse freely with the man in the street, to write down what he says, if not in the difficult native script, at least in the international Romic, and to read petitions and diaries in the same script. This knowledge of the *real* vernacular should be a *sine qua non* of all appointments in the civil departments.

It is impossible to learn to speak a foreign language in a short time (and without an age-long stay amidst the speakers of that tongue), unless one is trained in phonetics. A thirty-hour individual training in phonetics is necessary for each civil officer—Indian or other—who seeks to serve in India. This, we conceive, is the proper scheme of studies for an administrator. Whether you select him for possessing memory-power enough to pass muster in a written test or you nominate him because he is the wife's brother's sister-in-law's son of a man now in power, let him undergo the course of training indicated above, before or after being chosen and there is some chance he will be worth his salt. He will certainly be better prepared for his work than one who has merely learnt to manipulate the Greek gerund, the Sanskrit *Atmanepadam*, or the triple-joined Arabic root and other educational *eidola* invented by the monks of the Middle Ages.

XIX

It has been almost unanimously urged that the British tone of the services should be maintained, but no attempt has been made to consider the elements that make up the 'British tone' and whether it is in the blood or a characteristic communicable to the Indian races by education. We conceive the 'British tone' to consist at least of three elements: (1) the democratic temper; (2) adaptability to variation in environment; (3) a fairly high degree of incorruptibility. The democratic temper, we believe, is chiefly due to public school education and University life. In a public school, all the angles of character are knocked down and the elements of self-government are learnt; the young man learns to estimate his fellows by their merits and not by their caste. Snobbery, sneakishness and other evils of oligocracy are educated out of him. The University continues the work of the public school in moulding the gentleman, polished but democratic. Hence in India we urgently need the creation of boarding schools and teaching universities; and 'class' colleges, denominational schools, and departments of Moulvi or Pandit studies, &c., are very reactionary movements. All institutions that are devised to 'protect' the sanctity of the Brahman, or the Imam will arrest national progress. Such movements are anti-democratic, teach men to appreciate not merit but birth; what is more, the Pandit and the Moulvi is a petrified, immobile creature. He shuts his eyes and imagines that the world is what it was a thousand years ago. Instead of encouraging this, on the other hand, every Indian official of a fairly high standing should be encouraged to go to Europe, of course before his mind has been crystallized. Lastly the incorruptibility mentioned above is chiefly

due to the British official having no local interests or connections. It is easy to be above temptation when there is no temptation about you. The Indian official can easily be trained to be above prejudice, if he is not allowed to serve in districts where his mother-tongue is spoken, or in his native province. Then there will be very little complaint about caste prejudices corrupting public administration.

We have much pleasure in welcoming the second edition of this excellent volume by Mr. A. Rangasami Iyengar, B.A., B.L., Assistant Editor of the "Hindu," which supplies a longfelt and real want on this all-important subject. In spite of the difficulties and responsibilities of the author in the preparation of an important book like this he has succeeded in making it a thorough success all round though this is the first attempt of its kind in India. The book treats of the origin, growth and development of Indian constitution from the establishment of British sovereignty in India, up to the period of the all-important and far-reaching reforms inaugurated by Lords Morley and Minto and which are so successfully carried out by the sympathetic and broad-minded policy of Lord Hardinge. It is common knowledge now that the early East India Company chartered by Queen Elizabeth had not even a distant notion of the goal it was driving at and often mistook the nature of the situation in which it was placed. Skilful at counter-work and matured by training and associations, subordinating the acquisition of political power to the commercial interests of the Company, the Company's servants, almost from its early settlement, were obliged, out of their instinct of self-preservation, to take one side or other

in the wars that raged around them. This led them, step by step, to take leading part in such wars till they were themselves forced to assume sovereign power; curiously enough, by internecine feuds and decay of native sovereignties, large pieces of Indian territories passed into their possession and rule; all this, in spite of the policy against acquisition of territory and frequent protests from the Court of Directors and without the least shadow of a thought or consciousness that the Company was drifting into universal suzerainty of India. A book dealing in detail with the formation and consolidation of our Indian Empire, tracing, step by step, the passions and prejudices that retarded the efforts of the builders of that empire and the peculiar difficulties they had to grapple at every stage, not to speak of the censure and fault-findings of the Court of Directors, is yet to be written and is no easy task. Contributions of materials tending towards that end will be welcome at any time. The appearance of a second and enlarged edition of this valuable book is opportune especially now. The first six chapters are devoted to the frame-work of the Government of India and its relation to the Imperial Government and as to how it is controlled and how its machinery regulated from without. The succeeding four chapters deal with the Legislative power in British India and in Chapter XI is briefly and clearly pointed the relation that exists between the Executive and the Legislative department of Government. The passionate love and regard for law, that is the characteristic feature of the Anglo-Saxon race and that has found expression in the Imperial Parliament, finds indeed its echo in the constitution of the

Legislative Assemblies of India on which depends the future destiny of our empire and its material progress and the learned author might have lingered a little longer on this part of his story. Indian Courts of Justice and their constitution next occupy his attention which is followed by a chapter on Indian Finance. The policy inaugurated by Lord Mayo's Government—the policy of decentralisation—is briefly referred to and so also the existing settlements. The author would have done better if he had referred to them in greater detail and suggested some possible ways for their improvement. The relation of Native States to the British Government and their forming an integral portion of the British Empire, though for all internal administration they are practically independent items, is a topic of absorbing importance and has an international interest. In the author's account of the Native States, one misses the account of the judicial establishments and the safeguards that exist for the due administration of justice and for securing harmony between the British Indian and Native Courts so as to prevent a failure or miscarriage of justice. This is a subject beset with considerable difficulties and as Sir Courtenay Ilbert remarks, "there are quicksands at every step." After considering the Indian Budgets and the rules regulating them and securing a careful audit of Indian expenditure the author concludes his book with this paragraph which gives a keynote to all solid progress in these words: "The true disposition to further the common good in its highest form so necessary for future progress of India, can only be attained by the rulers of the land ceasing to take narrow views of mere administrative thoroughness and by taking and imposing on the adminis-

tration, broad views." A perusal of the book shows enough of the author's thoroughness and complete mastery of this difficult subject and of the painstaking care with which he has completed his task.

We are surprised to see that the Indian Universities (except Bombay) have not thought it fit to introduce Indian Constitutional History for any of the Arts Examinations, although the subject is one of absorbing interest and importance to Indian students nowadays. After the publication of this excellent book on the subject the Universities have no excuse on the score of the want of a suitable text-book. The Bombay University in its usual wise manner has at once taken the opportunity and prescribed Mr. Aiyangar's work as a text-book.

We strongly recommend this useful and instructive book not only to students of politics but also to students of Arts and Law courses. The book is neatly got up and is priced very moderately at Rs. 3.

Copies can be had at the "Hindu" Office, Mount Road, Madras.

On the first of March will be opened at Vizagapatam High School Female education to the fore. for Hindu girls. This is practically the first considerable experiment in the secondary education of girls in the mofussil and it is hoped that those people of the Northern Telugu Districts who have been speaking on platforms eloquent speeches on female education will send the girls under the sphere of their influence to the High School when it is started. One solitary High School in one solitary remote town of the Presidency will not solve the problem of female education. In Calcutta a strong committee has been organized to consider the question and we have reasons

to think that a similar committee will be appointed in Madras. In selecting members for the committee we hope the Government will not choose men as was done for the religious instruction committee, i.e., appoint men who have been delivering neat platform orations on the subject; when this latter committee met, it was found that the people who could orate, could not create a practicable scheme. On the contrary, we want men who know what they want and can devise means for getting it. A question, the committee might consider, is that of taking education to married girls instead of the ineffectual effort to immediately break age-long conventions. The education of married girls is really bound up with an economical problem in India, for every married girl takes a definite part in the household duties and any scheme of education which will take them away from their homes during the hours when they have to work there, is doomed to failure. Therefore instead of trying to teach all girls for 6 hours in a school, sets of some of them may be taught for 2 hours at a stretch in selected local centres (houses of richer residents) by teachers who will visit those places in rotation daily. The teaching hours may be arranged so as not to clash with the working hours of the girls.

The great bane of mediæval methods of teaching whether followed by Moulvis and Pandits or Professors of Colleges is the idea that "the mental power acquired by exercise of one kind of material is available when the pupil is confronted with other material." For generations Euclid was imposed on unwilling schoolboys, because it was supposed he made people logical. Heroic doses of grammar were given, because grammar gave man moral discipline. Getting up interminable word-lists developed mem-

ory. We now know this is all undiluted nonsense. Mental powers are not absolute entities but are correlated to the matter of knowledge. One man has a memory for faces, another for names. Hence the absurdity of making written examinations which test but one kind of memory, the means of judging school-work or the intelligence of pupils. Hence the necessity, too often forgotten, of suiting the syllabus of work to the aptitude of pupils; it is futile to attempt, as is so often done, to suit all pupils to a cast-iron syllabus. People who do not understand the psychological basis of modern methods of teaching cry out against what they call too early specialization. It may be possible, in the case of a pupil with no aptitude for scientific procedure but with artistic instincts, to stifle out his natural propensities and to do some work of little value in the field of science, but is the murder of the soul the object of school-work? That it is so now is a fact. But should not this be bettered? This same formalism is at the base of the theory that wrestling with the Greek grammar, or as Dr. Macan has called it in his presidential speech at the Modern Language Association, the "subcutaneous injection of a minimum of Greek" into a man, makes him develop qualities which will make him a good Collector, a good Magistrate or a good Judge.

We have referred to this subject in a recent issue. Our reason for taking it up again is that the latest source-book sent to us for review, by Arthur Innes, published by the Cambridge Press, has brought again vividly the fact that the Source-method of teaching History, like the Direct method of teaching foreign languages is not the latest fad of an over-earnest Inspector of Schools or of an over-zealous schoolmaster, but

has come to stay, at least in English schools. This is evidenced by the haste with which publishers are vying with each other for bringing out books on the lines of this method. The more advanced books which Indian teachers could use with advantage are Colby's *Selections from the Sources of English History*, Adams and Stephens' *Select Documents of English Constitutional History*, Medley's *Original Illustrations of English Constitutional History*, Kendall's *Source-book of English History* and Henderson's *Historical Documents of the Middle Ages*. There are besides at least four well-known series of source-books, Black's *English History from Original Sources*, Marshall's *Illustrative History*, Blackie's *Readings in English History from Original Sources*, and Nutt's *English History from Contemporary Writers* and *Scotch History from Contemporary Writers*. For school-use Keatinge and Frazer's *History of England for Schools* is very good, for it gives the story of England, select documents and exercises on these. Innes' *Source-book* is an excellent collection of extracts, but the teacher is left to devise for himself the problems thereon. In the hands of a good teacher who can think for himself and not go to an Inspector of Schools or an Examining Board to draw out syllabuses for his use, it is likely to be of much service.

Our readers may perhaps recollect that towards the end of 1910, The Madras Corporation our City Fathers were "Model Schools." discussing a scheme for providing certain model Elementary Schools in Madras. A Committee of the Corporation was appointed to consider the question of providing buildings for Aided Elementary Schools in the city, and the Committee submitted their report in September 1910. The Committee reported that most of the Elementary Schools in the city were run by the teachers themselves who were too poor

to effect any improvement in their accommodation and equipment or in respect of teaching. The Committee therefore considered that instead of contributing to finance their institutions, the Corporation would do well to open schools of its own, with proper accommodation, equipment and staff and gradually absorb the existing schools as far as possible. They accordingly recommended (1) that the Corporation should undertake to build 40 schools at the rate of 4 schools each year, the cost of each building with necessary equipment not exceeding Rs. 10,000; (2) that the schools built in one year should be maintained by the Corporation from the following year at an estimated cost not exceeding Rs. 1,174 per annum for each school; and (3) that the Corporation should, in consideration of the heavy outlay involved in the scheme, be relieved from the liability to pay teaching grants to Elementary Schools in the city.

These recommendations were accepted by the Corporation, and in G.O. No. 820, dated 25th May 1911, the Government approved of the above scheme for the construction and maintenance of the schools and exempted the Corporation from the payment of teaching grants to Aided Elementary Schools in the city for the 10 years which would be required for the completion of the scheme.*

In 1910-11, before the above scheme was sanctioned, the Corporation constructed a model Elementary School in the compound of St. Andrew's Church, Chulai, at a cost of Rs. 6,610, and handed it over to the Archbishop of Madras on his executing a registered lease deed agreeing, among other conditions, to maintain an Elementary School in an efficient condition and pay an annual rent of Rs. 66 to the Corporation.

* The exemption took effect from 1911-12.

The first four schools to be constructed during the last official year (1911-12) were decided to be located in Poonamallee Road, Vallaba Agraharam Street (Triplicane), Sanjivarayan Koil Street (Royapuram), and in Chulai Bazaar Road. Sites were acquired for the construction of the schools, but for some reason or other, the sites in Royapuram and Chulai were abandoned, and new sites selected. The schools in Poonamallee Road and Vallaba Agraharam have been completed and opened. Classes have been started and pupils are attending.

The Vallaba Agraharam Street School has been built at a cost of Rs. 12,000 and it can accommodate 160 to 200 pupils. There are to be 6 teachers with salaries ranging from Rs. 15 to Rs. 25. The fees to be levied in these model schools have purposely been fixed very low, ranging from *nil* to 6 annas per month.

We congratulate the Corporation on the completion—though very tardy—of the first of the several model schools proposed to be built by the Corporation, and we trust less lethargy will be shown in carrying out the general programme for the construction of 40 schools.

His Excellency Lord Pentland, P.C., G.C.I.E., Governor of Madras, is in direct charge of the Educational Portfolio and takes a keen interest in educational matters. His Excellency wishes to see all institutions and obtain first-hand information about their condition, their staff, their pay, the strength, accommodation and other details. During such a short time His Excellency has visited a number of educational institutions.

His Excellency accompanied by an A. D. C. was received on arrival at the following institutions by Rao Bahadur A. C. Pranatharthihara

Iyer and the staff of the institutions. The Madras-i-Azaam,—23rd January 1913. E. L. M. Elementary School, Kottichery—30th January 1913. The Hindu High School—30th January 1913.

His Excellency visited the following schools accompanied by an A. D. C. and Rao Bahadur A. C. Pranatharthihara Iyer.

5th February 1913. The Arya Patasala at Thumbu Chetty Street; The Muthialpet High School, Muthialpet; Ramanujam Chetty School, Coral Merchant Street; Moses Nadar School, Monigar Choultry Road; E. L. M. Bethany School, Cemetery Road, Government Panchama Training School.

6th February 1913. The Hindu Theological High School, Mint Street; The Progressive Union School, Audiyappa Naick Street; Mrs. Lazarus' Poor School, Elephant Gate Road; E. N. Vania Sangam School, Rasappa Chetty Street.

12th February 1913. Corporation Panchama School, Periamet; The S. P. G. High School, Vepery; The Government Muhammadan Training School, Mount Road; The Wesley College, Royapettah; Damodar Free School, Teynampet.

In addition to these His Excellency has visited The Madras Christian College, The Pachaiyappa's College, The Buckingham and Carnatic Mills Half Timers, The W. F. C. M. Hindu Girls' School, Thumbu Chetty Street, and Madras Girls' Day School, Acharappan Street.

We have no doubt that the personal knowledge which His Excellency acquires by these visits of Educational Institutions will bear fruit in due course.

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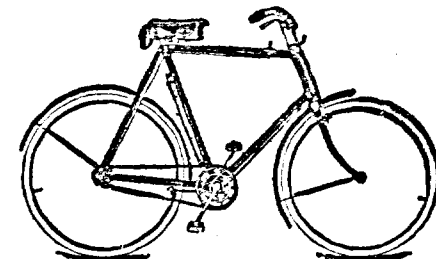
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The "Capital" writes:—"Book of considerable merit flinging out a bold challenge * * * is worth reading by publicists like Mr. Webb, who are inclined to take a little too much for granted when foisting their fads on the public."

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THE NEGLECT OF THE VERNACULARS IN SCHOOLS AND COLLEGES IN THE MADRAS PRESIDENCY.

(Continued from page 407, Vol. XVIII.)

V.

A retired and esteemed educationist writes:

THE reasons generally assigned for the re-introduction of the compulsory study of the South Indian Vernaculars in the University classes are, so far as I have been able to gather, that the study of the Vernacular literatures is absolutely necessary (1) to keep alive the traditions and culture of old India and thereby to prevent the denationalisation of the people; (2) to serve as a means of religious and moral education, the want of which is said to be now making our students irreverent and impatient of authority, and (3) to enable the educated section of the Indians to keep themselves in touch with the masses and to impart to the latter some of the knowledge by which they have themselves benefited. I shall now examine how far the study of the South Indian Vernaculars by our University students is likely to fulfil any of these objects.

It may seem surprising that the European section of the Senate should now come forward and vote away Rs. 36,000 of the annual recurring grant offered by Government for

the encouragement of the study of the Vernaculars. This solicitude of the European members of the Senate for the Vernaculars is attributed by some uncharitable Indians to a deep design to turn the attention of the Indians away from the pursuit of scientific studies lest a widespread knowledge of the sciences in India should enable the Indians to become a manufacturing nation and compete with England in the industrial arts and thereby India cease to afford a market for English manufactured articles. The brutally candid letter recently published in the "Times of India" purporting to have been written by a Lancashire manufacturer to an Indian student who sought admission into his mill for the purpose of getting a training in cotton industry has somewhat strengthened this suspicion. But without attributing any such selfish motives to the honourable Englishmen in the Senate we may easily account for their assigning Rs. 36,000 for the advancement of Vernacular studies in preference to the scientific. I think their present attitude is more or less due to their ignorance of the real nature of the Vernacular literature and its value as a medium of moral and religious instruction as well as to their mistaken belief that the study of the so-called higher Vernacular literature by the University

students would enable them to spread modern ideas of science and economics among their less fortunate brethren. What surprises us, however, is the strange inconsistent position of the Indians in that those who were loud in their clamour for the re-introduction of the vernaculars in the University curricula should now come forward and say that the Government grant should be utilized, not for the encouragement of Vernacular studies, but for the promotion of scientific knowledge. Does it not show a childish indecision, if not a want of sincerity in the advocacy of the cause of the vernaculars. It discloses a childish petulance and reminds one of the conduct of the child who having obtained the toy he most desired becomes dissatisfied with it as soon as he has got it and wants some other. It demonstrates the hollowness of the cry for the vernaculars, but what is worse, it discloses a dangerous tendency in the modern Indian politician to give every question a racial turn, and look with suspicion upon every public action of the Europeans as well as to characterise the Indians that agree with them as unpatriotic sycophants and toadies trying to please the powers that be for some selfish ends of their own. This attitude of a class of Indian politicians is bound to tell sooner or later upon the social and other relations between the two classes and end in disaster to the country. One speaker at the Town Hall (public?) meeting in connection with the study of the vernaculars the other day said that in the matter of the vernaculars the interests of Indians alone were concerned and that the European members of the Senate ought to have abstained from voting on the question. Can this principle be consistently followed? How many academical questions are there

in India which are not exclusively concerned with Indians? And for the matter of that, was there not in the Senate a large number of Indians themselves who voted against compulsory vernaculars and who might be credited with as much patriotic feeling and as much 'independence' as those who voted for it?

However, this by the way. To turn to the main question: First, as to the study of the vernacular literature by the University student during the whole of his career as a means of keeping alive among Indians Indian traditions and Indian culture and to prevent the denationalisation of the Indian boys, and also as a medium of moral and religious education: Vernacular literature is wholly and essentially *Hindu*, while the University students belong to all classes and creeds. Will the University as a public institution, and bound like the British Government to religious neutrality be justified in imposing the *Hindu* traditions and religious dogmas on the large number of *Mahomedan*, *Christian*, and other *non-Hindu* students whose vernaculars are the vernaculars of the countries in which they live? Surely the Mahomedans and Christians would naturally resent such action just as some Hindus think that Christian schools should not compel Hindu pupils to attend their Bible classes. These, however, have the option of avoiding Christian schools, but those being Dravidian non-Hindus will either have to learn some other second language or give up University training altogether if they wish to avoid learning things repulsive to their religious sentiments. The advocates of the vernaculars speak as if it were the most natural thing that Indians should be imbued with *Indian* traditions, but they overlook the fact that it is the *Hindu*

traditions and not *Indian* traditions that they thus seek to impose upon the students, and that the University is not for Hindus alone. This is a point which they have conveniently ignored, but which I hope will not be lost sight of in future whenever the question of the vernaculars is again brought up before the Senate.

Even granting that the University exists only for the Hindus, is it necessary to continue the study of the vernaculars through the whole University course, and is there sufficiently serious matter in the vernacular literature to make it worth the while of a modern University student to spend a great part of his precious time over it? and what, after all, are the traditions that are to be learnt and what are they worth? That the Vedas (which we can never read) are sacred Divine revelations, that God created the four castes, if not all the thousand and one now prevalent, that the Brahmin is superior to all other human beings, that it is no shame for him to beg, that there are thirty-three crores of gods and goddesses, that the earth rests on the head of *Adishesha*, who rests on the back of a tortoise, that the eclipses are produced by the monsters *Rahu* and *Ketu* swallowing the sun and moon who can be rescued from their jaws by your offering prayers during the time, and so on, and so forth. Is not such the pabulum with which the student is to be spoon-fed all his life by that most loving of grand-mothers, the Pandit? If so, does he not imbibe enough and to spare of it at home from the cradle upwards? and can he not be weaned from it even after the eleven or twelve years which he spends in the High School? Do not his mother and grand-mother know these traditions without their ever having learnt even the vernacular alphabet? I should therefore

think that if instead of the Vernacular text-books now taught in the classes up to the Matriculation which are nothing but translations of English readers, and so simply a repetition of the same ideas they learn in English, proper text-books consisting mostly of extracts and matter from Vernacular literature be introduced, a boy would have learnt a good deal of that literature itself and the ideas it contains—enough at least, to create in him a taste in such literature, if such a thing is possible. For, after all, it is his own vernacular, and he must be able to read a lot of it out of mere love (?) for it just as an English boy reads his Shakespeare, his Tennyson and his Robinson Crusoe for himself while still very young. No University student in Europe, or even in India for the matter of that, is compelled to study his own vernacular literature after he has entered the University.

As for the culture value of the vernacular literature the less said about it the better. This was avowedly the reason why the late Mr. V. Krishnaswamy Aiyar and Rao Bahadur Professor M. Rangachariar and several other Indian Fellows of the University thought that it need not be continued as a subject of compulsory study in the new University courses. Ninety per cent. of all Vernacular literature is trash, if not worse, and if we exclude the several versions of the *Ramayana* and the *Mahabharata* and in Tamil, the *Kural* and one or two other works, there is nothing in those literatures that will command the respect or admiration of an English educated gentleman whose aesthetic taste is not corrupted or who views them from other than an antiquarian or philological point of view. Little blame to the student who has been accused of neglecting and even hating it when

he is forced to read it side by side with English literature in the higher classes where he cannot help comparing the two together! I should like to know how many of the gentlemen who have taken up the cause of the vernaculars have a first-hand knowledge of the whole or the larger portion of even the published works in those languages!

I wish all the eloquence that was expended in the Senate and outside it in the cause of the vernaculars had been expended in a better cause. I shall not be so sarcastic as to say with some members of the Senate that the Senate's recent decision against the Hon'ble Mr. Seshagiri Aiyer's amendment was due no less to the disgust created by the platitudes so industriously and elaborately spun out in 'manuscript eloquence' by one and all the Indian supporters of that amendment than to the intrinsic weakness of the cause itself.

Lastly, as to the question whether the study of ancient vernacular literature will be of any help in creating a new literature in those languages serviceable in spreading modern ideas among the masses, we have had a practical demonstration of the utter futility of such a hope. From the very commencement of the Madras University vernacular literature has been a compulsory subject in the University courses from the lowest to the highest examination, and yet what has been the result? Practically nil. The reason is that the study of old vernacular literature unfits a man to express his thoughts in a manner useful and intelligible to the people. The old literary language in all the Dravidian languages is so archaic and so different from the modern spoken language, it attaches so much importance to words and sound rather

than to sense, its vocabulary and grammar are so obsolete that the study of the old can be of no help to any one who wishes to write books in a popular style. On the other hand those who have read the ancient literature (and let it be remembered, this is the only literature that is meant, and that we have in the vernaculars) learn to associate a good literary style so closely with the archaic and stilted style of the old literature that they are afraid of putting their new ideas in writing lest their work should be found fault with and condemned by the so-called learned men. That this is not an imaginary difficulty is evident from the fact that recently it was found necessary by the University Syndicate to appoint Committees for fixing the standard for vernacular composition in the Intermediate examination and from the reports submitted by these Committees. The public of Madras and the Government are aware how the Telugu Pandits and laymen have been still wrangling on this question of a correct style in Telugu and have not been able to come to any common understanding on the subject or are ever likely to do so.

I am not exaggerating in the least when I say that the study of the ancient literature in these languages rather *hampers*, than *aids*, the natural evolution of a popular modern literature. A recent writer on the history of the English language attributes the birth of modern English not to the study of the old Anglo-Saxon in schools, but to the removal of the conservative influence of traditional education by the Danish Invasion and the Norman Conquest of England which banished old English from the schools, the result of which was the emergence of an English language, vigorous, and capable of expressing the highest and the most modern ideas ever con-

ceived by man. I therefore most sincerely think that if ever a new vernacular literature of a healthy educative influence and progressive spirit is to grow in Southern India it must be on the *ashes of the old*, and that the further continuance of the compulsory study of an ancient obsolete vernacular literature by every University student is most unwise in the interests of progress at the present stage.

To sum up my observations on this subject which are scattered over three issues of this Journal, *viz.*, those for August 1912, September 1912, and the present one:—

1. The neglect of the vernaculars in the Presidency is due not to the University having removed them from the compulsory courses of study in the University Examinations but to the exclusion of it in the compulsory part of the School Leaving Certificate Examination, and to the natural characteristic of the people of Madras to study nothing that does not pay in the end of getting Government appointments.

2. The agitation for the reinstatement of the vernaculars to their former position in the University courses of study is an artificial cry originating in the instinct of self-preservation of the Pandit, supported by the selfishness of the Vernacular Examiners to the University and in the pseudo-patriotism of the grievance-monger whose thirst for popularity always takes the form of complaining to the constituted authorities in preference to taking the responsibility on his own shoulders and actively doing something himself for the people, and it is engineered by men who have never themselves cared to get a first hand knowledge of the vernacular literature in the interests as they think, of

the Hindu religion and traditions and is a phase of the reactionary spirit and as such is opposed to all progress.

3. The reintroduction of the vernaculars is calculated to outrage the feelings of the Muhammadans and Indian Christians whose mother-tongue is those vernaculars, inasmuch as their young boys will be compelled to imbibe a religion and traditions so opposed to their own.

4. The ancient vernacular literature has no culture-value and the study of it is calculated to keep alive the feeling of caste exclusiveness and the old superstitions which we all deplore so much and thereby to prevent a real union among the different classes of the Indian people.

5. Its study hampers the growth of a healthy modern literature in the vernaculars, and the spread of modern ideas from the educated to the masses.

EDUCATIONAL PROGRESS UNDER HIS EXCELLENCY LORD SYDENHAM.

IT will not be unprofitable now at the end of the fruitful régime of His Excellency Lord Sydenham to take a brief review of the educational work done under his sympathetic direction. His Excellency aptly remarked in his first Convocation address: "The educational systems now established or in process of formation will unquestionably prove dominating forces ruling the progress of nations and controlling the destinies of mankind."

Having thus recognised the importance of educational systems, His Excellency, during the next five years, has proved himself thoroughly capable of putting his theories into practice, and by the active interest he

has taken in all educational institutions, public or private, he has given a lasting stimulus to thought in this direction.

The first point to be considered in the formation of any educational system is the object it is intended to fulfil. The matter and the method of teaching cannot possibly be decided upon until that point is settled. The system of education hitherto adopted by the British Government in India has had for its object the production of Government officials to help the British Government to govern the vast territories under its sway. This was admittedly the end in view when the first educational institutions were organised under Macaulay's advice. The mistakes of great men are said to be at least as powerful a source of evil as their talents, if properly applied, are of good. Newton's mistaken theory of the propagation of light stopped all progress in that branch of science until recent years. Macaulay's narrow views about the education of India has had a similar effect in blinding people's eyes to the true end of education, 'which' says His Excellency, 'is to prepare men and women to perform their duties in life.'

This end being admitted, the old order of things must necessarily change and yield place to the new. But in a country which has been rusting for centuries together, change is not an easy matter. The capacity for change, for adaptation to altered environment, is, no doubt, the *sine qua non* of continued life and India will live again only when it acquires that capacity. But that will take time. For the present, it is the duty of the educated few to lead the way in this matter and be prepared to change, if change is admittedly desirable. Some of our great men, from their attitude towards the recent

changes, seem to think 'Has not the system produced us? Where is the necessity for change? What greater men can the new system produce?' We must take a broader view of the matter than that. Let us, for a moment, consider what the greatness of our great men consists of, and let us put them in the balance against the great men of the world. The modern world hinges not so much on spiritual as on material progress, not so much on religion as on science. Spiritualism is now apparently the only thing India has to boast of, and although, happily, it is on the decline at least in the more advanced nations of the world, the newest fads find a breeding place in India. It will not however do to pin our faith to a much-disputed God if we want to keep pace with the progress of the world. We must have something more solid. Moral character will stand the test much better, although, I dare say, a nation of scientists will beat the most moral nation in the world at all points. Leaving these aside, then, can we point to any other constituent of the greatness of our so-called great men? Original scientific research by Indians is hardly ever heard of. High literary attainment is not so rare, but naturally of less practical value. Even in this, original work is rare. Most of our good books, light or serious, in the vernaculars, are translations or adaptations. And the same may be said of original thought of any kind. What is this the result of? How do we account for this failure to produce even a few original workers when the Universities are manufacturing graduates by hundreds every year? Evidently there must be something radically wrong with the old system of education. And if we examine the old system, not with the object of defending it, but for the

purpose of finding out the defects, they stare us in the face.

PRIMARY EDUCATION.

The ideal system of primary education is that which makes it free and compulsory up to a certain limit, which will naturally not include much more than the three R's. But this ideal cannot at once be attempted for two reasons. The first is the want of funds. His Excellency declared in one of his Convocation addresses that Government is spending and will continue to spend the limit of its resources on education. Here, of course, allowance has to be made for the fact that the first object of a foreign government must necessarily be the maintenance of an adequate military force. Let us hope, however, that Government will sometime be in a position to do more than it is doing at present. In 1909-10 special grants were made for primary education, and the result, according to the official report, was an increase of $7\frac{1}{2}$ per cent. in the number of primary educational institutions.

The second difficulty in the way of compulsory primary education is the want of efficient teachers, although, of course, with sufficient funds, teachers could be trained. It is found that of the head-masters, more than half are untrained and of the assistants, only $\frac{1}{2}$ are trained and $\frac{1}{2}$ have passed the Vernacular Final. Of head-mistresses, $\frac{3}{4}$ are trained but of assistants, $\frac{1}{5}$ are untrained. The minimum pay of assistants has now been raised to Rs. 9. Naturally, better pay will procure more efficient men and this is a step to be commended. His Excellency has, in fact, declared it to be the policy of Government in this matter 'to make primary education more efficient rather than to spread it over a wider area, because, at present, it proves in

some cases to be no education at all, and consequently a waste of money and labour.

SECONDARY SCHOOLS.

As there is no question of making secondary education free or compulsory, the want of funds is not so acutely felt. There are, however, other difficulties. His Excellency remarked that only a small percentage of Matriculates were able to take advantage of any of the University courses, inferring that a great many pupils went up for Matriculation who should not. Also, the school classes had everywhere grown to such an extent as to be beyond the capacity of one teacher to manage adequately. Government thought it desirable, therefore, to raise the fees both in Government and in aided schools, though not to the same extent in both, and also to restrict the number of free students. Again, it is well-known that a large number of Matriculates do not know English enough to enable them properly to understand lectures at college. The remedy proposed is to teach some subjects for the Matriculation in the vernacular and to allow papers in them to be answered in the vernacular at option, the time thus saved being devoted to develop a greater general command of English. Also, to relieve the pressure of the examination still further, science, geography and the vernacular have been omitted from the examination, a certificate of progress from the head-master being sufficient. It is to be hoped, however, that a strict supervision will be maintained over all schools to ensure that these subjects are properly taught. Even before, very few schools could boast of an adequate laboratory and this evil is likely to increase in the absence of strictness. Other minor changes have been made in the school curriculum, and Government also propose

that the School Final Examination should be considered equal to the Matriculation for University purposes.

Here, again, arises the question of trained and untrained teachers. The Secondary Training College has now been in existence for seven years and during this time must have produced a good number of trained teachers. But my personal experience is that head-masters and even Inspectors do not take kindly to the up-to-date methods advocated at the Training College. Inspectors insist on the observance of mechanical methods which perhaps make the task of inspection easier, and head-masters, consequently, in some cases actually refuse to allow any new methods to be followed. We meet again the argument: 'we learnt under the old methods and we are fit to be Inspectors and head-masters,' etc. Now, as at present there are no trained head-masters, the evil will continue until the majority of head-masters are trained (who is to train the Inspectors by the way?) i.e., for a pretty long time.

'Transfers' is another cause of inefficiency and although I had heard that there would be no more transfers for promotion, one still sees teachers transferred for no apparent reason, and naturally the classes suffer.

The Bombay Presidency compares favourably with other provinces in the matter of expenditure on educational institutions, both Government and Municipal, and also in the number of public institutions, although Bengal and Madras are far ahead in private institutions. Also, the number of scholars in proportion to the population is the highest in Bombay.

THE UNIVERSITY.

Some of the most important changes due to Lord Sydenham are with respect to the curricula of University examinations.

Owing to proposals laid by the Government for consideration before the Senate, the curri-

culum for each examination has undergone considerable modifications. It is here possible only to note the more important ones. After 1913, the Previous Examination will not be held by the University, but by each college for itself. A certificate from the Principal of the College will be a passport to other courses as the P. E. was before. Practical Physics takes the place of History, and the course in Mathematics has been extended. On the whole, students will have to work much harder, and the portion in Mathematics is too much for one year.

At the Intermediate, Physics has been replaced by Indian History and Administration, and as I think Science more important than even *Indian History* I think the change is for the worse. The option of Logic for Mathematics will certainly be welcome to students, the latter being the bugbear of the average under-graduate. This also allows the course in Mathematics to be extended, so as to include the portion essential to students who wish to take up Science at the B.A.

All these lead up to the greatest and most disputed change of all, viz., that at the B.A. As finally adopted, the new curriculum has only one compulsory subject, English Language and Literature, and a voluntary subject has to be chosen from five groups. There are separate courses for Honours in the voluntary subjects, there being three additional papers for Honours.

At the M. A. there are only four branches: Languages, Philosophy, History and Mathematics, the last being divided into two groups, Pure and Applied. Physics, Chemistry and Natural Science are omitted. In Languages, it is not now compulsory to take English, but any two may be chosen provided a vernacular is accompanied by a classical language. It looks rather strange to allow the vernaculars at no other examination than

the M.A. Another notable feature is that Pali has been admitted as a Second Language at the higher examinations. The course in Mathematics is considerably augmented, scope being given for original work by taking it into consideration at the examination.

At the Inter-Science, English is omitted, and any one of four groups (of three subjects each) may be chosen.

At the B. Sc. there are seven groups of two subjects each, one to be the principal subject and one subsidiary.

At the M. Sc. (which did not exist before) there are six subjects, one of which is to be selected. Here, also, original work will be considered as at the M.A.

There have also been changes in the curricula of the L.M. & S., M.B. B.S., and LL.B. examinations and those of the examinations in agriculture have undergone considerable modifications.

Finally, there is the new Faculty of Commerce. The course in Commerce takes four years after Matriculation, the first year's course being the same as for the B.A. One year more is required for the Inter-Commerce and two more after this for the final examination for the degree of Bachelor of Commerce.

It will be seen that the guiding principle followed in the above changes is that the real value of education depends, not on the number of subjects taught, but on the thoroughness with which they have been taught. The greater the number of subjects attempted to be taught, the more superficial is the knowledge acquired by the pupils. Hence the cutting down of superfluous subjects, especially at the B.A. There being now only two subjects to read for that examination, the spare time can very well be given to any other subject the student has a fancy for, and in this he will be free from the pressure of examination.

Another defect noticeable in the old courses
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is a want of continuity. A student could never properly gauge what B.A. mathematics, for instance, would be like from what he knew of the subject till then. A similar gap existed between the B.A. and the M.A. courses. These have been nicely filled up in the new arrangement.

It need hardly be said that before changes on this extensive scale could be decided upon by the Senate, there were many hot discussions as to the utility or otherwise of particular subjects. There were in particular two, about which the greatest differences of opinion prevailed. One was

HISTORY.

There can hardly be two opinions as to the value of this subject when properly taught. But, as His Excellency once remarked, the teacher of History is born and not made. I must confess to having conceived a violent dislike towards the subject, merely because, although I was at one of the best schools, I did not meet that born teacher. I only regret the time spent on it, which might certainly have been better used. So far for Matriculation History, which to me consisted merely of dates and events! At the P. E., matters were little better. Besides, what can those little books prescribed for it really say about either Greece or Rome? About the introduction of History at the Intermediate, we find the following remark in the Government summary: 'Political agitation caused Government to provide a curriculum giving youths a clearer grasp of facts and circumstances concerning India's position in the Empire and a better chance of serving her economic needs.' There seems also to be much sense in the argument that those who have a *penchant* for the subject may take it up as their optional. The forced study of any subject is no study and the burden of two compulsory papers in History was really a heavy one. All arguments for keeping the

subject fall to the ground when it is remembered that a subject studied drily for examination purposes is soon forgotten and sometimes hated for ever after.

SCIENCE.

Another much-discussed subject was Science. After the praise bestowed on it in His Excellency's first Convocation speech, it is rather disappointing to find it given so little importance in the curricula. In the first year's course in Arts, where it occurs as 'Practical Physics' one finds a most important branch, electricity, altogether omitted. At the Intermediate, it finds no place. At the B.A., the Senate insisted on retaining it in opposition to the original proposals from Government. And it is dismissed from the M.A. course. The Government argument was that those who wanted Science may take the B. Sc. course, which, as a qualification for Government service, would be equal to the B.A. But in that way a student would have had to forego either English or Science; and the Senate acted wisely in allowing both to be read together at the B.A. The Government, of course, held its own in so far as it does not now provide for Science for the B.A. course at the three Government colleges. The Government has however done a great deal for science in another way, namely, by the establishment of Science Institutes at Bombay and Ahmedabad, mainly intended for post-graduate courses of study.

Two other supposed branches of education remain to be considered. The first is

RELIGIOUS EDUCATION.

If education has anything to do either with training the mental faculties or with imparting correct knowledge, 'religious education' does not, to my mind, convey any sense. For purposes of evasion, 'religion' is often supposed to include 'duty to man' as well as 'duty to God.' The former, however, rightly falls under 'morality,' which has no connec-

tion with religion, nay, is sometimes opposed to it. Considering 'religion' then in its proper sense of 'duty to God,' we find, in the first place, that the very existence of this God is, to put it mildly, a disputed point. Consequently, any structure based on His supposed existence is of very doubtful value. Religion very often says one thing and modern science says another. If, then, modern science is knowledge (and we regard it as such), religion is the direct opposite of knowledge, i.e., ignorance or superstition. I fail therefore to understand how the imparting of correct knowledge can be religious, or how a training in superstition can be called education.

Again it can certainly not train the mental faculties to be taught to believe without evidence, as religious people have to do. In fact, belief not being a voluntary function of the mind, 'religious education' (neglecting the contradiction) must, in a great many cases, lead to hypocrisy and is to be deplored. We find in the Government summary: '.....preparation of a series of moral and religious hand-books for use in schools.' These religious hand-books can in no way justify their existence in the twentieth century if ever they could and their effect on school-boys will be to steep them in superstition. We are told that they are intended to be a preventive remedy against illegitimate political agitation. A casual glance at history should have served to warn anybody that religious beliefs have been used, times out of number, to create political disturbances. It is well-known that Shivaji used them for his purposes, and it was quite as illegitimate then to plot against the Mahomedan Government as it is now to plot against the British. And more recently, was not the Great Mutiny itself fomented by a superstition, which is the invariable accompaniment of, if not synonymous with religion?

Besides, does any one really think that any amount of religious or other teaching would

have transformed bomb-throwers into peaceful citizens? It is nature that does these things, not education. How many Christians follow the advice of Christ and, when smitten on one cheek, offer the other for like treatment? In fact, has not the rise of the Christian nations been due to their doing the exact contrary? No people put the tenets of their religion into practice unless they are forced to.

And religious education is not at all necessary. Have we not the brilliant example of Japan pointing to the fact that a nation can rise by a purely secular system of education?

It is certainly to be deplored that sectarian Universities are being proposed which will necessarily give more importance to this imaginary education.

MORAL EDUCATION.

Moral education is quite a different matter, although opinions may differ as to how far it is possible. It must be remembered that the home and social environment determine the character of a man much more than any school or college education can do. In India especially, where there are practically no boarding schools, and college hostels, where there are any, accommodate only a limited number, schools and colleges can have but little influence on moral character. And besides, do not the existing text-books amply satisfy the moral requirements? Each series of readers contains a good many moral stories and these should be quite enough in the hands of capable teachers.

The next question is 'How far are the moral principles taught in schools capable of being put into practice?' Even with regard to the most elementary principles, there are difficulties. A man who always spoke the truth would be out of place in any civilized society. History will point to the fact that England owes its present position not to '.....a mind that lightly letteth go what others prize,.....an unrevenged spirit,' as

advised by the Bhagavad-Gita, but to a bulldog tenacity, which is the exact opposite of it, and so on to any extent. Besides, on complicated points there will be considerable differences of opinion. On the whole, the personality of the teacher will do more for the development of morals than any text-book. However, the books will not, at any rate, do harm.

One thing may here be noted. The older generation is rather fond of attributing want of reverence to the younger. The younger may justly retort: 'Deserve reverence and you are bound to get it.' As the Sanskrit poet has it, 'Everything is not good because it is old,' and, in a progressive world, everything has to go on its merits. To my mind, the charge indicates an amount of vanity in those who make it.

Looking back, one finds several encouraging items in the educational events of which we have taken a brief survey. There is certainly reason to hope that the concentration and focussing of attention aimed at in the revised curricula will lead to original work. Education has made considerable progress among the depressed classes. Ladies, too, are coming more to the front and there is a sensible increase in the number appearing for the various examinations. The Victoria Jubilee Technical Institute and the Art School are among the best institutions of their kind, and His Excellency has expressed the wish of Government to help Industrial institutions. There has hardly been any regime so important as Lord Sydenham's from the educational point of view and let us fervently hope that the Presidency shall see many more such Governors, taking so sympathetic an interest in the condition of the population entrusted to their care, and exerting themselves in such an eminently practical way to improve it.

R. D. KARVE.

Main heading.	Matter.	Illustrations, appliances, diagrams, reference to books, etc.
Refraction through a thick plate with parallel faces.	1. A ray of light falling <i>obliquely</i> on one face of a thick plate of a transparent substance such as glass, emerges from the other face in a direction <i>parallel</i> to that of the incident ray; it is not deviated but is <i>laterally displaced</i>. 2. If an object be looked at <i>obliquely</i> through a thick transparent plate with parallel faces, it is <i>laterally moved</i> and <i>appears nearer</i> than it is. The amount of lateral shifting increases with the <i>refractive index</i> of the plate, its <i>thickness</i> and its <i>inclination to the incident ray</i>. Qⁿ. A rectangular glass trough is half filled with water and the rest, with turpentine. It is held obliquely before a vertical line on a sheet of paper. Describe what will be observed if you look at it through the trough just along where the water and turpentine meet and state what inference can be drawn, regarding the relative refractive indices of water and turpentine. 3. When the object is viewed normally through such a plate, the image is not shifted towards the side, but appears nearer, the emergent ray continuing in the direction of the incident ray.	The path of the ray through and outside the plate can be found by the pin-method (similar to the one used for determining the refractive index of glass). The perpendiculars dropped from the emergent ray on the prolongation of the incident ray will be found equal, showing the parallelism of the former to the latter ray. The students may, with advantage, verify the result by drawing the paths of the ray, according to the laws of refraction. 2. Lateral displacement can be illustrated in a variety of ways:—

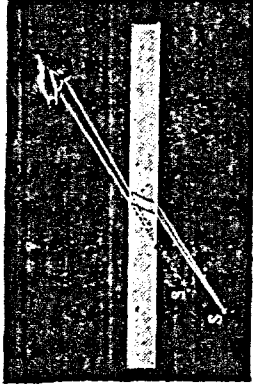


Fig. 30.

- (a) If a post or window is looked at through a piece of thick glass held obliquely, so that part is seen through the glass and part, by direct vision, the object appears broken at the glass edge.
- (b) Place a piece of plate-glass on a sheet of paper so as to cover a portion of a few straight lines drawn on it. Looked at *normally* through the glass, the lines still appear straight. If now the eye is removed to the right or left, they appear broken at the edge of the plate; the parts seen through it being still straight but shifted in the same direction as the eye. The same effect is seen if the eye is kept fixed and the plate is tilted. The above experiment can be repeated with different liquids, using a parallel-sided glass basin that can contain the given liquid. This can be used to roughly determine which of two given liquids has a higher refractive index.

Multiple images in glass mirrors.

Prism. Refraction through prism.

4. When the material of the plate is *less dense* than the surrounding medium, the lateral displacement is in the opposite direction to that in the case of a denser one.

A lighted candle held near an ordinary glass mirror and looked at obliquely, produces several images of varying brightness. When light falls upon a plate-glass mirror, part of it is reflected from the front surface of the glass, as *BE* producing a faint image at *a*. Part is refracted into the glass and then reflected at *c* from the silvered surface as *cd*; of this a portion is refracted into the air as *dil* producing a bright image at *a*; but another part is reflected back into glass, to be sent back from the silvered surface and refracted into air, proceeding parallel to the other rays. Thus a series of images is formed, gradually decreasing in brightness. The front surface and the back silvered-surface act like parallel mirrors. These images will not be seen in a polished metallic reflector.

The students should carefully understand the following terms and expressions before proceeding to experiment with prisms:—

- (a) *Prism*. From an optical point of view, a prism is a portion of a medium lying between two plane faces inclined at an angle.
- (b) *The refracting angle of the prism*: The angle between the faces.
- (c) *The edge* (or refractive edge): The line along which the faces meet or would meet if produced.
- (d) *Principal section*: A section of the prism at any point in its length, perpendicular to the edge. The prisms generally used for experiments are triangular prisms and their principal sections are usually *equilateral* or *isosceles* triangles.
- (e) The angle of deviation produced by the prism: The angle between the directions of the incident and emergent rays. (*vide* the angle $\hat{FOS}$ in fig. 32)

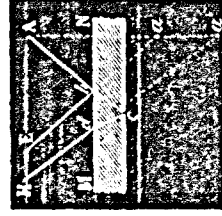


Fig. 31.

- Note. 1. It will be well to mount prisms on a stand with several points, the uppermost for rotating the prisms about its own axis, the second for turning it so that its edges make any required angle with the vertical, and the third, to give motion about a vertical axis and to enable its being raised or lowered through several inches.

2. Objects seen through prisms generally exhibit coloured edges, due to dispersion of light, which will be dealt with separately. For the pin-method and most other experiments on deviation of light by a prism, it will be well to employ large ones. Prisms of about 3 inch-face can be obtained at a low-price from Messrs. Pye and Co., Mill Lane, Cambridge.

3. Unless otherwise stated, the material of the prism, such as glass is considered *optically denser* than the surrounding medium which is generally *air*.

4. A prism of a liquid or a gas can be made by enclosing the liquid or gas in a hollow glass prism, the sides of which are glass plates with truly plane parallel faces and produce no deviation.

Refraction through a prism— (contd.)

The path of a ray of light through a prism can be traced with the aid of experiments or by means of a geometrical construction, if the refractive index of the material is known.

Light incident on a prism undergoes bending both when it enters the prism at one face and when it emerges at the other and the total deviation is the sum of the refractions at both the faces.

AB and AC = faces of the prism: $\angle BAO = \text{refracting angle}$.

RPD = incident ray " " Vide fig. 33.

DE = path of the ray through the prism.

EQS = emergent ray.

$\angle FOS = \text{angle of deviation} = \angle FDE + \angle DEO$.

It will be found from experiments that the direction in which rays of light are deviated is away from the refracting edge or towards the base or thicker part of the prism.

1. The pin-method: 2 pins R and P fixed on one side of the prism and another pair Q and S, on the other, so that either pair will be in a line with the images of the other pair seen through the prism.

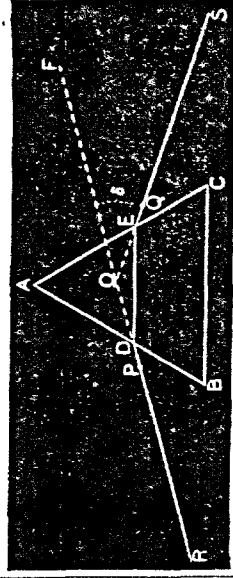


FIG. 32.

Stick P and Q on opposite sides and, looking in the prism with one eye closed in the direction of RP, place yourself so that P is in a line with the image of Q and stick R as far from P as the paper will allow. Similarly, by looking along SQ insert the pin S to appear in a line with Q and the image of P.

Note. It is important to stick S, looking along SQ and not along RP, as in the latter case, the image of S will appear somewhat indistinct and coloured on emergence (blue on one side and red on the other).

2. In the centre of a sheet of blackened card.

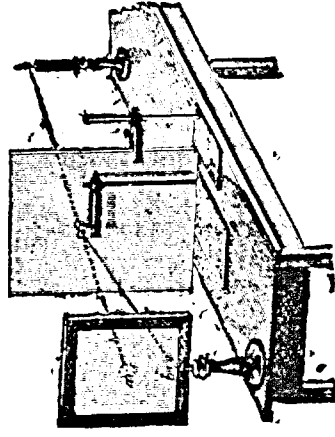


FIG. 33.

board, a small hole is made and kept at the same height as the wick of a candle placed in front. The spot of light α is received on a screen. A prism is then placed behind the hole, with its refracting edge horizontal and parallel to the screen. The spot of light is shifted to b . The angle of deviation is found by joining the two positions with the hole.

3. Remove the objective S' and condensers from an optical lantern; focus a small hole in the cap with a convex lens and note its position on a screen. Now interpose a prism in the path of the rays and observe that the spot moves towards the base in each position of the prism, the emergent ray making an angle with the direction of the incident ray.

This can be shown by taking prisms of different angles and using the pin-method or the experiment in para. 2 above.

In experiment 2 above, if behind the prism, a similar one is placed base to base, so as to increase the refracting angle, the displacement of the spot of light becomes greater.

It can be illustrated (1) by the pin-method and (2) by geometrical construction: the prisms of different substances should, in this case, be of the same angles and the angles of incidence, equal.

Note. For cases I and II, a parallel beam of light from a powerful source such as the magic lantern may be allowed to pass through a narrow, long vertical slit in a cardboard sheet and fall on the 2 prisms (of different material or angle as the case may be) placed one over the other so that the faces on which the light is incident are in the same plane.

Show this by drawing a number of figures for a particular case, and by experiment. A prism with two red lines ruled on its two faces, parallel to the edge, a sheet of ruled paper and 2 pins may be used to study deviation. Rule the lines in different parts and observe how the displacement varies: Vide L. M. Jones' Practical Physics, pp. 140-1.

Deviation produced by a prism.

The angle of deviation produced by a prism depends on the following:—

I. The refractive angle of the prism: as this angle increases or decreases, the deviation also increases or decreases; when it is zero, i.e., when the faces are parallel, deviation is nil, as has been seen in the case of a thick plate.

II. The material of the prism. Prisms of different substances produce different deviations. Other things being equal, the displacement increases with the refractive index, e.g., water, crown-glass, flint-glass, and carbon bisulphide are in the increasing order of deviation produced by them.

III. The path of the ray through the prism. As the angle which the incident ray makes with the 1st face increases, the deviation decreases until a certain portion is reached, after which it begins to increase again.

Position of minimum deviation.

The deviation produced by a given prism is *least*, when the *path of the ray* (see OR in fig. 34) in the prism is *symmetrical* with respect to the faces (AB and AC) i.e., is *equally inclined* to them. This is known as the *position of minimum deviation*. Here, the angle of incidence is equal to that of emergence.

Note. (i) In the position of minimum deviation, the index of refraction is equal to

$$\frac{\sin \frac{A+D}{2}}{\sin \frac{A}{2}} : D = \text{angle of deviation } \angle TQR$$

$$A = \text{ " of prism } \angle BAC.$$

(ii) When the refracting angle is *very small*, $\mu =$

$$\frac{D+A}{A};$$

$$\text{or } D = A (\mu - 1).$$

Image formed in prism.

The rays traversing a prism being bent away from the edge, the object will appear, to an observer looking through it, to be more nearly in the direction of the edge than it is.

In the position of minimum deviation, the virtual image of a luminous point (and hence of an object) as seen through a prism will be at the same distance from the edge and on the same side. Draw diagrams illustrating the formation of images in this as well as other positions.

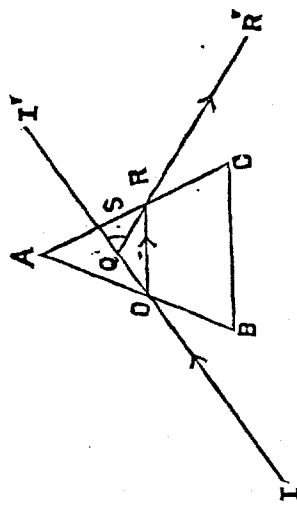


Fig. 34.

1. Illustrate this by using the apparatus above-noted and drawing the red lines equidistant from the edge of the prism.

2. Allow a beam of sunlight in a dark room to pass through a prism and observe that, on rotating it about its axis, there is a mean position which gives a smaller deviation of transmitted light than positions on either side of it and that, when in this position, a small rotation does not sensibly affect the amount of deviation. For geometrical proof, refer to L. M. Jones' Physics, p. 142.

The students may well be asked to set up prisms in the position of minimum deviation, calculate the index of refraction therefrom and verify the result by other methods.

A lighted candle looked at through a prism held in the hand *seems raised*. As an exercise, the students may be asked to carefully note and explain what will be observed if a glass prism was held with its refracting edge parallel to the edge of a window-bar or any well-defined straight line and the object looked at through it, (1) when the prism is kept fixed, (2) when it is rotated slowly so as to change the angle of incidence of the entrant ray.

Total reflection in prisms.

When ray incident on one face of a prism strikes the other face at an angle greater than the critical angle for the material, is *totally reflected*. According to this principle, if in a glass prism with angles $90^\circ, 45^\circ, 45^\circ$, a beam of light falls normally on one face AB, it suffers no refraction and very little loss by reflection and meets AC at 45° , which is greater than the critical angle (about 42°) for glass. So, it is *totally reflected* along QR and emerges from BC normally without refraction and with little loss of light by reflection. Thus, the beam is deviated through a right angle with very little loss of light. Such prisms are called total reflection prisms. In general, if the refracting angle of the prism exceeds twice the critical angle of its material, total reflection will take place.

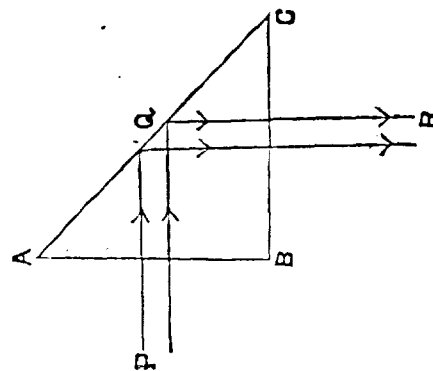


Fig. 35.

For experimental illustration, vide

- (i) L. M. Jones' Practical Physics, page 142.
(ii) Practical Exercises in Light, by Clay, page 11.

(a) Let the students try to trace the course of a ray of light entering one face of a right-angled prism and leaving a face at right angles: for example, let them place the prism on a printed sheet and endeavour and see if they can read the print, through the face at right angles to that on the paper.

(b) Let them place an equilateral glass prism on a page of print, look at it obliquely from above through the prism and observe and explain what will be seen if the eye is gradually lowered.

(To be continued.)

A. VARADACHARIAR.

OUR PUBLIC SCHOOLS AND INDIAN HISTORY.

METHODS of teaching in the public schools of our Presidency have changed considerably during the last decade. Any student who passed out of a High School, even half a decade ago, happening to visit the same, now, will be much struck with the improvements effected.

In certain High Schools where the Science laboratory and the Science class were huddled together in a room of not more than 20 by 20 ft. or thereabout, we have now separate halls equipped with elaborate apparatus, and with provision for enabling students to carry on experiments. In short, in certain progressive High Schools, these laboratory halls are as large as the laboratory halls of certain colleges, too.

A similar attempt at an advance in the teaching of history is made everywhere. Especially is this the case with English History. Walls of rooms are hung with pictures that represent notable scenes from English History. We see, almost everywhere, a long row of pictures, like the "Signing of the Magna Charta," the "Landing of the Normans on the English Soil," the "Clearance of the Parliament by Oliver Cromwell" and similar ones. Certainly, such a series of pictures will give an accurate and indelible impression of, the land-marks of political history, and, the general political life of the land, to which they refer. It will also picture to the curious eye of the young student the military dress and other interesting details of the customs of the land.

But let us see what amount of attention the History of India receives in these schools. It is a serious contrast that we notice and much

feel for. We rarely or never come across a single picture, relating to the events in Indian History. The lack of instructive and interesting pictures of the sort referred to in connection with English History is one of the causes that keep Indian History, behind English History, in our schools, in this respect. Our students have more familiar impression of the Courts of Henry II, Henry VIII, Elizabeth, Charles I, &c., than of Muhammad Ghor, Baber, Akbar or Shah Jahan, or of any of the Peshwas. They have a clearer idea of what Cromwell or Nelson was like than of Nadir Shah, or Raja Man Singh. While, when made to read and hear of the several kings of England they are introduced to the subsidiary historic personages of the times who took part in the court-life of the several rulers they have not got the opportunity or the means to take peeps at any such bye-personages of the Indian History. And the necessary result of such a system of teaching Indian History is quite unsatisfactory. Reading of history on such high-road-journey principles is certainly a tasteless and prosaic task. The brains of the students subjected to such a system are not soil, fertile, for the germination of the true historic spirit or genius. The horizon of their historic information with respect to Indian History is more like the mid-day sky, which is dominated by the all-pervading sun whose presence throws into the back ground all the other orbs in Space. Until the sun begins to retire into the West, we do not get a look at the beauties of the evening sky or the nocturnal starry moon-lit sky with its milky path. The sun's light falling on and illuminating the fringes of clouds is the brightest silver tinge and the pleasantest sight. Let, therefore, for the sake of the human interest, which these

subsidiary historic personages possess for us and, also, for the sake of the more lively and comprehensive picture of the contemporary life they give us, such personages be included in the scheme of historic studies. An account of the *court-life* of the several Moghul and Hindu rulers of India will give a more truly historic view of the ages that have past.

Conspicuity and familiarity are some of the sensible and practical methods of leaving indelible impressions on the plastic minds of young students. These, applied in the teaching of history, are very helpful for the creation of a historic genius in them. A picture, showing the Durbar of Jahangir hung up in the class-room, will bring home to the students most emphatically and realistically the atmosphere of the Moghul court-life. It will show what the Emperor was like, what his regalia was. It will give an idea no less clear of the achievements of the nation's art and industry of that period of history, for, in any age, the best attainments of the nation's art will be brought together in the king's court and palace. While once studying the picture of the Durbar of Jahangir given in one of the issues of the Journal of Indian Art and Industry it was observed that the Moghul Emperor was seated not on a Simhasanam usually associated in the Hindu mind with a king in court, but was seated on a dais leaning against a cylindrical pillow set horizontally behind him. It was also observed that all except the Emperor kept standing, every one of them holding a long staff in both the hands in the front implying the readiness and loyalty with which they bore the rod of his rule. Studying at another time, the picture of the Durbar of Akbar Shah II, this feature was noted with greater

interest, for Sir David Ochterlony too who attended the Durbar is seen standing holding the staff like the rest of the courtiers. A further observation was made that the Moghul (Semitic) ruler did not wear a cone-shaped crown (Kiritam) but had a pagri or turban on his head. Another picture which was of Nur Jahan evoked the observation that the Semitic queen wore a pagri, too. All the Durbar pictures relating to the Moghul Emperors show that the Hindus held responsible positions of rank and respect in their courts for it was observed that the beardless faces close to the Emperor's seat were Hindus. From this was drawn the legitimate conclusion that Hindus and Muhammadans enjoyed mutual trust and co-operation at this period of history. And students might draw these valuable lessons from these pictures much more easily than through lengthy accounts narrating these facts and learn more willingly, for, knowledge here comes in the attractive garb of pictures which are universally loved much by children.

We have seen of what immense value and help such pictures are in the teaching of Indian history. The best way for securing illustrations of this type is to utilise the plates reproduced in the Journal of Indian Art and Industry (published by Messrs. W. Briggs & Sons, Ltd., Peckham (Hanover Street, London, S. E.). The informatory notes, given in this Journal, on the plates reproduced, are of inestimable value. We get interesting side-peeps into the inner court-life of the ancient rulers of this land and also at the persons and vicissitudes of the several English generals and statesmen that have played their part in the history of India. For example even a graduate of this University might not have known that in Akbar's Court were two

great Hindu painters Daswant and Basavan who learnt the Persian style of painting from Muhammadan teachers and soon surpassed them in it. Nor is it known to many students of history that Asaf-Jah of Oudh employed the two Daniells as Court-painters who grew to be famous as painters of Indian historic personages and places.

Thus it may be seen that it is hard to estimate the value of securing these and similar illustrations relating to Indian History, and utilising them in our schools. They may be profitably framed and hung up in places accessible to the students and helping them to study them. The matter given in this Journal will be of considerable help in the matter of making up an Indian History from original sources. Much time has already passed by our High Schools, in complete darkness as to the existence of this fruitful source of information and the best stimulus and nursery of historic genius. Now at least they may set about utilising this wonderful record of the ancient and modern Indian art and history which gives a true and complete picture of the past of this land.

C. R. KRISHNAMACHARI.

THE EDUCATIONAL POLICY OF THE GOVERNMENT OF INDIA.

ON the 11th March 1904, Lord Curzon who was then Governor-General, published a lengthy Resolution reviewing the state and prospects of education at the time. The History of Education in India up to 1854 when the Court of Directors issued their memorable Despatch was cursorily reviewed and careful stock taken of the results of the educational policy of the State for fifty years since then. Some of the more important recommendations of the Education Commission

of 1882-83 were also reviewed as *e. g.* the systematic encouragement of private effort by liberal grants-in-aid, the gradual devolution of Secondary and Collegiate education upon private enterprise, the extension of Primary education among the masses as one of the most important duties of the State. While acting on the recommendation of the Commission, Government retained general control over all public educational institutions and continued to maintain a limited number of Arts and Professional Colleges in the Presidency town and at important centres. In spite of the vast progress made as regards increase in educational institutions and scholars under instruction, and in spite of advance in various directions, the whole machinery required overhauling as examinations and the preparation for examinations dominated the whole system of education. A Commission was appointed to enquire into the working of the Universities with the result that the Universities Act of 1904 was passed and other educational reforms followed. The Government of India have given and continue to give what financial aid is possible to enable colleges and schools to make the necessary improvements under the altered conditions, in the teaching staff, in the matter of buildings, hostel accommodation, educational appliances and in the equipment of laboratories.

It is now nine years since reforms on all fours began to be introduced into Elementary and Secondary Schools and into all Arts and Professional Colleges throughout the Empire. The Resolution of the Government of India on the educational policy of the State published in Delhi on the 21st February reviews at great length the advance made, the improvements effected in all departments of educational activity and draws attention to some

of the more complex problems that remain yet to be solved. The statesman-like pronouncement fully opens with a quotation from the speech made by His Most Gracious Majesty the King-Emperor in reply to the address of the Calcutta University in January 1912 and which evoked great enthusiasm at the time and remains enshrined in the memory of the people of a promise of great things to follow. The whole document breathes the spirit of sympathy and deep solicitude for the genuine betterment of educational facilities and agencies. No one who reads it through carefully will fail to be impressed with the magnitude and many-sidedness of the educational problem of India, and the praiseworthy efforts made to cope with the situation.

It is refreshing to note that the Government of India place "the formation of character of the scholars and the undergraduates under tuition" in the forefront of their educational policy and, while bound to maintain strict neutrality in matters of religion, they regard the question of moral and religious instruction as "unquestionably the most important educational problem of the time." The rapid increase in the number of hostels and resident male students is noted with satisfaction and the Government of India expresses the hope that educational buildings of the future will be "distinguished as the most modern and commodious buildings in the locality." The paramount claims of hygiene in all its bearings on educational work and method is to receive greater attention, the courses of instruction, elementary, secondary and collegiate will, as far as possible, "be diverted to more practical ends" and provision made for higher studies and research work so that Indian students may

not have to go abroad for such studies. Considerable space is devoted to the subject of primary education and the education of girls. For financial and administrative reasons the Government of India cannot see their way to make primary education compulsory and free. They however desire "the widest possible extension of primary education" and Local Governments have been asked to make provision for free elementary education amongst the poorer and backward classes of the population. In the matter of female education which has rapidly advanced during the last decade, in spite of social customs which present peculiar difficulties, facilities will continue to be given towards further improvements by concession as regards fees and grant of scholarships.

Secondary English education is next discussed at some length as it is "the basis of all professional or industrial training in India." Following the policy laid down in the Despatch of 1854 and the recommendations of the Education Commission the Government of India hold out every encouragement to schools efficiently managed and maintained by private agencies. Acknowledgment is made in the Resolution of "admirable schools" maintained by Missionary Societies and other bodies. The introduction of the School Leaving Certificate scheme is regarded as a reform in the right direction and the Madras Presidency commended for progress in this direction. Next to the improvement of the pay and the prospects of the teacher the Government of India regard this as the most important reform required in Secondary education. As regards collegiate education the Resolution speaks of the good work accomplished in the past and of the beneficial results that

have followed since the Universities Act of 1904 came into force. With the improvements contemplated the Government of India hope that "a great impetus will be given to higher studies throughout India and that Indian students of the future will be better equipped for the battle of life than the students of the present generation." A teaching and residential University will be founded at Dacca and the Government of India are prepared to sanction under certain conditions similar Universities at Aligarh and Benares." The establishment of Universities at such places as Rangoon, Patna and Nagpur is also contemplated.

The space at my disposal will not suffice were I to make any reference to the various other departments or branches of learning the State holds itself responsible for, such as, Technical education, Commercial education, Agricultural education, Forestry education, Veterinary education, Medical education, Legal education, Chiefs' Colleges, Oriental studies, Schools of Art, Museums and the education of Muhammadans and that of the Domiciled community. Every one of these is carefully reviewed and up-to-date improvements suggested. But all the reforms suggested and the improvements contemplated cannot be achieved unless provision is made for securing for all schools and colleges an increasing number of teachers trained on modern pedagogic methods. This the Government of India recognise as a matter of great urgency and have desired local Governments to provide for the pressing need in view also of the rapid extension of primary education. This need I may add, is still further accentuated by the absorption in recent years into Government service of a large number of trained teachers employed in aided schools and colleges.

To all engaged and interested in the education of the land the Resolution brings hope and encouragement for the future. To the rank and file of the Teaching profession the most gratifying and heartening part of the Resolution is the boon they have long looked for and the Government of India say that "they attach the greatest importance to the provision for the old age of teachers either by pension or provident fund." To the Managers of well-conducted and efficient schools and colleges who have struggled hard to make ends meet the promise is given of "Special Assistance" to enable them to make the improvements called for and the grants-in-aid will be on a more liberal scale and under a more elastic system.

The whole Resolution is replete with valuable observations and far-sighted suggestions for the *education*, in the truest sense of the word, of the rising generation and every one of its 62 paragraphs throbs with genuine sympathy for the Empire and its people, to guide whose destinies at this momentous period in their history Providence has given them Lord Hardinge for their Viceroy and Governor-General, a statesman so wise and broad-minded as he is large-hearted and magnanimous. Long may he live!

J. P. COTELINGAM.

ELEMENTARY EDUCATION POLICY OF MADRAS GOVERNMENT.

An important feature of the Budget of the Government of Madras for the next year is a very large advance of expenditure under Education including the improvement and expansion of elementary education. The greater portion of this expenditure is non-recurring and is due to the Government of India making large grants

out of their surpluses and thereby materially supplementing such amounts as the Provincial Governments themselves could spare. In view of the intrinsic importance of the subject of elementary education, the heavy additional recurring liabilities Government are assuming on account of it and the general interest taken in the development of Elementary Education, the following remarks by Sir Harold Stuart as to the Policy of the Government in this matter are contained in the Revised Financial Statement presented to the Legislative Council:—

"The goal we have set before ourselves is the extension of elementary education to the entire school-going population. The attainment of this ideal is, of course, beyond the resources of our provincial settlement, and the Government of India have recognised that the bulk of the funds for the financing of the new forward movement must come from Imperial sources. Anxious, however, to supplement Imperial aid as largely as we could from our existing provincial resources, we have closely scrutinized the normal development of our ordinary revenues and expenditure, and we find that by careful economy and without starving other services we can in present circumstances set aside a sum of two lakhs each year in arithmetical progression from our provincial funds proper to assist in the financing of this great undertaking. In the current year we have provided this amount for additional recurring liabilities and in the budget for the coming year we have added a further two lakhs. But as I have said before, the bulk of the money has to be found by the Government of India and the rate of future expansion must depend directly on the amount they can give us for the purpose. In the current year the portion of the recurring expenditure which they have supplied is 6.65 lakhs and for the next year they have given us an additional recurring subsidy of 6.80 lakhs the greater part of which will doubtless be for this purpose, though at present details are not forthcoming. The prospects of future Imperial increments of subsidy

are not so certain as we could wish, as the Government of India refrain from making a definite pronouncement as to future instalments. We can only hope that the Government of India will find themselves in a position to make regular recurring additional grants. I must confess that I could wish the position were less indefinite.

"I shall now say something about the lines on which we are incurring additional outlay on the improvement and extension of elementary education. The policy being pursued is to increase the supply of teachers by the offer of larger salaries and by increased facilities for training to secure the improvement of existing schools and to open new schools in both urban and rural areas. While it is essential to go on opening as many new schools as possible in places where no school exists, we find that it is very desirable to place on a more permanent footing a number of the ephemeral teacher-manager schools, many of which are at present almost useless and are established one year and shut the next. We find a widespread desire throughout the Presidency on the part of both teachers and parents that these schools should be taken under Board management.

"With regard to the opening of new school maps are being prepared showing for each taluq the area supplied by each existing school, and lists are under preparation of villages where schools should be opened as soon as possible. It is found that more rapid progress can be made by extending gradually outwards from existing schools rather than locating new schools in distant centres where the advantages of education are not yet fully appreciated. Every school newly opened under Board management is ordinarily provided in the first instance with one teacher and others are added as necessity arises and as funds permit, the number and scale of salaries following the recommendation of the Educational Rules. It is expected that during the current year about 1,700 new schools will have been opened by Local Boards and over 100 by Municipalities. The corresponding figures for 1911-1912 were 696 and 19,

"The inspecting staff has also been increased by the appointment of 48 additional Sub-Assistant Inspectors as a temporary measure of relief.

"The present policy with regard to the education of girls is to open schools for girls in as many places as possible where the population exceeds 5,000; in smaller places the so-called boys' schools are as a rule, mixed schools and every new boys' school opened, provides some girls with education in their early years.

"To ensure that this policy of improvement and expansion shall be carried out to the best advantage we have relieved Sir Alfred Bourne of his routine duties by placing Mr. Stone on special duty in the Office of the Director of Public Instruction to carry on whatever part of the Director's work can be made over to him."

NATURE STUDY.

THE study of any subject could be effected in two ways. The first is the method of learning it from what others have said or written about it. The second is the method of acquiring knowledge about it mainly by one's own efforts. Of these the former seems to be the more convenient one as the subject is more easily understood though the information obtained is of a second-hand nature. If knowledge be valued for its own sake it does not so much matter how we obtain it provided its utility is apparent. As the mere storing of the memory with a number of disjointed facts does not in itself comprise the development of one's faculties it is desirable to consider, while acquiring knowledge about a subject, the method of doing it also. Thus viewed, as every one of our actions is made perfect by regular and systematic practice, that method which employs our faculties most will be found to be the best fitted for developing our mind to the fullest possible extent.

Nature study, when conducted on right lines, offers wide scope for the realisation of the aim referred to above. Every one of our senses has to be brought into play in the study of nature. Taking any object in nature, for instance a bird, we could first observe its form, then handle it and draw a picture representing its shape, hear its peculiar melody and exercise our reasoning faculty as regards the adaptation of its structure to its habits. Whatever be the object, knowledge gained by its observation and handling cannot but be effective in appealing to our mind and making a deep and indelible mark therein.

It would be well for us to consider here what Nature Study means. It is not and cannot be a subject taught in the classroom as is commonly done at present. It is not a mixture of Physics, Chemistry, Physiology, Botany, Zoology, Hygiene and all put together. Nor is it a method of obtaining knowledge by elaborate scientific research or the like. Though the study of nature differs in different parts of the land the method is all the same. The only requisite in a student of nature is to wander about freely in the open air with his eyes open. He must be able to study every object that he sees from all points of view. He must be able to compare one object with another and note the contrast between them. His knowledge of the object will increase in proportion to the attention that is paid to it. Every minute of observation will discover new features in the object more interesting and attractive than before. "An eminent botanist was once asked the question how many plants he knew intimately. He answered with truthfulness that he did not know the full life history of any one plant, for the particular flower he

happened to be studying was so wonderful and its biography so absorbing that the study of that one individual drove the knowledge possessed of all others out of his head."

Among the objects that we commonly find in nature there are a few that we love and cherish and many that we disregard and condemn. The All-wise Creator gave life and being to every object in nature with a set purpose. Before characterising an object as useless it would be well for us to consider what place it occupies and what use it serves in the economy of nature. But for them human life would be intolerable. They are the mitigators of life's misery. They teach us good and noble virtues. They train us in patience and perseverance. The beauties of creation fill our hearts with feelings of awe and wonder and from them we learn the Grace and Majesty of the Supreme Being.

P. RANGANATHAN.

IN MEMORIAM.

To J. M. CRAIG, Esq., M.A., B.D.

To him no more the sun and moon can shine,
Our kindly earth its wonders great display,
No more—the sun in russet up his way,
The silvery orb to paleness thin decline,
The stars, of brightness reft, in sorrow pine—
This many a charming view of early dawn
No more shall kindle him, for he is gone!
His vesture does with dust to dust combine
There lies he low where all at last must go.
He held us near his heart in bonds of love
Who lived but yesterday, now is no more;
How close to us is He that is above!
So good a man must surely be God's friend,
Rejoice, not mourn, at him whom angels tend.

S. SRINIVASAN.

EDUCATION IN THE MAGAZINES. (INDIAN.)

Some Educational Ideals and Methods.

In the course of his address at the meeting of the Madras Christian College Associated Societies, Mr. S. Srinivasa Iyengar spoke as follows:

We have gained much by the present system of education. We have the residential system and I hear that your College has already five hostels and is likely to have a sixth. Corporate life is an outstanding feature of the new system from which I expect much. Another advantage is that increasing attention is paid to specialization. The system is not however without defects. I find more and more that tuition is imparted in Colleges by means of lectures by professors, rather than by reading; the student is made to listen to lectures in classes and he has plenty of home work. That I think is undoubtedly a mistake so far as India is concerned having regard to the nature of Indian intellects.

There has been a cry in various quarters that the newer race of students is not as religious and as reverential towards their superiors as the older generation of students. But I have certainly come to the conclusion that the newer race of students is much better than the race of students to which I have the honour to belong. There are some corrigible mental defects in the Hindu intellects which ought to be taken notice of earlier, so that the next generation might be trained in the proper way. The Hindu intellect versatile, acute, subtle, refined if they willed, is lacking in all the qualities of fairness, energy, accuracy, etc., which make for originality, the habit of looking below the surface of things in place of the habit of taking things for granted. To remedy this we should make some scientific training as part of our compulsory system from the very earliest class.

In the early days one feature of the Hindu educational system was the *Ashrama* system. But it had limitations; firstly, it was confined to a particular class, namely, to Brahmins; secondly the *Ashramas* were isolated, an interchange of ideas was impossible; thirdly, they made every branch of knowledge religious, part of a revealed religion—formal and technical and unalterable or alterable only by quibbling.

For our progress we should go to Western methods of research. There is no use of boasting of the glorious past. We should constantly try to acquire some branch of science, for it is only in that way that we could secure habits of energy, method and accuracy. We should make up our mind therefore to have some judicious combination of our ideals with the Western ideals and we must reject everything that hampers our progress.

The Vernaculars in Schools.

Indian Education for March contains an article on this subject by Mr. P. C. Banerji. The following extract will be interesting especially now when the subject is engaging the attention of all educationists in this Presidency:—

Much more stress needs be paid to the teaching of Vernaculars in our schools, than is at present done. One is almost tempted to say that the vernaculars are neglected in the school, though if the study of vernaculars is properly conducted, it would afford no less mental training than the teaching of English, and would also help the study of English. Moreover a study of the vernacular is by itself important, and not much less useful than the study of English.

1. Is it not true that our boys should first learn to write and express their thoughts in the vernacular correctly and lucidly?

2. Should not the vernacular be the first means to give them correct ideas about general things?

Both the above questions require an affirmative answer, but in practice we know that the teaching of the vernacular is left over to some antiquated Pandits or Moulvies, many of whom care more for florid style than for thought and expression, and what happens is that composition in the vernacular is something unheard of except rarely.

To look for arrangement or logical sequence in the vernacular composition of even a Matriculation candidate, would be to search for pearls in a pond. Indeed it may sound disgraceful but it has to be said that some Matriculates are unable to write an application in the vernacular, say in Urdu or Hindi, though they have been studying Urdu or Hindi in the school.

As for the general information—scientific, historical, biographical and geographical—to be gained through vernacular books, it may be surprising, but it is true, that the school library

contains not one book in Urdu, Hindi, &c., for boys to read, though it cannot be said that there are no suitable books for boys in these languages. What is more pitiable is that it cannot be said that the readers in Urdu, Hindi, &c., provided for the boys are suitable in style and matter for boys, and provide that amount of reading and information which the boys require.

What should we say of a school boy who does not know anything about a thermometer, a barometer or a balloon or about malaria or cholera? Should not this information find place in the vernacular books?

For the style and subject-matter chosen in the vernacular books prescribed for our boys what can we say when they allow—say in the Urdu Matriculation course of the United Provinces—highly exaggerated and hyperbolic style, and choose sentimental poetry and love poems for the reading of boys and girls. I shall not speak of the teachers whose task is to expound these love matters, but only ask of what usefulness these far-fetched fancies and exaggerated notions of the old poets will be to boys. It may be that Urdu is rich in love poems and hyperbole may be the favourite device of some of its writers, but there is no excuse for these when better things are available, which should be set as examples to boys.

Education for Chiefs.

The following is a portion of H. E. the Viceroy's speech at the Chief's Conference held at Delhi on the 3rd instant:—

I have no wish to fetter, in any way, the action which you may consider it desirable to take in the education of your sons, but I cannot refrain from expressing the opinion that no scheme for higher education, which is not framed with a strict consideration for the after career of the students and the openings presenting themselves to them, can ultimately prove successful. This is no narrow

ideal. Whether the student be the son of a Ruling Chief or merely a noble, the career open to him may be one rich in possibilities of good, and the qualifications required of him of a somewhat special nature are exceptionally wide. These qualifications can only be acquired by an education conducted on distinctive lines comprising firstly, a general development of the faculties; secondly, physical culture upon the best lines; thirdly, a study of the principles and practice of administration, and lastly, and in my judgment, the most important feature, a religious upbringing calculated to produce a character inspired by high ideals and by an unswerving purpose towards the achievement of what is right. It is for you, gentlemen, assembled in Conference, to consider the lines in greater detail. I desire only to impress upon you the importance of keeping in your discussions a watchful eye upon the end to be attained, and of permitting no doctrinaire opinion to prevail over the practical aspects of the matter or to obscure the well-defined idea which will shape your conclusions. It is clear that any scheme that may be eventually adopted will entail considerable expenditure, but in that case I am confident that the support which has been so generously accorded in the past to existing institutions by the Chiefs in whose interests the Rajkumar Colleges are maintained may be expected on this occasion with a no less liberal hand. I desire to add that the object which you have in view has the warmest sympathy of my Government, and if the proposals, which you make, meet with their approval they are prepared to recommend to His Majesty's Secretary of State an annual subvention, to the institution, of half a lakh of rupees.

Industrial Education.

The following extract from the speech of His Excellency Lord Pentland at the annual meeting of the Victoria Technical Institute will prove interesting:—"This country will be the poorer for

the loss of all the inherited skill of which the contents of this hall are some evidence. That reminds me of what we have gone through in Great Britain. We have gone through what is often briefly characterised as an industrial revolution. While that revolution with the inventions which facilitated it gave rise to steam, electricity and all the rest of it—while those changes have added immensely to the material comfort and standard of life which is possible, which so far as we can see, would have come much more slowly than it has come without those great changes due to these inventions, still this industrial change has had its disadvantage that it has left almost no trace in many parts of the country, of native home industries of our own country. It is only during the last generation that efforts have been made in different parts of England, in Scotland, in Ireland and Wales to revive those home industries. Even the utilitarian objector is obliged to admit that in the face of all the mills and factories with which the country is studded there is room and there is function left for the hand industries. While that is so in Great Britain, surely it is even more so in India. In the first place, the obliteration in industries has not been so general or so complete. There are still much more numerous nuclei of those industries which may be developed, and in the second place there is a character about India which is native to India alone not only in its vivid colouring in its scenes, in its sky, and the life of its people, in their festivals, in their family, in their village, and their religious life—all these must enter and influence the customs so that the productions of this country are interesting treasures and must be precious, and we must do our utmost to preserve them. In that I think is the strength of the appeal addressed to Indians especially, but it is an appeal which I am sure everyone will feel addressed to himself and herself and we must do everything that we can to restore to it the prestige of the art industries of India."

School Education: Some Reflections.

Boys who have received the School Leaving Certificate are decidedly abler than the Matriculates as far as their general knowledge is concerned, and in my opinion general knowledge is the only true test of a man's ability.

But speciality has got its own advantages and they can not lightly be passed over: to be able to learn a passage intelligently and to master it thoroughly is the sure preparation for the understanding and explaining of other passages of an equal or even greater difficulty.

But as the tendency of the University is towards encouraging the exercise of the intellect rather than loading the memory with facts of the text-book, it is at once wise and advantageous to impart to the students such general education as may enable them to express their ideas logically and plainly and with a certain degree of appropriate effectiveness and emphasis. Now we have to see how this can successfully be achieved and we cannot do better here than put down the following suggestions:—

(1) Boys up to class V should be required to express their ideas in their vernacular on such familiar objects as a black-board, a chair, a dog, a banyan tree, an Indian bazaar, a tiger and a railway station.

(2) Teachers should address their students and receive replies from them in English from Class VI upwards. The students of Class VI, VII and VIII should be required to write short essays on such familiar subjects as have been mentioned above. Boys should be required to rehearse the dialogues given in their books, and to act the chief characters of the important dramatic chapters of the text book. They should be asked to reproduce in their own words and in their own defective but simple English a lesson taught by their teachers.

(3) Easy passages from the text-book and other books of equal difficulty should be dictated

to them every alternate day and mistakes should be carefully corrected and pointed out to them. This system of teaching passages from books should extend to Classes IX and X as well.

(4) The students of Classes IX and X should be required to make synopsis of the important chapters of their text-books as well as their histories.

(5) Conversation should be held in class between the students and the class teachers at least once a week. These conversations should be such as are calculated to both enlarge the mental horizon of the students and to supply them with a fairly large stock of useful words and phrases.

(6) A debating society should be formed in which lectures should be delivered and discussions held on ordinary but useful topics. A magazine should also be started in every school in which contributions from students should be published after necessary corrections and improvements have been made by the class teacher or the editor.

(7) Great stress should be laid on their handwriting and the method of answering questions. Elliptical answers should never be accepted.

(8) Above all things, great heed should be paid to the improvement of their powers of speech and composition, for these latter two are in my opinion the veritable *terminus ad quem* of a University education.—*An Educationist.*

WANTED:—Annotated editions of English authors or Notes only published by the Old Journal of Education Office, Madras. Also, back annual volumes of the Journal. Write, stating price and particulars to the Librarian, Native General Library, Bombay.

(FOREIGN.)

Pupil and Teacher.

"Paidocentricism" is an ugly hybrid introduced by Dr. J. Stanley Hall, the well-known American writer on Education, and explained by Professor Adams in the *Educational News* of January 31st. It means that view of education that places the pupil in the forefront in all educational theory and practice. Its neglect is found where the teacher rejoices in talking and teaching without sufficiently considering if the child is able to listen and learn. The teacher's aim should be to secure that every bit of teaching produces its appropriate bit of learning.

"It is remarkable," says Professor Adams, "how seldom teachers give the pupils any help regarding how to set about learning. Quite commonly the only help given is the bald instruction 'For to-morrow prepare the disjunctive pronoun, or the theory of indices, or the Gulf-Stream.' A boy who had never drawn a map was told by his master: 'Draw a map of England for next Wednesday.' The boy worked according to his lights. These showed him that the map in his atlas was divided up into little rectangles. He took these to be the units of construction, and worked up his Map rectangle by rectangle, producing a drawing that had some at least of the qualities of a patchwork quilt. The teacher complained with some vehemence that he could not understand how the boy could be so stupid, and by this complaint proclaimed his own professional incompetence. It is his business to understand such things."

The Efficient Teacher.

This is an extract from the address of Mr. Rhodes as President of the Section of English Teachers, State Teachers' Association, Buffalo, who said:

"The efficient teacher has not arrived. Many seem to think that 'anybody' can teach English

and 'anybody' too often gets the opportunity. The teacher of English must not only have a personality, but he must be a real person and have the right kind of a personality. He must be a prophet, a seer, an inspirer of his pupils. No man can drive or beat or coax or drill or nag the love of literature into the heart of an unwilling pupil.

"The efficient teacher must be withal a sane and wholesome optimist, which implies being an equally sane and wholesome idealist, for to be an inspirer, the teacher's greatest privilege, one must possess these qualities.

"It is not enough to get our pupils to pass and so leave us for the world or for college. The only adequate results of our work are an appreciation of literature and a mastery of the language."

The Teaching of Literature.

Sir Arthur Quiller-Couch, in giving his inaugural lecture as King Edward VII Professor of English Literature in the University of Cambridge, admitted that there lurked in the public mind a doubt whether English literature could be taught in the way that other school subjects are taught. He said that the study of English literature could be promoted in young minds by an elder one, and that their zeal could be promoted, their taste directed, and their vision quickened. If we may summarize we may say that Sir Arthur urged the necessity of studying the masterpieces with minds intent on finding out just what the author meant, and that commentators should not be allowed to obscure the direct vision of the author. He made some severe allusions to the "endless stream of little school books, all upside down and wrong from beginning to end." The difficulty is, of course, well known and always present. The teacher does not feel that he is doing his work unless he is explaining all the time, and the pupils have no chance of studying the author.

The Comma.

Maurice Winter Moe, High School, Appleton, Wis., writes in *The English Journal*:

The proper use of punctuation, the comma in particular, is one of the first things to be taught in the high-school course, for if the pupil does not learn it at this stage he never learns it thoroughly, and his work is always characterized by a lack of readability and clearness, or by actual ambiguity. But the common method of teaching the comma is almost sure to produce in the pupil's mind the very confusion that ought to be cleared up. The standard rhetorics all contain a list of comma rules, varying from ten to twenty-five, all thrown together without apparent order or reason, and expressed in the "thou shalt" form that gives the impression of an immutable decalogue delivered from some pedagogical Sinai. "Take the rules for the comma for the next lesson," says the teacher, and Johnnie laps up the rules, with an example for each, which he may or may not understand. But in his composition that week he leaves a noun in apposition uncomma-ed with blissful unconcern, and when it returns to him blue-penciled, he guesses that a comma or two is needed and inserts them—but goes on leaving his nouns in apposition to roam at large. Now let us see if we cannot teach Johnnie just what kind of an implement this little broom is, and how to hold it properly and make the dirt fly with it.

The first step is to be sure that the pupil coming up from the grades knows thoroughly—as he ought—the names and uses of the various parts of speech and of the various members of the sentence. For instance, he must know a participial modifier, know at once whether it is restrictive or merely parenthetical; he must know clearly the difference between a relative clause that restricts a noun or pronoun in the sentence and one merely thrown in for explanation; he must recognize an adverbial phrase or clause at sight, so that when he uses one out of

its regular order he will set it off as naturally as he writes "c-a-t." Without this knowledge he is merely learning sets of words without knowing just what they mean.

Next, he must come to see just what it is that the comma does in the sentence. A typical unpunctuated paragraph on the board will make him realize how colourless and hard to read our language would be without commas; how they are needed to *stand between* words or phrases to keep them from running together in a confused mass, and to *partition off* certain parts of the sentence to give them emphasis or show their relation to the rest of the sentence.

Modern Language Teaching.

How the fullest, completest, and most liberal education may be given by means of Modern Languages is the subject of a paper by Mr. Stanley Leathes in a recent issue of *Modern Language Teaching*. A co-ordination of language, literature, and history is what he aims at—"language is the key to literature, literature illuminates history, history explains literature,"—and of course geography is necessary to the comprehension of both history and literature. Too often, however, history is treated as a separate subject.

What can examiners do in this matter, Mr. Leathes asks: "Should our tests for boys of eighteen or nineteen still be tests in language alone, in translation, composition, and conversation, or can we be more ambitious?" The literature paper to be answered by text-book knowledge finds no favour. "The test which I should like to impose would be a general paper on the History of France say from Henry IV to Louis-Philippe, and another on the history of Germany from Frederick the Great to Bismarck. These should not be papers which could be answered from a text-book of history or a text-book of literature or both together; but papers intended to test the first-hand knowledge and intelligent study of the literary masterpieces of the period."

A Glory in Browning.

Mr. Norman Gale writes in "Great Thoughts":

"There is no poet fit to be compared with Browning who of all poets is the man most able to purify while stimulating the heart that is burdened by an overwhelming passion. Be it constantly remembered, Browning is the most exacting of immortal consplers. He sullied no page, and he can tolerate no sullied heart. If he is to walk with us, converse with us, allow us to lean upon his experience, he demands of us to show him our flame, to prove it clean, to convince him that it is fed by no transitory fuel. As soon as he is assured of our right to be in his company, with what hammer-strokes of valiance he beats upon our breasts! Look where we may in the records of literature, we shall find no other example of vivid largeness worthy to be compared with that given to the world by Robert Browning not even in the highest expression of the Golden Age of the Greek mind? No. Not even in the highest expression of the Golden Age of the Roman mind? No. Not even in Shakespeare? No. Since the human brain has a superlative genius for variation, it would be daring of me to assume that in days yet to be born there will not be heard a voice even more masculine and awakening than the voice of the poet in whose breast the tides of feeling, with salt enough in them to wake them saluting, ran in fine abundance towards the coast of love; Bright-eyed, bright-hearted, bright-souled, this poet had no time to spend on the weakling. For his disciples he needed men with sinews strong for loyal resistance, not men in whom flabbiness appears while as yet they are only half-way to the second obstacle. If he had been valorous in difficulties only because he was aware that in the end victory must reward his efforts, then he would have been less the heroic spirit by whose example we can be helped across wilderness of almost indescribable emotion. But he taught us the desert as well as the oasis, and he charged lovers to be illustrious in defeat. He sang upright carriage for the vanquished; he sang the unshaken lip; he sang the heart valiant enough to lose all and yet remain unroused. To him the moment of downfall was the moment for struggling to rise."

Geography in the Class-room.

Mr. E. C. Hodgkison, B.A., Assistant Master at Crewe County School, contributes an interesting article on Geography Teaching to the "Educational Review." He says:—

Much of the indefiniteness that has characterised the teaching of geography seems to have resulted from the fact that so many have taken up the subject as an after-thought, or regarded it as merely accessory to more important subjects. To the Arts man geography has afforded an opportunity of pleasantly retailing many interesting facts, he has been inclined to devote excessive attention to the human side. The Science man has been inclined to treat the subject as a branch of geology, the mathematician as a branch of mathematics. The truth of the matter is that successful treatment demands the combination of a variety of methods.

This will be readily acknowledged if the aims of the study be considered under the following heads:—

(1) The earth as the abode of man, including the physical conditions that have determined the present state of development in various countries, and a general outline of the regions of the earth.

(2) The representation of the whole or of parts of the earth's surface.

(3) The earth as one of the heavenly bodies.

The teacher is fitted for the work outlined above by the mastery of such books as Huxley and Gregory's *Physiography*. Knowledge of the home district may be sought in the Cambridge County Histories or other trustworthy works. Every teacher should see the *Geographical Journal*, the monthly publication of the Royal Geographical Society. An excellent example of what may be done in the study of a special district is seen in the number for November 1912, which contains an admirable study of the Tyne region.

For the proper treatment of other countries a wide course of reading is necessary. All kinds of books of travel should be read as well as books of which the following are types: Kinglake's *Eothen*, De Quincey's *Revolt of the Tartars*, Gautier's *Voyage en Espagne*, Heine's *Harzreise*, Maurice Baring's books on Russia. Pictures, post-cards, and lantern slides should also be used. Some pupils often possess knowledge of a particular county, and they should be encouraged to tell what they know to the class. It may be found useful to give a pupil a particular district to study, recommending what is to be read, and then to allow him to talk to the rest of the class out of the fulness of his knowledge.

THE UNIVERSITIES.

MADRAS UNIVERSITY.

With reference to the vacancy on the Syndicate caused by the retirement of the Hon'ble Mr. Justice P. R. Sundara Aiyar, B.A., B.L., it is notified that the same gentleman has been duly re-elected as a member of the Syndicate.

Recommendations of the Syndicate.

At a meeting of the Senate held in the Senate House on the 7th instant, the recommendation of the Syndicate, that certain gentlemen who had been recently appointed Ordinary Fellows of the University be assigned to the Faculties of Arts and Law, was approved.

The recommendation of the Syndicate for exempting certain students for the University Examinations from the production of attendance-certificates was granted.

Taking Degree in absentia.

Rev. E. M. Macphail then moved to insert the words "or who from some unavoidable cause is unable to be present in person" in Regulation 68 after the words "at the time." Regulation 68 runs thus:—"A candidate for a degree who is not resident within the territorial limits of the University at the time or who is precluded from appearing in public, may, with the permission of the Syndicate and on payment of a fee of Rs. 10 be admitted *in absentia* to that degree at the annual Convocation in November or December."

In moving this proposition he explained the object of taking degree *in absentia*. Sometimes a candidate might be inside the territorial limits but might not be able to come and attend the Convocation owing to illness or some other cause. To meet those conditions it was necessary to alter the Regulations. At the same time in order to prevent people from fancying that certain causes were unavoidable they should raise the amount from Rs. 10 to Rs. 25. Thus there would be a substantial money payment by persons who were taking degree *in absentia*. He would therefore move first that portion of the proposition which was put to the meeting and carried. Mr. Middlemast seconded the motion. Mr. S. Srinivasa Aiyangar moved that the clause "or who is precluded from appearing in public" be omitted.

Rev. Macphail then moved that Rs. 10 be altered into Rs. 25 in the same Regulation. He said that in order to avoid the possibility of a large number of people taking degree *in absentia*

a substantial pecuniary charge should be levied. Then the privilege of taking degree *in absentia* might not be abused. There was a tendency for people to say that certain causes were unavoidable, that they could not come. If it was worthwhile to take degree, let them pay a good sum. Rev. Father Sewell seconded the motion. Mr. S. Srinivasa Aiyangar moved that Rs. 25 be reduced to Rs. 15. He said he was against the enhancement of fees altogether. In case the majority of the House was inclined to raise it he proposed that it should be raised only to Rs. 15. Mr. Natesan seconded the amendment. Mr. C. P. Ramaswamy Aiyar, Sir V. C. Desikachari, Mr. Ramanuja Chariar of Pachaiyappa's College, and Mr. Ramanuja Chariar of Maharejah's College, Vizianagrum, were all against the enhancement of fees. The amendment was put to the meeting and lost.

The substantive proposition was then before the House.

Mr. Justice Sundara Aiyar said that the reason that actuated the Syndicate to raise the fee was that the Syndicate had to decide whether the cause put forward by candidates was proper or not. He asked the gentlemen who opposed the motion, to consider whether it was an easy thing to decide whether the causes put forward by various applicants were unavoidable or not. The object was to fix a figure which would be sufficiently heavy to induce people not to make vain excuses. It was the desire of the Syndicate that as many people as possible should attend the Convocation. A fee of Rs. 25 would not be excessive and would be a sufficient check on people who would otherwise absent themselves without good grounds. It was difficult to say what exact figure they should fix. He did not see how Rs. 15 would be better than Rs. 25.

Dr. Bourne pointed out that if a candidate was unable to come and take his degree in a certain year he could wait till the next year and there was no charge for that. And further the fee was not exactly as a fine. It was a payment for a distinct privilege and for convenience. It was usual in all Universities.

The Hon. Mr. T. V. Seshagiri Aiyar said he could not understand how the fee could be levied in consideration of the Senate deciding whether the cause stated to be unavoidable in a particular case was so or not. He was of opinion that Rs. 10 ought to be sufficient. The Hon. Mr. V. S. Srinivasa Sastry was also against the raising of this fee.

The Resolution was put to the meeting and carried.

Attending the Convocation.

Mr. Macphail then moved to amend the following Regulation (68):—

Candidates for degrees must, five clear days before the day fixed for Convocation, inform the Registrar in writing of their intention to be present. No person shall be admitted to the Convocation who has not thus sent in his name to the Registrar. Mr. W. J. Prendergast seconded the motion which was carried.

Licentiate in Medicine.

Lt.-Col. Giffard moved to alter Regulation 252 relating to the examination for Licentiate in Medicine and Surgery by not requiring candidates who had passed in the Physical Science or Natural Science Group of Part II for the degree in Arts of this University to pass in any of the subjects laid down for the first examination in which they might have already passed at the examination for the degree. The proposition was carried.

University Lectures.

Mr. Justice P. R. Sundara Aiyar then moved that the list of University Lectures proposed for the Academic year 1913-14 submitted by the Syndicate for sanction under Regulation 394 be sanctioned by the Senate. Mr. B. Hanumantha Rao seconded the motion. Mr. Ramanuja Chariar said that it would have been well if the Syndicate had arranged for a course of lectures on the history of the Telugu Language in which candidates for the B. A. Degree Examination Pass Course had to be examined. There was no book written on the subject yet.

Mr. Natesan moved that the matter be referred to the Syndicate for reconsideration. In giving his reasons for so asking he said: From a careful study of the syllabus laid for the Honours Course and of the names of the gentlemen selected to lecture upon subjects on behalf of the University, he found that some of the gentlemen were teaching the identical subjects in colleges for which they were either paid by Government or by private bodies according as the Colleges were Government or private. There were certain subjects which ought to be taught by inter-collegiate lectures and there was no payment for the same.

Mr. Ramalinga Reddi said that the Professors were giving University lectures but not lectures in a private capacity.

Mr. Natesan then pointed out some more Professors came under that category—Professor Mackintosh and Professor Crawford.

The Vice-Chancellor said that it was admitted that those lectures to some extent covered the

grounds of subjects taught by some of those Professors in classes.

Mr. Natesan said that such a state of things should not be allowed to go on and that the matter should be referred back to the Syndicate for reconsideration.

Mr. Justice Sundara Aiyar explained that the desire of the Syndicate was that the University lectures should be of a very advanced nature, not merely lectures which would be delivered to students studying for Honours Course. Who would be able to deliver lectures except those Professors who were teaching the subjects? The intention of the Syndicate was that the lectures should show special research. The object of such University lectures was to stimulate research on the part of gentlemen who were devoting their lives to the teaching of particular subjects. He fully believed that the lecturers would make an earnest and honest effort to deliver lectures higher than ordinary lectures.

Mr. Mark Hunter explained that the lectures were to be delivered out of ordinary college hours and they could not be provided for in the inter-collegiate course of lectures. There were extra lectures altogether outside ordinary college hours and the Professors had the right to claim remuneration for the same. If the Senate should say that they had no right to claim remuneration, he would protest against it. Rev. G. Pittendrigh also pointed out that the lectures to be delivered by Mr. Crawford were extra lectures altogether.

Prof. B. Hanumantha Rao seconded the Resolution which was put to the meeting and carried.

Position occupied by Languages.

Mr. Mark Hunter then moved for adoption of the Report of the Committee of the Senate appointed on March 2, 1912, to consider and report upon the position occupied by languages other than English in the various courses of study and to frame and present to the Senate any proposal for alterations in the Regulations that may be considered desirable in order to ensure more attention being paid to such languages.

The following were the Resolutions adopted by the Committee which the Syndicate placed before the Senate:—

(1) That it is unnecessary and undesirable to recast the existing general scheme of courses and examinations so as to render the further study of Indian languages compulsory for all

Intermediate or B.A. students, or for any group of such students.

(2) That no real improvement in language studies is likely to result from such modification of the general scheme.

(3) That it is unnecessary and undesirable to modify the existing Regulations for Part II of the Intermediate course examination.

In moving the Resolution Mr. Hunter made a speech in the course of which he said :—

"The Committee after inviting opinions from the affiliated Colleges, and after a very full discussion, resolved by an overwhelming majority, that it is not desirable to extend the compulsory principle, since as the majority strongly hold, the study of Indian languages would be much more likely to suffer from, than benefit such extension.

"This conclusion the Committee invites the Senate to adopt. If it be adopted the Committee will then be free to consider how language studies may best be promoted on the optional principles, and though it would be foolish to minimise the difficulty of the problem, we do not doubt that methods, really effectual, may be discovered and applied. If, however, the Senate rejects the Committee's Report, the Senate will then be confronted with another question—a question which scarcely came before the Committee at all. If the Senate concludes that the language course will benefit by the adoption of Mr. Seshagiri Aiyar's proposals, we will then have to consider whether the gain to languages will be sufficient to compensate the loss which other subjects individually—which the course taken as a whole—may sustain; and this, I would impress upon the Senate, is a very serious matter. You cannot simply thrust an additional compulsory subject into the courses.

"Undoubtedly, it is necessary for the University to encourage the study of Indian languages—including the vernaculars—in another way and with a view to other ends. We have to encourage the study of the literatures on rational principles and the study of the languages on critical lines. This the Committee believes can best be effected through the optional courses. We are told that the optional system had broken down, that scarcely any student has elected or is electing to take the optional language courses. This complaint, we found, on enquiry, to have been greatly exaggerated. The number of students now taking one language or two languages in group III of the Subordinate Course is 771, or nearly a fourth of the total number of students taking the group,

and nearly a seventh of the total number taking the course. Some of those students no doubt are studying European languages, classical or modern; but in the great majority of cases the languages studied are Indian languages.

"These figures, as the Committee thinks are, for a beginning distinctly, satisfactory. Already an appreciable number of students have elected to study Indian languages from personal taste and preferences; and in the Committee's opinion there is more hope for the future of such studies when 12 or 15 per cent. follow them freely from personal choice than there would be if 100 per cent. studied merely on compulsion.

"On all sides, we are told, that the language courses do not attract because they are taught by Pandits whose methods of teaching are uninteresting, uncritical, obsolete and bad.

"In the face of the evidence, it seems to me, that the Committee would not come to the conclusion other than that arrived at, viz., that the University cannot, with any sort of justification, compel all candidates for a degree to pass through courses in which the methods of study and instruction can still fairly be described as uninteresting, uncritical, obsolete and bad. Moreover the system of compulsory Pandit-conducted courses has been abundantly tried—we have had many years of it, and it is seriously open to question, and have been abundantly found wanting. We have as the final result of many years of compulsory Pandit courses, little or nothing to show. There is therefore small hope that what has proved so signal a failure in the past will be productive of anything but failure in the future.

"I move that the report of the Committee be adopted." Mr. G. V. Appa Row seconded the motion.

Mr. Venkataranga Row then moved that the Report be rejected as *ultra vires* as it was not in accordance with the terms of reference. The Report was altogether different from what the Committee was asked to report.

The Vice-Chancellor ruled the motion in order and called Mr. Seshagiri Aiyar to move his amendment.

The Hon'ble Mr. Seshagiri Aiyar then moved the following amendment :—

That, in Agendum No. VI, the motion be amended by the addition after the word 'adopted,' of the following words:—'subject to the modifications':—

(a) That, in the opinion of the Senate, it is necessary that the study of Indian languages

should be made compulsory in the Intermediate Course.

(b) That, in the opinion of the Senate, it is further necessary that the study of Indian languages should be made compulsory in the Pass Course of the B.A. Degree examination.

In doing so the Hon'ble Mr. Seshagiri Aiyar said that the whole compulsory system with regard to vernacular languages was not a signal failure in the past as was remarked by Mr. Mark Hunter. He hoped that the opinion of the Committee would not weigh with the Senate. It was not a representative Committee. Certain names which were not at first mentioned were subsequently added on. They were persons who gave their opinion in a definite manner. The inspiration of many people comes from the literature of the country. The interests of those people were not likely to be advanced by the study of cheap literature such as novels and other books now written in modern prose. He was aware that a large number of Indians had voted in favour of the Report. He would ask them to reconsider the position of the vernacular literature of the country if the languages were not made compulsory. It might be very well for a foreigner to acquire a sort of knowledge in the vernacular languages by the study of cheap literature. The children of the soil should acquire a sound knowledge of the vernaculars by the study of books of approved merit. An Englishman would not ask his children to read some novels and acquire some knowledge which would enable them only to read and write with fluency and ease. Would he not ask them to read Milton, Shakespeare and Chaucer. The curriculum should not be burdensome. At the same time they should see that the country was not denationalised. It was absolutely necessary that there should be compulsory vernacular in the Intermediate.

In seconding the amendment Mr. C. P. Ramaswami Aiyar referred to the numerous complaints made against the Secondary School-Leaving Certificate system which it has been asserted fails adequately to insist on the compulsory aspect of vernacular education, and the existing University courses. At no stage in the University course, he said, need a candidate necessarily study any of the vernaculars or except so far as is necessary for the Intermediate composition and above the Matriculation standard even if he decides to study one of the vernaculars he can only do so either along with certain specified subjects or with a classical language. If under the old scheme the Government of India had to point out that the neglect of the languages of the

country by the ordinary University graduate of the present day is notorious, we might well wonder what the results of the new system would be on the development of vernacular studies. It appeared to the Government of Madras in 1906 that if those who have secured a University education are to do the best for the country with the education they have received, it was imperative that they should preserve a sound knowledge of the vernaculars.

The Committee of the Senate was appointed in order to focus educated public opinion on this subject. But the procedure adopted by them had been most unsatisfactory. The Committee in formulating questions issued to affiliated colleges seemed to have committed the initial error of mistaking the effect for the cause. To take one particular instance the Madras Christian College had 318 students in the Intermediate classes for the year 1911-1912 and 352 for the year 1912-1913 and of them, though a majority seem to have selected vernacular composition in preference to translation from a classical language yet the figures regarding group III proved that in this the most popular sub-division the vernaculars were really nowhere, only 33 students having selected any of the vernaculars. The obvious explanation was that whilst vernacular composition is considered easier than the mastery of a classical language yet having regard to the collections of subjects, in group III the languages are taken up in the large majority of cases for the simple reason that History and Logic go together more easily than History or Logic and one of the languages. Moreover by insisting on two languages as an essential for the B.A. Degree including one of the classical languages it was idle to expect that an Intermediate student would concentrate his attention on a vernacular.

On the main question the second-grade colleges by a large majority had declared that the compulsory study of vernaculars after Matriculation is both necessary and desirable.

In this state of opinion it was remarkable that the Committee should have arrived at the unhesitating conclusion that it was unnecessary and undesirable to overcast the existing general scheme of courses and examination so as to render the further study of Indian languages compulsory for all Intermediate or B.A. students.

On the whole the Committee had not founded its opinions on any definite or unmistakable data and had not even proceeded consistently on the basis of agreeing with the consensus of opinion of the colleges. In the first place the Committee failed to keep prominently before its mind that it

was appointed to frame and present to the Senate proposals for attentions in the Regulations that might be considered desirable in order to ensure more attention being paid to vernacular languages. Such a Committee so appointed in the language of the lawyer, had no jurisdiction to pronounce its complacent benediction upon the existing system. It came into existence to remedy an evil that was felt and it did not fall within its purview to say that there was no evil at all.

Rev. Macphail in opposing the amendment said that the study of Indian languages was already compulsory upon almost all candidates in the Intermediate course. Part II (composition) of the course for the Intermediate examination was compulsory. He did not understand what was meant by Mr. Seshagiri Aiyar. How could one study the composition and yet did not study the language? How could a person write a language well without knowing it well? People were now learning a great deal more by vernacular composition than by the old Pandit methods. The whole controversy arose from an attack upon vernaculars, when Government put in the Intermediate course compulsory Vernacular composition. A large number of people were up in arms against it. The whole attack was originally directed against vernaculars. It was rather late for them now to wring their hands. He had known several brilliant students taking up in the old Sanskrit system and they knew precious little of their own vernaculars. The present system was doing a great deal for the vernaculars. He would not go and ask his children to read Shakespeare or Milton. They could take up any English book and read it. Under the old system of compulsory vernacular languages, no student could understand one word of classical language without the Pandit coming to explain it. If that was the education given by Pandits it was of no use whatever. The same old thing continued from the lowest class to the highest class. They should not be guided by sentiments but should face facts. He was extremely sorry that English was a compulsory language in India. He would give freedom to every one to take up any language. It was better that 10 or 12 persons take up an earnest study of the vernacular languages than a lot of persons devoted indifferent attention to the same. All they wanted was to see good vernacular literature growing up. He was utterly opposed to taking the retrograde steps.

Mr. Cotelingam in opposing the amendment said that composition made the study of vernaculars compulsory. In the majority of the schools in the Presidency, more careful attention was

being paid to vernaculars than in the years gone by. Composition tested one's knowledge in a language. By the system of compulsory composition, vernacular education was bound to advance as years rolled on.

Mr. Justice Sundara Aiyar confessed that he as Chairman of the Committee was not altogether satisfied with conclusions of the Committee. At the same time the evidence collected by the Committee and the information he has been able to gather convinced him that things were moving forward fairly well. Even taking up the question of vernacular for the Intermediate course he would not dislocate the arrangement that had already been made. He was not present at the last meeting of the Committee. He thought if he had been present, perhaps he might have suggested that a passage for paraphrase might be added. But now after more information had been received on the subject he did not think it necessary to go further and press it just now. The Committee did not say nothing more could be done at any time. He agreed with the present Resolution and thought it was better for them to wait and see.

Dr. Bourne proposed that the meeting be adjourned till 3 P.M. on the 8th instant.

Sir Alfred Bourne.

At the resumed meeting of the Senate on the 8th instant, Sir A. G. Bourne, the Director of Public Instruction, wished to make a few observations. He said that they should hear both sides of the question. Whatever might be their opinion as educationists, there was the opinion of the people who spoke those languages. He was not at all sure if the Committee had as yet sufficiently dealt with the evidence before them. The answers showed there were difficulties due to want of standard, lack of terms or poverty of the language, difficulty of expressing Western ideas in the vernacular, inability to think in the vernacular and so on. The Committee had before it a mass of opinion that there were difficulties in teaching vernacular composition. They came to the conclusion that it was unnecessary and undesirable to modify the existing Regulations for Part 2 in the Intermediate Course. He did not know whether that meant that the words of the Regulations need not be altered. That might be so or might not be. It was quite clear that something should be done to improve Part 2. It might not be by altering the Regulations but by instructions to Examiners with regard to the books to be used—instructions such as were commonly and frequently issued by the Syndicate which would, of course, also have statutory power by being embodied in the actual Regulations. He would himself like to adopt the report of the Committee except one portion of it. The Senate should request the Committee to consider again, in view of the evidence before it whether by so arranging the Course in Part II they could not

secure a really efficient study of those languages to the extent or standard which was desirable to make compulsory on every candidate for the Intermediate Course. It was quite clear that although the composition might already be doing some good, it was not regarded very seriously. If two hours a week was all the time the scholars devoted to those languages, he was quite prepared to say it was not enough. Various amendments besides those of Mr. Seshagiri Aiyar had been put forward. Those amendments were an attempt to improve Part II of the Intermediate Course. The second question was whether the vernaculars should be introduced for all candidates who passed the B.A. Degree. That question was not touched upon in the meeting of the previous evening. He was rather in favour of introducing it in the Pass B.A. Course also by modifying the Regulations in a suitable way, similar to Part II of the Intermediate Course.

Mr. K. B. Ramanathan.

Mr. K. B. Ramanatha Aiyar in supporting Mr. Seshagiri Aiyar's amendment said he was not satisfied with the report of the Committee. The question of the position to be occupied by the mother-tongue should be satisfactorily settled. They must try to get from the Pandit all the good he could impart. They should improve him and not dispose him off in the manner the present arrangement seemed to dispose of him. If they made it impossible for students to learn the vernacular in the early stage, any amount of interest they might create afterwards would not make up lost opportunities. For composition purpose, familiarity with books was absolutely necessary. He would not also decry the study of modern novels in the vernaculars. The B.A. Honours Course should be so revised as not to make the Second Language Course a compulsory one. The second language question was in an unsettled condition and so they were obliged to be tinkering at this question till they could get a satisfactory state of things. In the matter under discussion the European gentlemen were out of court. The man who wore the shoe should say whether the shoe fitted him or not. It would not do to say that those who opposed the adoption of the report were guided by sentiment.

Mr. H. J. Allen.

Mr. Allen said that there were no text-books in vernaculars. Further a lot of money (30 lakhs) had been spent by Colleges in putting the new Regulations into force before one examination was conducted under the new Regulations. He asked the Senate if it would be reasonable to revise the Regulations again.

Mr. Azizuddin Sahib.

Khan Bahadur Azizuddin Sahib in opposing the amendment, said that if vernaculars were made compulsory, Mussalmans were likely to suffer. In the High Schools and Colleges there were no Munshis at all. Even if there were Munshis, they were most deficient. He would appeal to their Hindu brethren to induce their children to pay

more attention to the study of vernaculars. He was of opinion that the Committee was not attempting to stifle the progress of vernaculars.

Mr. V. S. Srinivasa Sastri.

The Hon. Mr. V. S. Srinivasa Sastri in supporting the amendment quoted figures to show how many students were taking up Indian vernacular languages in the Intermediate and B.A. Courses since the introduction of the new Regulations in the second-grade and first-grade Colleges and said that Sanskrit seemed to have gained very much. Under the present system they did not see a very large number of people taking to the study of vernacular languages with the enthusiasm which they would desire to see. There were only 8 Colleges in the Presidency that provided for Branch VI of the B.A. Pass Course. No College in Madras made provision for Branch VI—neither the Presidency College nor the Christian College. The way to better the condition of vernacular languages was not by doing away with the Pandits altogether. Unless one studied the classical books one would not be able to express himself with effect, power and beauty. It was his desire and the desire of others to put the second language in the place it once occupied before the new Regulations came. It might be that it was a matter of sentiment, but in that respect they could not be asked to forego their sentiment.

Mr. C. Ramalinga Reddi.

Mr. C. Ramalinga Reddi in opposing the amendment, said that the present system was much better calculated to promote the interests of vernaculars. The curriculum had very little to do with the number of students taking up a vernacular. There were more students taking Telugu. The compulsory system of vernaculars was not popular. The present system which encouraged Sanskrit learning could not be said to denationalise the country. The Telugu people were keen on social reform and wanted to popularise new ideas.

Mr. A. C. Pranatharthihara Aiyar.

Mr. A. C. Pranatharthihara Aiyar in supporting the amendment, said that under the present system students had very few chances to study vernaculars. It was one of the five optional subjects in the third group of the Intermediate Course. If they threw overboard all the vernacular literature, were they to wait for a completely new vernacular literature? The question was how to improve the present literature. If vernacular composition was compulsory, text-books should be introduced for compulsory study. Otherwise the whole curriculum was bound to be pulled down one day or other. On the cultivation of the knowledge of the mother-tongue, the good of a country depended.

Mr. Yakub Hussain.

Mr. Yakub Hussain said that the Committee left the question of classical languages severely alone. The study of classical languages was very important in the study of modern languages. The vernaculars could never develop if the scholars were

unacquainted with classical languages. Many Indian languages derived their strength and inspiration from Sanskrit. So did Urdu from Persian. If instead of vernacular composition, classical languages were made compulsory, the purpose would have been served better. The vernacular need not be made compulsory in the B.A. Course. In the advanced stage a student should be left free to choose subjects for studies. A classical language was unnecessarily grouped with a vernacular in the B.A. That made students fight shy to take those two languages. Vernaculars held a very important place in the making of an ideal Indian nationality. He would be the last person to oppose any measure for the advancement of vernaculars. The present resolution did not, however, help them much in that direction. The vernacular should be made compulsory in the High School classes.

Mr. G. Venkataranga Row.

Mr. G. Venkataranga Row in supporting the amendment, said that Indian Universities must be worked under Indian conditions. The Pandits were the makers of Indian literature of which the Hindus were proud and they were keeping it alive. There had been a remarkable growth of indigenous vernacular literature all over the country which had been the work of graduates during the last quarter of a century. They should aim at raising the height and broadening the basis of classical and vernacular languages.

Mr. K. V. Rangasami Aiyangar.

Mr. K. V. Rangasami Aiyangar in supporting the amendment, said both English and the vernaculars should be studied properly. The question was not whether vernaculars were receiving more attention now than before—was it getting adequate amount of attention in the various examinations? There was very little progress in the matter of vernaculars; equipment was practically very little in those languages. They should bring a constructive proposal for promotion of vernacular study. It was not desirable to get rid of Pandits even supposing they were once incompetent to teach text-books.

Mr. S. Krishnaswamy Aiyangar.

Mr. S. Krishnaswamy Aiyangar said that the study of a language should be pursued on rational lines. Two hours' composition was not the proper equivalent for an hour's work every day in the study of English language. The proposition of Mr. Seshagiri Aiyar did not mean anything revolutionary.

The amendments of the Hon. Mr. Seshagiri Aiyar were separately put to the meeting and lost by a large majority as many as 30 Europeans voting against on the second amendment.

Mr. Seshagiri Aiyar then moved the following amendment:—

"That the motion be amended by the addition after the word 'adopted' of the following words:—

"With the alteration that, in the opinion of the Senate, it should be made compulsory for all students selecting Group III of the Intermediate Course to take up the study of one language as one of the three subjects of the Course."

Mr. C. P. Ramaswamy Aiyar seconded the amendment.

Mr. Justice Sundara Aiyar.

Mr. Justice P. R. Sundara Aiyar said there was a good deal more to be said for this amendment than for the amendment which had been rejected. He did not propose to vote for the amendment simply because the information that they obtained after they had begun the inquiry in the Committee had convinced him that the time was not yet ripe for a change of the present system. His experience taught him to wait a little and see.

Mr. Allen pointed out that if composition be made compulsory there would be practical difficulty in arranging the time-table.

The amendment was put to vote and lost by 15 against 47.

Mr. S. Srinivasa Aiyangar then spoke on the original proposition with reference to para. 4 of the Committee's recommendations, viz., that it is unnecessary and undesirable to modify the existing Regulations of Part II of the Intermediate Course and Examination. He said that Vernacular and Sanskrit ought to be treated in the same footing as English. Having made vernacular composition compulsory the Senate should go further and prescribe text-books and they were concerned with Tamil, Telugu, Malayalam and Canarese in which text-books were available. Sanskrit composition should be enforced. He then proposed that the meeting pass on to the next business on the agenda, so that the Committee might go on with its further deliberations. The Committee had not concluded its deliberations on the subject. That being so, the Senate should not tie its hands for one year.

Mr. Justice P. R. Sundara Aiyar seconded this motion. He said that if the Committee's report were adopted, no adverse proposition could be brought up for a year. There was room for modifying some of the Regulations. That would be entirely in harmony with the main resolution of the Committee's work. A great deal of work had been done by the Committee but there was no necessity that the Senate should do something immediately thereupon.

Mr. Hunter said that the majority of the Committee would do nothing until they know the opinion of the Senate and until they satisfied themselves whether they were on the right track or wrong track.

The motion was put to the meeting and lost, a large body of Europeans voting against it.

The motion for the adoption of the Report was then put to the meeting and carried by 45 against 16.

Affiliation of Colleges.

The application of the American College, Madura, for affiliation in Group V for B.A., that of the Madras Christian College for further affiliation in B.A. Honours Course in Mathematics and that of the Central College, Bangalore, in Group II-B of the B.A. Course were granted by the Senate.

CALCUTTA UNIVERSITY.

Calcutta Universities Institute.

His Excellency received a deputation from the junior members of the Calcutta University Institute consisting of the following gentlemen:—Babu Sisir Kumar Bhaduri, B.A.; Babu Amulyaratan Chakravarti, B.Sc.; Bibu Nares Chandra Mitra, B.A.; Babu Panna Lal Mukerji, M.Sc.; Babu Prafulla Chandra Ghatak, B.A.

The deputation accompanied by the Secretary of the Institute—Babu Khagendra Nath Mitter, was introduced by Mr. Gourlay, Private Secretary.

Babu Sisir Kumar Bhaduri read a history of the Association for His Excellency's information. The deputation thanked the Government for the grant of 2 lakhs of rupees towards the provision of a suitable building for the Institute.

University Lectures.

At a meeting of the Senate held at the Senate House, Collegio Square, it was resolved that the undermentioned gentlemen be appointed University Lecturers in Geology for a term of two years:—Mr. J. Coggin-Brown, B.Sc., F.G.S. and Babu Hemchandra Das-Gupta, M.A., F.G.S., and that Dr. Prabhu Dutt Sastri be appointed University Lecturer in Sanskrit and Philosophy for a term of two years.

Serampur College.

The Senate resolved that the Government of India be moved to sanction the proposal that (in addition to the affiliation already granted to the Serampur College, it be further affiliated, with effect from the commencement of the ensuing session, to the B.A. standard in the following subjects:—English (Pass and Honours); Bengali; Philosophy (Pass and Honours); Sanskrit (Pass and Honours); History (Pass); Political Economy and Political Philosophy (Pass).

Chittagong College.

It was next resolved that in addition to the affiliation already granted to the Chittagong College, it be further affiliated in Physics to the B.A. and B.Sc. Pass standards, with effect from the commencement of the next session, provided that the number of students in each of the 3rd and 4th year classes do not exceed ten.

A new Centre.

Muzaffarpur has been appointed a centre for holding the Intermediate examination in Arts and the examination for the Bachelor of Arts degree with effect from the ensuing examinations.

ALLAHABAD UNIVERSITY.

A Faculty of Commerce.

A largely attended meeting of the Allahabad University Senate was held on the 14th instant in the Senate Hall, Dr. Sunder Lal, Rai Bahadur, C.I.E., the Vice-Chancellor, presiding.

Mr. Jesse proposed the addition of the Faculty of Commerce to the other Faculties of the University. At present commerce was "tacked on" to the Faculty of Science, he said, and the number of co-opted members to be elected by that Faculty was too few to enable them to give commerce representation. From conversation with members of the Arts Faculty he found that they were no more willing to look after commerce than the Faculty of Science. It therefore seemed to him that the only way out of the difficulty was to have a Faculty of Commerce. If, as he proposed, eight Fellows were placed on the new Faculty, they would at once have the power of electing two men as co-opted members who would be specialists in commerce and would be able to guide the University in the questions which arose in connection with the diploma, and possibly later on they would follow the example of Bombay and go on to give a Degree in Commerce.

Dr. Jha seconded the motion and after considerable discussion it was carried by a majority of votes.

Changes in Regulations.

In accordance with the provisions of section 20 of the Allahabad University Act, 1887 (XVIII of 1887), certain additions and amendments to the existing University Regulations, which have been made by the Senate of the Allahabad University with the sanction of the Local Government under section 25, sub-section (1) of the Indian Universities Act, 1904 (VIII of 1904), are notified for general information.

PUNJAB UNIVERSITY.

Prof. J. C. Bose's Gift.

Professor J. C. Bose has offered the whole amount of his honorarium Rs. 1,200 for the University lectures he delivered here as a gift to the University for promoting research work in the Punjab. He has suggested that a research scholarship of hundred rupees a month be given to a deserving student for one year. The Syndicate of the University has accepted the gift.

TECHNICAL EDUCATION.

TYPEWRITER TOPICS.

Position at the machine.—A high seat is necessary and the table on which the machine is placed should be of such a height that when the operator sits next to it, his elbows are about on a level with the key-board. Have the arm inclined slightly downward from the elbow. The hands or the arms should not rest on the table when working on the key-board. Hold them just over the key-board with the fingers stretched, and ready to light upon the keys when required. Sit close to the machine.

The Oliver Ribbons.—The Ribbon moves in a lengthwise direction from spool to spool, and when one side is exhausted and a slightly heavy pressure will be required, you can make it act in the reverse direction by simply moving a handle or knob that is in front of you on the right-hand side of the key-board. Though only one coloured ribbon is provided on the machine, there is no limit to the colours that can be produced. For, any colour can be got by simply placing that coloured carbon just below the ribbon. For the sake of convenience in so doing "Carbon cards" are supplied with the machine by the manufacturers, if required.

CALCUTTA COMMERCIAL EXAMINATION.

Examinations in Shorthand and Typewriting, in connection with the Bengal Government Commercial Course, Dacca Centre, will be held in Dacca next month. Particulars can be obtained from Mr. E. E. Biss, the Secretary of the Examination Board, Dacca Centre.

THE VICTORIA TECHNICAL INSTITUTE, MADRAS.

The annual meeting of the Victoria Technical Institute was held at the Institute Buildings where there was a large and distinguished gathering present, His Excellency Lord Pentland being in the chair. The proceedings of the meeting began with the Secretary reading the report of the Institute for the year 1912. Sir Harold Stuart moved the adoption of the report which was seconded by Mr. Justice Sadasiva Iyer. His Excellency in concluding the meeting made an interesting speech of which we give an extract in another page. Sir John Atkinson proposed a vote of thanks to His Excellency and the meeting then terminated.

THE PITMAN CENTENARY—CELEBRATION AT CALCUTTA.

The centenary of the birth of Sir Isaac Pitman, inventor of one of the earliest alphabetic system

of shorthand which goes by his name, was celebrated at the Y. M. C. A. Hall, Chowringhee, under the presidency of Sir Lawrence Jenkins, Chief Justice of Bengal. The function was largely attended by employers of shorthand labour, as well as shorthand writers in active work in various spheres of life. They included Lady Jenkins, Mr. Justice Holmwood, Mr. Justice Cox, the Hon'ble Maharaja of Nashipur, Mr. Wigley and Mr. A. W. Watson, I.C.S. The shorthand learners of the city mustered strong on the occasion.

MR. ALFRED CHATTERTON IN MYSORE.

Mr. Alfred Chatterton, the head of the Mysore Department of Industries, has been exerting to develop industrial activity there. He is designated 'Director of Industries and Commerce,' and his duties are stated to comprise—

(1) assisting private individuals by advice and loans or in any other manner considered necessary to enable them to start industries and new business concerns; (2) furnishing, as far as possible free of cost, estimates, schemes, prospectuses, articles of association, etc., to private capitalists and also to bodies of persons, anxious to start joint-stock industrial or trade concerns; (3) experimental installations in industries and manufactures at the cost of either Government or private individuals; (4) collecting and maintaining correct statistics of industries and commerce for the whole State as well as for important trade centres; (5) industrial survey, formation of a central industrial depot, a museum of industrial machinery and commercial products, and an information bureau, and (6) study of markets for Mysore products.

We are told it is the intention of the State Government that the Director should as far as possible, devote special attention to stimulating private enterprise and private initiative in industries and commerce. This year a sum of Rs. 50,000 has been placed at the disposal of Mr. Chatterton for the purposes stated below:—(1) a weaving factory, Rs. 5,000; (2) recoverable advances to weavers, etc., Rs. 5,000; (3) working three sugar-cane plants, Rs. 25,000; (4) silk reeling experiments, Rs. 5,000; (5) a general industrial fund (to be expended with the specific sanction of Government), Rs. 10,000. At the end of three years the utility of the Office of Director of Industries and Commerce is to be reconsidered.

THE ASSOCIATION OF BOOK-KEEPING TEACHERS, LONDON.

The examination in Book-keeping (Elementary, Intermediate and Advanced Grades) of the

Association of Book-keeping Teachers, London, will be held at Trichinopoly, in the first week of May next. Candidates desiring to appear for the examinations should get detailed particulars re the examinations, applying with $\frac{1}{2}$ anna stamp to Mr. T. C. Ranganatha Row, F.D.I., F.G.T., Honorary Local Secretary, English Examination Boards, Srirangam P. O. (Trichinopoly.)

TECHNICAL EDUCATION AND EVENING SCHOOLS, LONDON.

The report of the Education Committee of the London County Council on eight years of technical education and continuation schools—mainly evening work—compiled by Mr. R. Blair, the Education officer, was issued last month. It is divided into two parts, the one dealing with history and administration and the other with subjects of instruction. A chapter in the report, which is bound to receive considerable attention, is that which deals with evening schools, especially when the remarks made by Mr. S. E. Bray, a District Inspector, in his memorandum, are read with the description of the German system given in Appendix H. Mr. Bray says that at present the greatest need of the evening schools is stability of attendance—a subject which must claim attention equally in connection with the extension of elementary education in India among the agricultural and artisan classes. In the first few weeks of the session everything goes fairly happily in this respect, but shortly after this the falling off in the attendance begins and "assumes disquieting proportions as Christmas approaches." In no school, taking the sessions as a whole, is the attendance regarded as satisfactory. Most of the irregularity in attendance is said to be due to the student's own shortcomings. It is thought, however, that there would be less "absenteeism" if evening schools were not built so largely on the lines of the day schools. It is exceptional too, for an employer of labour to take an active interest in the evening education of his employees. In Germany the distinctive feature of the continuation school system is the recognition of the principle of compulsory attendance. The Imperial Labour Law of 1891 imposes on all employers the obligation of giving to their employees under 18 years of age such leave of absence from work for attendance at continuation schools as the local authority may prescribe. A decree of 1904 enjoins that compulsory classes should be held during the working day and not in the evening or on Sundays—thus avoiding the difficulty experienced in this country through the fatigue of those who attend evening classes

after a hard day's work. In the introductory chapters there is an interesting review of the growth of technical instruction with statistics of attendance at the schools. The number of enrolled students at polytechnics, schools of art, evening schools, etc., fell from 199,109 in 1904-5 to 176,617 in 1910-11. There was, however, a considerable increase in the number of hours of attendance per student—in the evening schools alone there was an increase from 38 to 46. The cost of maintenance has increased largely, the total in 1904 being £369,400 as compared with £470,038 in 1910-11. Other chapters in the report devote to the training of teachers, trade schools, original research, schools of art, and physical training.

SHORTHAND AMONG THE ANCIENTS.

Shorthand is so intimately associated in our minds with the rush of modern times and methods that it is startling (says a writer in the *Philadelphia Record*) to learn that some form of it was known to the ancient Greeks and Romans. Yet there appears to be little doubt that the orations of Cicero were reported with a skill and rapidity equal, perhaps, to those of many modern stenographers. It is, however, difficult to state just how old is the system of abbreviated writing. The Greeks called it tachygraphy. Xenophon is believed to have employed this system of taking notes of the lectures of Socrates, which would take it back to the fifth century before Christ. This is disputed by some authorities, but there seems to be no doubt about its use in the first century. By some it is held that the development of shorthand was due especially to Marcus Tullius Tiro. Born in Latium in 103 B.C., Tiro, who was a slave, was reared with Cicero, who was some years his junior. Freed he became Cicero's Secretary, and in this capacity aided him greatly. In the famous trial of Cataline (63 B.C.) the stenographic skill of Tiro was shown at its height. In the first century before Christ a discourse of Cato Uticensis was, according to Plutarch, taken down by shorthand reporters. Early in the third century of our era is encountered the term "semeiograph" (stenographic character) used by the Greek orator Flavius Philostratus. Origen of Alexandria (A.D. 185—254) noted his sermons in shorthand, and Socrates, the ecclesiastical historian of the fourth century, said that parts of sermons of St. John Chrysostom were preserved by the same process.

Reviews and Notices.

CAPTAIN COOK'S VOYAGES OF DISCOVERY. (J. M. DENT & SONS.) 6d.

Captain Cook is among the most illustrious men of action in the History of England. The deeds of the great hero are likely to inspire the noblest kind of enthusiasm in young minds and Messrs. Dent & Sons must be thanked for placing his life before them. After the preliminary biographical introduction, the editor has made Captain Cook himself tell his own story of exploration. Even the casual reader of Cook's writings must be struck with the effective manner in which he is able to impress himself upon his mind, without any attempt at literary excellence or rhetorical polish. We have no hesitation in recommending it as a text-book for our boys as it is full of thrilling adventures in the cause of Truth.

TOD'S ANNALS OF RAJASTHAN, BY C. H. PAYNE, (ROUTLEDGE.) 3s. 6d.

The huge volume of Tod's *Annals* and the absence of any good edition of the work has long rendered a brief adaptation of some form absolutely necessary. Mr. Payne has done the useful service of collecting the most important tales in Tod's classical work, within the short compass of about two hundred pages. The stories are as far as possible narrated in Tod's own words and the usefulness of the books is considerably heightened by a valuable map and a large number of illustrations. To those who have been in touch with the kind of literature placed before the Indian student, nothing has probably been more noteworthy, than the utter absence of books appealing to his sense of national greatness or glorifying the achievements of his forefathers. Rajasthan comprises in its history all that is noble and chivalrous in the Indian character of past ages and it is eminently desirable that every student in India must be given the opportunity of studying it.

THE STORY OF ENID: EDITED BY H. A. TREBLE, M.A. (GEORGE BELL & SONS.) 10d.

The pathetic story of the sufferings of Enid is among the most touching portions of *The Idylls of the King*. The purity and virtue of Enid which stands the most violent tests of Geraint has evoked intense admiration from thousands of readers. Mr. Treble's edition of the poem is very well-adapted for the use of students in colleges and

schools as it has a valuable introduction and judicious notes at the end. It was a good idea of the editor's to append the version of the story as found in the *Mabinogion*. It will serve the double purpose of enabling the reader to study the story from its very source, and to appreciate the artistic principles involved in Tennyson's deviations from the original.

ARNOLD'S ENGLISH LITERATURE SERIES: BLACKMORE'S LORNA DOONE AND KINGSLEY'S WESTWARD HO! (EDWARD ARNOLD.) 1s. 6d. each.

It is possible to raise an objection of some seriousness to the presentation of masterpieces in literature in the form of abridged editions. But the limitations of class-work render it difficult to think of carrying the young student through the entire length of a ponderous novel. The volumes under notice fulfil the useful purpose of introducing two well-known masterpieces in a form suited to the special requirements of the lower classes.

THE CHILDREN'S STORY BOOKS: (MACMILLAN & Co.): SCENES IN FAIRYLAND, 1s; OLD GREEK TALES, 9d; OLD ENGLISH TALES, 6d.; TALES FROM NORSELAND, 6d.

Teachers of elementary classes will testify to the keen interest roused in their boys by any kind of story-telling. In addition to the satisfaction of a taste so predominant in all youths, the series of books under review will serve the purpose of introducing the beginner to a world of romance dealt with in literature. Comprising themes of varied origin and interest, they must prove very useful for general reading. Messrs. Macmillan & Co. deserve to be congratulated on the discrimination displayed in the selection of tales and the efforts made to render the books useful for the class of students to whom they are intended. The illustrations and the peculiarly easy style are points of no ordinary importance in books of this nature.

THE FAIRY BOOK, BY THE AUTHOR OF 'JOHN HALIFAX, GENTLEMAN.' (MACMILLAN & Co.) 1s.

The author of 'John Halifax, Gentleman,' Mrs. Craik has enjoyed considerable reputation as a writer of books for children and this cheap reprint of her *Fairy Book* will serve to enhance it.

Some of the most well-known fairy-tales have been included in the volume and the name of the *Author of John Halifax, Gentleman*, is a guarantee of literary merit. The despondent cry has often been set up that the domain of man's imagination is becoming narrower and narrower, but an occasional glimpse of this world of fairies will serve as a corrective influence. If the grown-up man does not always long for sights that would make him less forlorn, as Wordsworth did, the fanciful mind of the boy at least finds immeasurable joy in the direction. There are few books better suited for the purpose of stimulating interest in the world of fairies, than this collection by Mrs. Craig.

BURKE: SPEECHES ON AMERICA, EDITED BY A. J. F. COLLINS. (UNIVERSITY TUTORIAL PRESS) 1s. 6d.

There are few things in the History of English Literature that can rival Burke's *Speeches on America* in loftiness of political wisdom or in oratorical balance. The historian has regretted the neglect of Burke's principles by contemporary politicians in England, but the literary value and broad humanity of his speeches have impressed themselves profoundly on the English-speaking world. This edition of his speeches on America will be found very useful in colleges. The Introduction furnishes the reader with all the material necessary for a proper appreciation of the work, and the notes are judicious and comprehensive. We have no hesitation in recommending the volume as a suitable text-book for our Universities.

"A COMPLETE COURSE IN BLACKBOARD DRAWING" IN TELUGU, BY MR. A. SUBRAMANYA IYER, ASSISTANT, AND DRAWING MASTER, GOVERNMENT TRAINING SCHOOL, SAIDAPET. Price 12 As.

It is an excellent Teacher's Hand-book. It seems to be written on the same plan as the well-known Augsburg's Drawing Books.

From every page of the book it is evident that the author has spared no pains to embrace in his book all the varieties of topics that are usually taught in teaching Blackboard Drawing and what is more he has admirably succeeded in making the book suitable to Indian conditions. Perhaps it would have been well if the book had the subject of painting also treated in it. The language of the book is simple and suited to those for whom it is intended. The get-up of the book

is all that is desirable. It may be unhesitatingly said that the book supplies a great educational need of the day and therefore should be welcomed by all teachers who have to make Telugu the medium of instruction in Drawing.

LESSONS IN INFANT MANAGEMENT, BY FLORENCE LESSELS MATHER. (THOMAS NELSON AND SONS, LONDON). 1s. 6d. pp. 112.

The high rate of death among infants which is almost everywhere the case ought to make all responsible men pause and think a while as to the steps which can be devised to prevent it, if possible. It is now generally agreed that the high percentage of death among infants is due mostly to ignorance and carelessness. A greater knowledge of mothercraft and infant management would go a great way in helping to bring about a reduction of this high death-rate. With this idea the Board of Education (England) in 1910 issued a circular from its medical department (758) advising the teaching of infant management to all girls before leaving the elementary school. This little book is designed to meet the requirements of women who wish to be posted up with the necessary information about infant management. The book has something to say on all the important subjects of food, sleep, toilet, clothing, ailments, &c. of children. The treatment is quite plain and simple. Though the instruction cannot *in toto* be followed in this country, still we feel that a study of the book will be of great use. We wish the book success in its laudable object.

EDUCATIONAL CLASSICS: FREBEL'S CHIEF WRITINGS ON EDUCATION, EDITED BY FLETCHER AND WELTON. (EDWARD ARNOLD, LONDON). pp. xx, 246. 4s. 6d. net.

The conception of development, the introduction of which marks one of the principal differences between the thought of the present age and that of the eighteenth century and all preceding times is that which inspires the editors of the series of Educational Classics in which the present work appears. Fully convinced that the present is the child of the past and the parent of the future, the editors apply the ideas of evolution and development to the educational problems, as the best method of approaching and appreciating the ideas. With this end in view, these volumes containing the writings of the great educationists whose ideas have come to prevail in the educational systems of all civilised countries of the

present day, are published. One of the famous names in this long list of great educationists is that of Fröbel. The kindergarten which is an essential feature of the present day Elementary School curriculum is traced to this great thinker. It is therefore natural that the series has a volume on Fröbel's chief educational writings.

Two dominant notes in the work of Fröbel are a passionate love of childhood and a lofty pantheism. The lucid and stimulating introduction by the translators traces to these two sources all the prominent notions of Fröbel's writings. His passionate love of children is due to his own neglected childhood, among other things. His pantheistic tendency is due to the philosophic environment of German idealism which just then was running its course from Kant through Fichte and Schelling to Hegel. This idealism had its effect on Fröbel. Fröbel's chief philosophical positions that "nature is visible spirit, and spirit invisible nature; that matter is only an appearance of which the reality is spirit and therefore cognate with the individual soul; that all nature lives and manifests its life in an infinite productivity; that all creation is one with itself and with its Creator, in that all is spiritual; that the individual spirit craves to find satisfaction in the apprehension of this essential unity" look so closely similar to the doctrines of Hegel. In the field of education, Fröbel was early brought under the influence of Pestalozzi. Many of the most valuable principles generally associated with the name of Fröbel are found dimly indicated in Pestalozzi's writings. Early life, German idealism and Pestalozzi form the three chief sources from which flow the doctrines of Fröbel.

Insistence on self-education, bodily activity and kindergarten, are, among others, the primary contributions of Fröbel to the history of educational thought. It is not possible within the short compass of a review to bring out all the essential points of the Fröbellian theory, yet one or two points need special mention. Fröbel rightly conceived the purposive nature of mental life and laid due stress on the true function of education as being an evolving or a drawing out of the powers of man. It is the grasping of this notion that gives Fröbel an enduring place in the history of thought. There is no use of storing one's mind with facts. True education is a self-education where one sees things for one-self as far as possible. Much confusion prevails about Fröbel's ideas of discipline. Since Fröbel lays stress on play and its usefulness, it is sometimes thought that he does not attach much importance to the value of discipline. But the

fact is that, according to him, discipline is no end in itself but only a means and a necessary means to the realisation of the divine element in man which is the true objective of education. The function of discipline is to allow the divine spirit in man to come to perfection. Thus Fröbel clearly grasps and appreciates the value of discipline as an instrument of training the will. But he is dead against that rash and reckless discipline which enforces constraint and atrophies the free play of the will. Fröbel's ideas about the value and limitations of discipline are beautifully summed up in the introduction which says "external constraint and punishment have their place, but their function is not that of mechanical pressure but that of inward inspiration" (p. 20).

The translators have done their work well. To them we owe a debt of gratitude for an excellent introduction and a fine readable English version of Fröbel's chief educational writings. We hope the book will be read by all who take an interest in this vital problem of education.

LITERARY NOTES.

Messrs. Macmillan & Co. have issued the names of the following books which will be published shortly.

The Children's Classics with illustrations, Primary No. 12. Senior No. 55.

The Governments of Europe by Prof. Frederic Austin Ogg, Ph. D. 12/6 net.

Studies in Literature by Prof. Frederick M. Tisdell, Ph. D. 4/ net.

Elementary Biology: Plant, Animal, Human, by J. E. Peabody, A.M., and A. E. Hunt, Ph. B. 5/6 net.

The Tudor Shakespeare edited by W. A. Neilson, Ph. D., and A. H. Thorndike Ph. D., 1/ net per vol.: Julius Cæsar, edited by R. M. Lovett, A. B.

The Merry Wives of Windsor, edited by F. P. Emery, A.M.

The following books have been published during February.

Development and Purpose. An Essay towards a Philosophy of Evolution, by Prof. L. T. Hobhouse, M.A. 10/ net.

An Introduction to Metaphysics, by Prof. Henri Bergson, translated by T. E. Hulme, 2/ net.

A Short History of English Literature, by Prof. George Saintsbury: A Re-issue, arranged in five parts, 2/ each.

The Golden Treasury of Australian Verse, edited by Bertram Stevens, new edition, 5/ net.

Soame's Phonetic Method for Learning to Read: The Teacher's Manual, Parts I and II, each 2/6.

Macmillan's Reformed Arithmetics, Girls' Edn. Teacher's Book VI, 9d.

Lectures on the American Civil War by J. F. Rhodes LL.D. Litt. with map, 5/ net.

The Old Colonial System 1660—1754, by G. L. Beer. Part I. The Establishment of the System. 1660—1683 in 2 vols. 17/ net.

Messrs. Hodder and Stoughton have taken over nine of the most famous stories by the Baroness Orczy including the Scarlet Pimpernel and are publishing them during 1913 in their shilling net cloth library. All the books will have new cloth binding and new coloured wrappers, which are being specially drawn by famous artists.

The Poets and the Poetry of the Nineteenth century is a popular Encyclopædia of modern poetry, covering the area of Greater Britain and the limits of the nineteenth century, edited by Alfred H. Miles and Published by the well-known firm of Messrs. George Routledge & Sons, Ltd., in 12 vols. Each volume is sold separately.

While many excellent books for technical students are already on the market, it would seem that there is a distinct need for a low priced series specially adapted to the modern organization of the Technical School and the needs of poor students. The Broadway Text-Books of Technology edited by G. Sidney Yule supplies this real want. The first list of volumes is on these subjects:—Technical school organization and teaching: machine construction and Drawing: The Geometry of Building construction: first year of Building construction: Practical mathematics: mathematics, science and drawing for the Preliminary technical course: The science of Building and Building materials: Applied Mechanics: Electrical Engineering: Mechanics for Textile Students. The volumes are all profusely illustrated and published by Messrs. George Routledge & Sons.

Of Routledge's Indian Text-Book series prepared to meet the requirements of the Indian University Examinations edited with preface and copious Explanatory notes, cloth limp, each 1/6; the following are now ready and other volumes are soon to follow: Hawthorne's Tanglewood Tales, Lambes Tales from Shakespeare, The Herces.

A Tennyson Concordance will be published immediately by Messrs Kegan Paul Treuch Tribuner & Co., Ltd. This is a complete concordance to the poetical and Dramatic Works of Alfred Lord Tennyson. Poet Laureate, by Arthur E. Baker, 25/ net.

Messrs. George Routledge & Sons, Ltd., and Messrs. Kegan Paul Treuch Tribuner & Co., Ltd., associated together under joint management will issue

during the season 1913 many important works in Literature. The following are some of them:—A Guide to the Best Fiction in English, new edition by Earnest A. Baker, M.A., D. Litt., F.L.A., 21/ net.

Children's play and its place in Education with an appendix on the Montessori method by Walter Wood, 3/6 net.

Roman Life and Manners under the Early Empire, by Ludwig Fiedlander, Vol. IV, translated by Dr. A. B. Gough, 10/.

How to write an Essay, by W. T. Webb, M.A., sometime Professor of English Literature, Presidency College, Calcutta, 1/ net.

Collected Poems by Austin Dobson, 9th edition, with a section of new poems with a photograph, 6/.

A Grammar of the Dravidian Languages, by the late Bishop Caldwell, DD., LL.D. New edition, by the Rev. J. L. Wyatt, M.A. and T. Ramakrishna Pillai, B.A. about 10/ net.

The following are some of the forthcoming books of the University Tutorial Press.

Preliminary English Course, by A. M. Walmsley, M.A.

Shakespeare, Henry IV, Part I, by A. J. F. Collins, M.A.

Preliminary Geography, by E. G. Hodgkinson, B.A. 1/6.

Algebra for Matriculation, by A. G. Cracknell, M.A., B.Sc.

Preliminary Arithmetic, by A. Barraclough, M.A. Junior Geometry, by A. G. Cracknell, M.A., B.Sc.

Preliminary Chemistry, by H. W. Bonsor, M.A.

Grammar and Thinking, a Study of the Working Conceptions in Syntax, by Alfred Durig Sheffield: New York: Pitman. In a thorough-going and convincing manner, Mr. Sheffield traces in this book the relation between the form of expression and the thought. The greater part of the book is devoted, as the sub-title would indicate, to a study of the working conceptions in Syntax. The value of each of our grammatical classifications and the reaction between the forms recognised by grammar and the varied thought-conceptions are presented in a novel and ingenious manner. The "dry bones" of grammar are so dressed that even the casual reader feels that the field has been illuminated. The book will be inspiring to the teacher of English.

Extemporaneous Speaking, by Paul M. Pearson and Philip M. Hicks. New York: Hinds, Noble and Eldredge, 1912. Part I contains eight chapters on the preparation and delivery of speeches. Part II is devoted to examples of good speeches for study. This is a very serviceable book.

Modern Business Methods, by William H. Teller Henry E. Brown, Chicago: Rand, McNally & Co.

This is an exceedingly valuable handbook. Examples of all the business forms usually required are included, together with much practical information and many exercises for practice.

Heroes of the Nations (Pitman, 5s. net,) will come as a revelation to ordinary readers. Of the first, "Roger of Sicily," by Professor Curtis, of the Sheffield University, they will probably know nothing, and of the second "Canute the Great," by Professor Larson, of Illinois University, they will only remember the story in their school-books about his sitting on the sea-shore, and rebuking the tides. Yet both these great historic characters are well worth knowing, and in these finely illustrated volumes everything that is known of them, as the result of recent research, is attractively set forth.

The Charles Dickens Originals, by Edwin Pugh (Foulis, 6s.) This is a book that all Dickensians should read. It is partly expository and partly critical and is copiously illustrated. Mr. Pugh does not think that Dickens had much sense of humour, in spite of all the mirth that he has caused. His sense of humour played but little part in his private life, he says.

Homes and Haunts of John Ruskin, by Sir E. T. Cook. (G. Allen, 21s. net.) This is a splendid volume, and with its twenty-eight colour pictures from original drawings and sixteen in black and white by Miss E. M. B. Warren, it makes a very valuable guide-book for the arm-chair pilgrim to the various Ruskin Shrines in Great Britain and the continent of Europe. The book takes us pleasantly to Oxford, to the Lake District, to Scotland, to France, Switzerland, and Italy and talks to us delightfully and with full knowledge of the homes and haunts that Ruskin loved.

Papers, Critical and Reminiscent, by William Sharp, selected and arranged by Mrs. William Sharp. (Heinemann, 5s. net) is full of examples of exquisite and discerning criticism and it is a volume to be read not once only but many times. William Sharp is a master of exquisite prose, and one of the most poetic of modern poets, his graceful fancy, and dream-like delicacy of touch, melt into the heart like dew. The essays and criticisms in his book possess, to a certain extent, the intimacy which belongs to literary confessions, and is valuable as a record of personal impressions of men, more famous than the writer himself, with whom he was on terms of personal intimacy.

The Teaching of Mathematics in the United Kingdom. The following set of papers published by His Majesty's Stationery Office, discuss matters relating to Secondary, Technical and University teaching. In every case the writer has a special and intimate knowledge of the subject with which he deals.

The Teaching of Algebra in Schools, by S. Barnard. 1½d.; Research and Advanced Study as a Training for Mathematical Teachers, by G. H. Bryan. 1½d.; The Teaching of Mathematics in Evening Technical Institutions, by W. E. Sumpner. 1d.; The Undergraduate Course in Pass Mathematics, Generally and in Relation to Economics and Statistics, by A. L. Bowley. 1½d.; The Preliminary Mathematical Training of Technical Students, by P. Abbott. 1½d.; The Training of Teachers of Mathematics, by T. P. Nunn. 1½d.; Recent Changes in the Mathematical Tripos at Cambridge, by A. Berry. 1½d.; Mathematics in the Preparatory School, by E. Kitchener. 1½d.; Course in Mathematics for Municipal Secondary Schools, by L. M. Jones. 1½d.; Examinations for Mathematical Scholarships at Oxford and Cambridge, by A. E. Jolliffe and G. N. Hardy. 2d.; Parallel Straight Lines and the Method of Direction, by T. J. Garstang. 1d.; Practical Mathematics at Public Schools, by H. H. Turner. R. C. Fawdry, A. W. Siddons, F. W. Sanderson, G. M. Bell. 1d.; Mathematical Examinations at Oxford, by A. L. Dixon. 6d.

The following four books published recently are typical of the modern Tendencies in History Teaching. *A History of Europe*, by A. J. Grant: Longmans. 7s. 6d. net. *France*, by C. Headlam: A. C. Black. 7s. 6d. net. *The Last Century in Europe*, by C. E. M. Hawkesworth, Arnold, 5s. net. *Australasia*, by A. W. Tilby, Constable. 6s. net.

The following are some of the recent books on *Theory and History of Education*.

A Cyclopædia of Education, edited by Dr. P. Monroe. Vol. III., 682 pp. (Macmillan.) 21s. net; Life and Work of Pestalozzi, by Prof. J. A. Green. 390 pp. (Olive.) 4s. 6d.; Infant Schools and Kindergartens, by E. B. Murray. 145 pp. (Pitman.) 2s. 6d. net; A Housemaster's Letters. 313 pp. (Smith, Elder.) 6s. net; The Art of Education, by Dr. I. W. Howerth. 237 pp. (Macmillan) 4s. 6d. net; The Psychology of Educational Administration and Criticism, by Dr. F. H. Hayward. 592 pp. (Ralph, Holland.) 7s. 6d. net; Experimental Psychology and Pedagogy, by K. Schulze, translated by Dr. R. Pintner. 364 pp. (Allen.) 15s. net.

A First Book of Chemistry, by E. Barrett and T. P. Nunn: A. C. Black, 1s. 6d. Dr. Nunn explains in the preface that this book is based on a scheme of instruction drawn up by himself when Science-master at the William Ellis School. The scheme is heuristic, or perhaps suggestively heuristic, i.e., the authors give a great deal of information which might be deduced by the perfect teacher from the perfect child.

When Kings Rode to Delhi, by Gabrielle Festing, with illustrations. This book is an attempt to treat the history of Delhi as the author had already treated the history of some of the States of Rajputana in a former book. The book is intended only for the general reader or the traveller in India. William Blackwood & Sons. 7s. 6d. net.

An Outline History of English Literature, by W. H. Hudson: Bell & Sons. The author aims at

giving a clear and systematic account not of the achievements of successive great writers merely, but of national changes and development.

An Elementary Course of Magnetism and Electricity, by C. H. Draper, B.A., D.Sc. (Blackie). A separate issue of Section VII of the author's *Course of Physics, Practical and Theoretical*.

A Course of Physics, Practical and Theoretical, by C. H. Draper, B.A., D.Sc. (Blackie). Consists mainly of instructions for exercises intended to be performed by beginners.

The Historical Record of London University. A five-shilling book called "The Historical Record of the University of London" has been published. It contains a history of the University, the texts of the various charters and of the University of London Act, the texts of University College and King's College Act, lists of former Fellows and Officers, full particulars of Trusts and Benefactions and lists of living Graduates and of Exhibitioners, Scholars, Prize-winners, and Honours Graduates from the foundation of the University.

Messrs. Hodder and Stoughton announce the first list of Charles Garvice's seven penny novels. They will be issued handsomely bound in cloth with magnificent coloured wrappers picturing a unique series of Garvice Heroines by well known Artists. The very best Garvice novels will be included in this series. Mr. Charles Garvice's readers are numbered by the million.

SCHOOL AND COLLEGE SPORTING NEWS.

M. C. ATHLETIC ASSOCIATION.

Senior Cricket Tournament, Final.

WESLEY v. ENGINEERING.

The above teams met in the final of this tournament. Though none of the matches in the preliminary rounds of this tournament was by any means well contested, it was thought that the final at least would produce a keen contest. However, as it turned out, this match proved to be even more disappointing than the previous matches, as the Engineers, who were very lucky in getting into the final without actually taking part in any of the previous matches, gave up this match, at the end of two days' play, evidently finding themselves in a hopelessly weak position. In spite of the above draw-backs, this tournament after all had not been without any interest, for Vencataramanjulu, Baliah, and Ramaswami,

the three sons of the late Mr. Buchi Babu Naidu, all of whom were playing for the Wesley, covered themselves with glory by doing some remarkable things. To start with, Baliah distinguished himself by scoring 113 runs in the opening innings of this tournament against the Medicces. Not content with it as it were, he knocked up against the Christians an even bigger score, namely 141 runs. In this match, Ramaswami, the youngest of the lot, put up 188 runs, the biggest individual score made by an Indian here. That a youngster of his age, who is still in his teens, should have beaten all previous records is undoubtedly very creditable. We congratulate the youngster on his achieving this unique distinction. Vencataramanjulu, the oldest of the three of whom great things were expected in batting, though he failed to justify the high expectations that were entertained of him, made up for it in a way by bowling exceedingly well in all their innings, besides bringing about several remarkable catches in the slips. He altogether bagged 29 wickets out of the 49 that fell to the credit of the Wesley bowlers.

THE MADRAS C. A. ASSOCIATION.

The annual sports of the Madras Collegiate Athletic Association was held on the grounds of the South Indian Athletic Association in the People's Park.

Considering the large number of educational institutions in the city the gathering of students was not quite so large as that seen on previous occasions when the meetings were held on the grounds of the Engineering College. This was presumably due to the fact that admission into the grounds even for *bona fide* students was on payment. The attendance of the general public also was not up to the average of the previous years.

The programme of sports was as usual the same as in previous years. The Rev. H. Ashcroft, Capt. E. W. Bradfield, Mr. A. Guthrie, Mr. W. C. Old, Mr. J. L. Simonsen and Mr. S. Narayana Iyengar acted, while Mr. C. L. Griffith was the Time-keeper and Mr. W. G. Ventham, Starter.

No less than eleven of the High Schools and Colleges elected to send in competitors for the sports, and prominent among those who were not represented were the Veterinary College, the Triplicane Hindu High School and the Pennathur Subramaniam High School. There were a large number of entries for the various events ranging from 7 to 5, and it was therefore found necessary to run these in heats on the day previous,

Their Excellencies the Governor and Lady Pentland were present in time to witness the last four events and Her Excellency subsequently gave away the prizes.

The proceedings terminated with three cheers for His Excellency the Governor and Lady Pentland.

TRICHINOPOLY ATHLETIC ASSOCIATION.

Mr. J. T. Gillespie, I.C.S., presented the prizes for three competitions which the Trichinopoly Athletic Association had arranged during the first half of this month. The first was a football competition open to all High Schools in the District, and won for the second year by St. Joseph's College High School. The second was a badminton competition also open to High Schools. This was won also for the second year by the S. P. G. College High School. The last competition was the Gymkhana Football sixes tournament open to all associated Clubs. This produced some excellent games and the final was a very interesting game between St. Joseph's College and the City Club. The former won by 11 points to nil, and received a great ovation from the large crowd on winning the shield for the third year in succession. Medals for the individual players were also presented on behalf of the Association by Mr. Gillespie.

UNIVERSITY BOAT RACES.

No surprise will be occasioned by the news that this year's University Boat Race provided an exciting finish. Although Oxford were installed favourites on the form exhibited in practice, Cambridge had nevertheless registered good timing over the complete course prior to the race, and many people believed they would win. It seems remarkable that, although leading not only at Hammersmith but also at Barnes Bridge, they were eventually beaten by three-quarters of a length by Oxford. The obvious deduction is that they could not stay the distance. The Dark Blues have now won the race 39 times and Cambridge 30. The record timing is held by Oxford, who in 1911 completed the course in 18 minutes 29 seconds. Prior to that, the record was 18 minutes 47 seconds, achieved by Oxford in 1893, and equalled by Cambridge seven years later. This inter-Varsity contest has at various times been marked by exciting incidents. The event of 1898 was rowed in a gale, and was won by Oxford in 22 minutes 15 seconds. But last year's race was perhaps the most remarkable. The weather was so stormy that both boats became water-logged. The Cambridge boat sank, while Oxford were compelled to pull in to the bank and empty their

boat. They then completed the course alone. The umpire declared it "no race" and the contest was rowed again a few days later, when Oxford won easily in 22 minutes 5 seconds.

Football Tournament.

MADRAS-I AZAM V. VETERINARY COLLEGE.

The match between the above teams was played on the S. I. A. A. Ground. It was a rather poor display of football that was seen both sides being not up to good form. As it was the Azamis appeared to decidedly greater advantage than their opponents, who it has to be understood, were making their first appearance in a football tournament this year. Considering the very weak team they had at their disposal, we can only say that it was indeed very sporting of the Vets to have entered at all.

The match resulted in a win for the Azamis by 2 goals to nil.

ENGINEERING V. PRESIDENCY.

The match between the above teams was played on the S. I. A. A. Ground. Great interest was centred in this match. The Engineers defeated the Presidency and we congratulate them on it, especially as it was a well deserved win. But it has to be said in fairness to the Presidency that they were extremely unlucky in having had the only goal scored against them, when they were playing one player short. Apart from this, they had to take the field without the services of two of their best players, while their opponents were practically at full strength. The absence of Siva Prasad, their most hardworking player, particularly told on their team.

PUBLICATIONS RECEIVED.

The Fairy Book. By the author of "John Halifax Gentleman." London: Macmillan, 1s. net.

Cambridge Manuals of Science and Literature, Vols. 52 and 53. London: The Cambridge University Press, each 1s. net.

New Junior French Course. By G. A. Roberts, M.A. London: The University Tutorial Press, 2s. 6d.

Burke's Speeches on America. By A. J. F. Collins, M.A. and F. J. C. Hearnshaw, M.A. London: The University Tutorial Press, 2s. 6d.

A Hand-Book of Geography. By A. J. Herbertson, M.A., Ph.D. Vol. II. London: Nelson, 4s. 6d.

The Children's Story-Books (bound in cloth) Old English Tales, 6d. Tales from Norse-land, 6d. Old Greek Tales, 9d. Scenes in Fairyland, 1s. London: Macmillan.

History of English Literature, By Prof. Saintsbury, in five Vols. London: Macmillan, 2s. each vol.

Lessons in Infant Management, By F. L. Mather. London: Nelson, 1s. 6d.

Fröbel's Educational Writings, By S. S. F. Fletcher, M.A., Ph.D. and J. Welton, M.A. London: Edward Arnold, 4s. 6d. net.

Chambers's Supplementary Readers: A Cavalier of Fortune, By Escott Lynn, 1s. Selections from Hakluyt, By H. A. Treble, M.A., 1s. The Water-Babies, By Charles Kingsley, 8d. Greying Towers, By Mrs. Molesworth, 8d. Marmaduke Merry, the Midshipman, By H. E. Kingston. London: Chambers, 8d. net.

Character in the Making, By Abel J. Jones. London: Murray, 2s. net.

The Children's Classics: No. 11, 2d. No. 42, 3½d. No. 53, 4d. No. 55, 4d. London: Macmillan.

Exercises in Geometry with full solutions and figures, By Hiralal Lalubhai Kaji, M.A., B.Sc., Rajkumar College, Rajkot. Re. 1.

Topics of the Day, Education, By Diwan Bahadur V. Nagam Aiyar, B.A., F.R. Hist. S. Madras: The Law Printing House.

The Gospel of St. Mark, Edited by Rev. J. F. Richard, M.A. and Rev. T. Walker, M.A. London: Clive, 1s.

Indian Educational Notes.

MADRAS.

Building Grants.—The following building grants have been sanctioned by the Local Government subject to the usual conditions:—

1. The Government are pleased to sanction a grant not exceeding one-half of the actual expenditure nor Rs. 5,800 towards the cost of the extension of the Voorhee's College building at Vellore.

2. The Government approve the proposal to carry out at an approximate cost of Rs. 14,980 certain additions and improvements to the Victoria Jubilee Hostel, Kumbakonam. Further orders regarding the preparation of plans and estimates and the execution of the work will issue in the Public Works Department.

3. The Government are pleased to sanction a grant not exceeding one-half of the actual expenditure, nor exceeding Rs. 29,000, towards the cost of

constructing a Hostel and Warden's quarters in connection with the Wesley College, Royapettah.

4. The estimates for the construction of a building for the Wesleyan Mission School for Hindu Girls at Sembium include provision for a carriage shed and teacher's quarters not forming an adjunct to a hostel. As the Grant-in-Aid Code does not admit of the payment of grants towards expenditure on these objects, the amounts of Rs. 230 and Rs. 490 provided in the estimates on that account must be eliminated for the purpose of calculating the building grant.

The sole object of allowing a terraced roof for the main building being the ultimate addition of a second storey, the Government expect the management to strengthen the roof, and to this end a sum of Rs. 150 will be added to the estimate.

Towards the admissible estimated cost of Rs. 6,530 as revised by the Chief Engineer, the Government are pleased to sanction a grant not exceeding one-half of the actual expenditure, nor Rs. 3,265.

5. The Government are pleased to sanction a grant not exceeding two-thirds of the actual expenditure, nor exceeding Rs. 3,567 towards the cost of construction of a dormitory, a dining block and a bath and kitchen block for the Holy Cross Girls' School at Tuticorin.

6. The Government are pleased to sanction a grant not exceeding one-half of the actual expenditure, nor Rs. 13,650 towards the cost of construction of a building for the Basel German Mission Christian High School, Udipi, South Canara District.

A Condolence Meeting.—The members of the Secondary School Teachers' Association, Mayavaram, assembled at 5 p.m. on Monday, the 9th instant, to give formal expression to their grief at the death of Mr. Krishnasamy Iyer at his residence in Mayavaram with Mr. K. Seshu Aiyar in the chair. Mr. N. P. Krishnasamy Aiyar in moving a resolution said:

"We are assembled here under the most distressing circumstances to mourn the deep and irreparable loss to ourselves, our country, and the teaching profession of one of the veteran teachers we have known, the like of whom we may not see again.

He has gone, the common way of all.
'Like a summer dried fountain,
Like a winter dried forest.'

But the question is, is he really dead, dead to the world, without leaving a permanent lasting undying impression in the mind, conduct, character of those happy youths who passed through his hands these thirty-three years of his active life?

In the course of conversation I had with him a few months ago he showed me a book containing a list of his pupils, men adorning the different ranks of life as schoolmasters, lawyers, and public

servants. From the list I gathered that the men he has made by thousands have spread out not only throughout this Presidency but through the length and breadth of India. Not a day he passed without a few of his pupils visiting him as though performing a pilgrimage to the sacred shrine of his residence in Mayavaram. On such occasions, when his students met him, he, by his fervour and earnest preaching, created in a few minutes such an atmosphere of moral elevation that his students soon forgot themselves, believed this earth an Eden, saw an Angel preaching, pouring out his heart for the betterment of man. His very contact, the intellectual treat the students enjoyed, the marvellous influence he exercised over them, the readiness with which he poured forth his quotations, all these made us shrink within ourselves for the littleness of our mind.

In 1874 when he took his B.A. Degree and when he was appointed a teacher to the Fourth class in the Kumbakonam College under the very eye of his loving patron and master, Mr. T. Gopala Row, I had the peculiar privilege, as a student and monitor of that class to sit at his feet and imbibe knowledge. The impression he produced in that impressionable age was such that his students soon began to regard him as an Angel on earth with a special mission. How he taught, how soon he forgot himself and made his students forget, how nectar-like his ideas flowed, how his students drank delight at the fountain-head of wisdom, how he held us spell-bound as in a trance, how mellifluously his utterance flowed, how metamorphosed we stood before him, how we resented the hour-bell as an unwelcome intruder and interrupter, these and these were only known to those fortunate few who sat under his magical influence. But alas! these have become things of the past, matter of history. To the last day of his life till the very breath left his nostrils he continued to be a teacher, if not to the larger world outside, at least to his children and the children of his children. In his old and declining age with a number of physical maladies how he was able to study afresh as an ardent student, the sacred literature of the East, how he ransacked the rich treasures locked up in them, with what ease and flow he quoted Sanskrit slokas after slokas, how he mastered the obscure doctrines of the Advaita philosophy, how masterly he discussed with learned Pundits, these are a marvel to me.

'He learned as though he were to live for ever,
And lived as though he were to die to-morrow.'

Our only consolation now is that death has cut the saint down but he cannot keep him down. We have yet a painful duty to perform, a duty nevertheless, to convey to the bereaved family our sense of the deep loss his children have sustained and with them his students, friends and admirers. May his spirit rest in peace.—Amen.

M.R.Ry. S. Ramasamy Iyer Avl. then read a number of pathetic stanzas composed in Tamil in memory of the deceased.

M.R.Ry. K. Seshu Aiyar Avl. in supporting the resolution, paid a tribute to his old teacher in a very touching speech.

The following resolution was unanimously passed, "That the Secondary School Teachers' Association, Mayavaram, learns with intense regret the great and irreparable loss the teaching profession and the country have sustained in the death of M.R.Ry. S. Krishnasamy Iyer Avl. the veteran educationist and late Headmaster of the Town High School, Kumbakonam, and conveys its sympathy to his sons and the other members of his family in their sad bereavement."

Tumkur District Teachers' Association.—Under the Chairmanship of Mr. T. Visweswara Iya, B.A., Headmaster of the A. V. School, Tumkur, an interesting and convincing paper on the "Need of a Teachers' Association," was read recently by Mr. P. N. Venkata Rau, English Teacher of the Empress Girls' School, Tumkur.

Amidst the rejoicings of the 40 teachers assembled at the time, the Association took the name, "The District Teachers' Association."

The chief object being to serve the country, i.e., to help the students to turn out the best and most useful and dutiful subjects when they grow to manhood, it is proposed that any one interested in education may become members, that members should pay a monthly fee of an anna each.

An executive committee of 9 members, and the following office-bearers were selected, Patron: M. Srinivas Rao, Esq. B.A., Inspector of Schools, Mysore Circle. President: H. N. Venkataramanaiya, Esq. B.A., Deputy Inspector of Schools, Tumkur Dist., Secretary: Mr. T. Visweswara Iya, B.A., Head Master, A. V. School, Tumkur. Assistant Secretary: Mr. P. N. Venkata Rau, English Teacher, Empress Girls' School, Tumkur. Librarian and Treasurer: Mr. Garuda Char, Assistant Master, A. V. School, Tumkur.

Hostels.—The Madras Government do not approve the proposals submitted by the Director of Public Instruction, Madras, with regard to the designing of the hostels and wardens' quarters to be constructed in connection with the Government Training Schools for Masters. Two new and more economical designs have since been prepared by the Chief Engineer under instructions from Government, for a students' dining hall. The accommodation provided in these plans should satisfy all reasonable requirements and the Director of Public Instruction will be requested to adopt them in the case of all proposals for the construction of hostels in connection with Government Training Schools for Masters. Having regard to the importance of making hostel residence obligatory on the students under training and in consideration of the inability of most students in the elementary training schools to pay the rent

leviable in accordance with Public Works Department Code, the Government are pleased to exempt such students from any liability to rent during their occupation of hostels provided for their accommodation.

Elementary Schools.—The Government of Madras have sanctioned the payment of further subsidies amounting to Rs. 38,877 to the following District Boards towards the cost of maintenance of the Elementary Schools newly opened:—Arcot (North), Rs. 500; Arcot (South), Rs. 4,500; Bellary, Rs. 1,500; Canara (South), Rs. 3,000; Chingleput, Rs. 1,100; Chittoor, Rs. 800; Cuddapah, Rs. 1,700; Godavari, Rs. 1,200; Kistna, Rs. 3,177; Kurnool, Rs. 2,700; Madura, Rs. 1,600; Nellore, Rs. 3,300; Ramnad, Rs. 1,200; Salem, Rs. 700; Tanjore, Rs. 2,600; Tinnevely, Rs. 500; Trichinopoly, Rs. 3,300; Vizagapatam, Rs. 5,000.

Education of Factory Children.—Interesting light is thrown upon the number of children employed in factories of this Presidency by a Government Order which has recently been published regarding their education. According to latest published reports there were 201 factories in this province with an average daily attendance of 4,725 children. Of these factories very few do anything for the children employed therein. The two notable exceptions are the Carnatic and Buckingham Mills in this city which on the 31st March last, had respectively 277 and 274 pupils on the rolls of their schools. Out of the total of 4,725 children, 3,059 are employed in factories in places where, in the opinion of Sir A. G. Bourne, Director of Public Instruction, provision for their education exists or measures to that effect seem practical. At present only 602 children receive education at these places. Sir A. G. Bourne therefore proposes and Government have accepted his proposal, that a number of half-timer's schools be started in places where there are factories employing a considerable number of children and where managers promise their co-operation in securing the education of children. These schools, to the number of five, will be started in the following places, one at Ellore, Madura and Tuticorin and two at Coimbatore, affecting 1,532 children. These proposals only affect jute and cotton factories, and it is recognised that there are certain other industries, for example, rice mills which employ a considerable number of children on whose behalf schools might be opened, if the tentative measures proposed prove successful.

The Government High School for Indian Girls, Vizagapatam.—The opening ceremony of the Government High School for Indian Girls, Vizagapatam, was celebrated with much eclat on the 4th instant in the school premises.

The proceedings began at 5-10 P.M. with the opening remarks of Mrs. Cecil Rhenius, the Inspectress of Girls' Schools, Northern Circle.

At the conclusion of her speech she read extracts of letters from various gentlemen showing their sympathy with the movement.

Among the speakers were Mr. P. T. Srinivas Aiyangar, Principal of the Mrs. A. V. N. College, Vizagapatam, and Mr. V. V. Sivavadhani, the Subordinate Judge of the town.

During the intervals verses and slokas composed for the occasion were read out by the Pandits of the school and the Music Instructor engaged the audience by playing the Vina.

A Pupil Teachers' Association.—The Tenth Anniversary Meeting of the Pupil Teachers' Association connected with the Government Training School, Tanjore, was held with Mr. Hart, M.A., Inspector of Schools for the Range, in the chair. The Secretary's report showed the useful work done at the several meetings. A lecture on the well-known Tamil poet Kamban and his works was delivered by Mr. C. Sivagnanam Pillai in Tamil. The Chairman congratulated the Association in its steady solid work and suggested the desirability of all Government schools and colleges providing for the distribution of prizes to successful pupils as was done in years gone-by. In the course of his remarks he impressed on teachers the importance of inculcating good principles in the lessons taught during the course of their daily work in school. Mr. Hart referred appreciatively to the King-Emperor's speech on education and the recent resolution of the Government of India on education and the prospects opened out for teachers. The speech was eminently fitted to the Association and Mr. Varadaraj Iyengar, Head Master, thanked Mr. Hart for his friendly counsel.

Educational Exhibition.—At the Tindivanam Educational Exhibition the prizes were announced by the Sub-Assistant Inspector, Mr. Satakopachariar, a fair number of medals and a larger one of certificates of excellence being awarded to the deserving owners of the exhibits. Mr. Gopal-swami Iyengar, the Sub-Collector of the division, gave a short and interesting speech.

Mr. T. V. Sivakumara Sastriar came next and in a happy speech, summed up the various excellences of the exhibition. He specially thanked the Rev. W. T. Scudder and Mr. Satakopachariar for the great trouble they had both taken in the organization of the exhibition; and he hoped that the exhibition would become an annual institution in Tindivanam, promising to do his best towards realizing the same. He also thanked Mr. Gopal-swami Iyengar for his valuable suggestion of vacation classes to Elementary School Teachers. The Rev. W. T. Scudder gave his hearty thanks to the President, the Sub-Assistant Inspector, the

Head Master of the A. M. M. School and all teachers present for the pains they had all taken in the matter of the Exhibition.

Doveton College.—The interesting ceremony of the distribution of prizes to the successful pupils of the College took place on the 13th instant. His Excellency the Governor presiding. There was a large gathering of ladies and gentlemen to witness the ceremony. The proceedings began with prayer, after which the Principal read the annual report on the working of the institutions, which showed good progress. After the prizes were distributed His Excellency delivered an interesting speech.

The Rev. J. Cooling then proposed a hearty vote of thanks to His Excellency for presiding and for his remarkable address, and the proceedings were brought to a close with calling for three cheers to the Governor. A holiday was announced for a day in honour of the occasion.

The Setupathi High School.—The twenty-third anniversary and prize-giving of the above institution was held on the 5th instant at 5-45 P.M., with Mr. S. Srinivasa Aiyengar, B.A., B.L., High Court Vakil, Madras, in the chair. The school was tastefully decorated and well-illuminated for the occasion. The proceedings of the evening commenced with a prayer in Sanskrit by a student.

Mr. C. Narayanaswamy Iyer, B.A., L.T., Headmaster, read the report for 1911-12. He made a touching reference to the irreparable loss which the school had sustained by the death of Mr. S. Venkobachari, the late Principal of the Madura College.

The reading of the report over, the boys of the 4th standard enacted 'Alfred the Great,' followed by recitations of small pieces.

The Chairman offered a few concluding remarks.

Mr. C. Narayanaswamy Iyer proposed a hearty vote of thanks to the Chairman and to the gentlemen present and with the singing of the National Anthem the function terminated.

Bishop Corrie High School.—The annual gathering and prize-distribution took place at the Bishop Corrie High School under the presidency of the Hon. Mr. L. M. Wynch. The hall was filled to its utmost capacity, a large number of parents of scholars, friends of the school and old students having attended, to take part in the proceedings, while needless to say, nearly all the scholars were present. Mrs. Pears gave away the prizes.

Madras Collegiate School.—The Madras Collegiate School celebrated its annual prize-giving festival, the occasion being honoured by the presence of the Lord Bishop of the Diocese. The

proceedings opened with an entertainment by the scholars. The Rev. Mr. Evans read the report. His Lordship gave an interesting speech and concluded by asking the Sisters to kindly grant the scholars a holiday in commemoration of his visit.

The Rev. S. Jenkins Evans then proposed a vote of thanks to the Bishop for his kindness in visiting them.

A very hearty cheer was given for the Bishop as he moved from his chair.

A High School for Girls in Triplicane.—The Maharajah of Vizianagaram Girl's School at Triplicane becomes a Government institution, with a new set of teachers. For the present, instruction will be given up to the III Form, and higher classes will be opened as pupils begin to join them. The school is located in the house in Big Street, newly built by the late Dewan Bahadur M. Ramaswamy Naidu.

South Indian Association.—The Annual Sessions will commence on the 29th instant. Besides the Presidential Address by the Hon'ble Mr. P. S. Sivaswami Aiyar, C.S.I., C.I.E., there will be lectures by the following gentlemen:—Lecture by Lt.-Col. C. Donovan, I.M.S., on *Kala Azar*; lecture by Mr. A. Subramaniya Aiyar, Prof. of Philosophy, Presidency College, on *Mons Berzson and Sri Sankara*; lecture by Mr. Jayanta Ramayya Pantulu Gurn, B.A., B.L., on *Judicial Procedure in Ancient India*; lecture by Dr. P. S. Chandrasekar, M.D., on *Consumption in Madras*; lecture by Mr. S. Srinivasa Aiyangar, B.A., B.L., on *The Evolution of the Indian Constitution*; lecture by Mr. K. V. Rangasami Aiyangar, M.A., F.R. Hist. S., Prof. of History and Economics, H. H. the Maharaja's College, Trivandrum, on *Old Indian State*; lecture by Mr. M. V. Kuka, M.A., on the Antiquity of the Iranian Calendar and of the Era Zoroaster.

The Taluk High School, Tenali.—A meeting was held under the presidency of Mr. J. N. Roy, I. C. S., Collector of Guntur, for the purpose of celebrating the formal opening of the Taluk High School built mainly by subscriptions among the ryots and now accommodating over 500 pupils.

The history of the school formed the subject of an interesting report by Mr. C. V. Subramanyam, Secretary of Taluk High School Committee.

The success of the entertainment was largely due to the efforts of the Headmaster, Mr. Subramanyam and his Assistants who were duly thanked by the President.

Teachers' College, Teachers' Association, Saidapet.—Under the auspices of this Association a lecture on "How to improve the status of the teachers" was delivered by Mr. A. Panchapakesa Aiyar on the 20th instant in the College Hall, Saidapet, with the Hon'ble Mr. T. V. Seshagiri Aiyar in the chair. The lecturer said that three things should be done if the

status of the teachers should be raised:—(1) The teachers should demand that their salary should be raised, (2) The managers should establish a permanent fund, and (3) Government should fix a scale of salary. He was not in favour of starting a Provident Fund for Teachers first. The salary of teachers should first be increased and the question of Provident Fund might then be considered.

Teachers should start Associations in different centres and try to improve matters through the Associations. The Hon'ble Mr. Seshagiri Aiyar remarked that Provident Fund was very necessary and asked what the teachers would do in their old age or when they were sick if there was no such fund. Government should aid the managers of schools more liberally, so that the latter in their turn might pay the teachers more liberally and make them content. Teachers should be contented before they impart to the pupils the spirit of contentment. In conclusion he said that a Teachers' Family Fund would be of immense advantage to the teachers.

Elementary Teachers' Association, Madura.—The anniversary of the Elementary Teachers' Association, Madura, was celebrated on Saturday, the 15th instant, in the Madura College Hall, Mr. N. R. Krishnamma, B.A., Assistant Inspector of Schools, presiding. There was a large gathering of teachers and students.

The meeting began with a prayer sung by the pupils of the A. M. South Gate School. The Secretary's report for the past year was then read. The number of Members on the rolls was 160. 12 ordinary and 3 business meetings were held during the year. The average attendance of members was only 85 per cent.

The Vernaculars.—A public meeting was held at the Victoria Public Hall, with Dewan Bahadur P. Rajaratna Mudaliar, in the chair, to protest against the decision of the Senate of the University of Madras in regard to the study of Indian languages in the College classes. Resolutions were passed expressing dissent with the Senate's decision, asking Government to veto it and requesting it to take such steps as to make the study of Indian languages compulsory in the Intermediate and B.A. Pass courses. The proceedings of the meeting have focussed public opinion on the matter and brought out the public resentment felt at the Senate's decision.

The Government Training Schools, Coimbatore.—Admissions for fresh batches of teachers for training at the Training School for Masters were made. There were about thirty students in the Elementary Lower Grade and about twelve in the Secondary Grade. The Government Training School for Mistresses was removed from the old Taluk Office, where it was temporarily located, owing to the extension of their old buildings.

Madura Tamil Sangam.—At a representative public meeting held under the auspices of the Madura Tamil Sangam on the 16th instant the following Resolution has been passed:—

That a memorial be submitted to the Government praying that the Government be pleased to veto the Resolution of the Senate of the University of Madras which accepted the conclusion of the Select Committee to the effect that the Vernacular languages need not be made one of the compulsory subjects in the University examination as the said Resolution is not conducive to the advancement and progress of vernacular learning and literature.

Birthday Celebrations.—The Tanjore District Conference has undertaken to arrange for Annual Birthday celebrations of prominent men from this year, and already, the Birth-day of the late Sir Justice T. Muthuswamy Iyer, K.C.I.E., was held on the 28th January last, and of the late Hon. Dewan Bahadur Raghunatha Row, C.S.I., on the 7th February last. The next turn was that of the late Sir A. Seshiah Sastrial, K.C.S.I., who, as the Dewan of Travancore and latterly of Pudukotah, had rendered distinguished services. A public meeting was held in the Porter Town Hall on the 22nd instant, which happened to be his eighty-fifth birthday, when Dewan Bahadur V. Nagamiah, B.A., F.R. Hist. S., Ex-Senior Dewan Peishkar of Travancore, Trivandrum, presided.

Mr. Montagu's visit to Colleges.—Mr. Montagu paid a visit to the Presidency College recently. On arrival he was received at the entrance by Mr. E. W. Middlemast, M.A., the Principal, Mr. W. E. Smith, Mr. R. L. Jones, Mr. Mark Hunter and Mr. J. Ramunni Menon and conducted to the Physical Laboratory, Philosophy Hall, the Botany class, and the Physics and Chemistry classes. Mr. Montagu lastly visited the Library where he spent a few minutes in examining some of the books. Mr. Montagu expressed his entire satisfaction with the arrangements and the management of the College. Prior to his departure Mr. Middlemast thanked him for his extreme kindness in visiting the College during his short stay in Madras.

After visiting the Presidency College Mr. Montagu proceeded to the Christian College where he was received at the entrance by the Rev. Dr. William Skinner, M.A., the Principal, the Rev. E. M. Macphail, M.A., B.D., the Bursar, and the professors of the college, to whom he was introduced. Mr. Montagu was then conducted over most of the classes while at work. The distinguished visitor spent over half an hour in the inspection, and before leaving expressed his pleasure at all that he had seen in the college.

BOMBAY.

A Moslem College for Poona.—It is understood that the scheme for a Mahomedan College at Poona, on the lines of the Aligarh College is being matured.

and that a Mahomedan gentleman has expressed his readiness to make a donation of 10 lakhs for founding a college if the scheme is matured.

It is proposed to extend the Currimbhai Ebrahim Mahomedan School, the foundation-stone of which was laid by H. E. the Governor in November last.

Education Grants.—Out of the Durbar grant of Rs. 50 lakhs for popular education, the Bombay Presidency was given Rs. 6,50,000, distributed as follows among different objects:—Rs. 4,36,000 for the elementary education of boys; Rs. 75,000 for the education of girls; Rs. 48,000 for hostels; Rs. 51,000 for technical and industrial education, and Rs. 40,000 for the education of Europeans and Anglo-Indians. Of these amounts Rs. 1,50,000 has been given to Municipalities for their primary schools; Rs. 1,50,000 has been utilised for increasing the output of trained teachers from the Training Colleges at Poona, Dhulia, Dharwar, Ahmedabad and Hyderabad; Rs. 25,000 for giving increased pay to teachers in vernacular schools, and Rs. 1,11,000 for other objects in connection with primary education. Of trained teachers the institutions named above will henceforth turn out 146 more per annum than they have done till now. A sum of Rs. 20,934 has been sanctioned for the entertainment of 14 Additional Assistant Deputy Inspectors of Schools. The sum of Rs. 75,000 assigned for the education of girls has been equally distributed among the four divisions of the Presidency. In Sindh, more than half of the allotment will be utilised in increasing the grants to aided girls' schools from one-third to one-half of their gross annual expenditure, and the balance will be applied chiefly to the development of the Training College for Women at Hyderabad. In the case of the Southern Division the allotment will be utilised mainly for the development of the Dharwar Training College for Women. The manual training classes in connection with the Training Colleges for Men at Poona, Ahmedabad, Dharwar and Hyderabad will get Rs. 8,000 for buildings and equipment; Rs. 6,50,000 will be given to the Victoria Jubilee Technical Institute, Bombay, for machinery and apparatus; Rs. 5,000 for oil-engine, wood-working machine, etc., at the Victoria Jubilee Technical Institute, Sukkur, and Rs. 8,500 to the College of Engineering, Poona, for equipment, furniture and books for the library. A sum of Rs. 15,000 has been reserved for the College of Commerce.

Commercial College.—A movement has been set on foot to raise a memorial to Lord Sydenham in Bombay. A subscription list is being sent round among the leading members of the Indian community. Several have promised their support to the movement and Rs. 2,13,500 has already been subscribed. The Maharaja Raj of Dhrangadhra who has given Rs. 10,000 suggests the establishment of a Commercial College. The following sums have been subscribed or promised:—H. H. the Gaekwar of Baroda Rs. 20,000 for the building fund

and two monthly scholarships of Rs. 20 each (in all Rs. 32,000); The Nawab of Junagadh Rs. 15,000; Maharajah of Bhavnagar Rs. 10,000; The Raj Sahab of Dhrangadhra Rs. 10,000; Jam Sahab Ranjitsinghji Rs. 15,000; H. H. the Aga Khan Rs. 1,000; Messrs. Tata and Sons Rs. 1,500; Sir Jacob Sassoon Rs. 10,000; Sir Sassoon David Rs. 10,000; Sir Cowasji Jehangir ready money Rs. 10,000; Sir Chinubhoj Madhavlal Rs. 10,000; Sir Shapurji B. Broacha Rs. 10,000; Sir Vussanji Trawamji Mutji Rs. 10,000; Sir Jugmohandas Varjivandas Rs. 5,000; Sir Vitthaladas D. Thakersey Rs. 5,000; Mr. Narotum Morarji Gokuldas Rs. 5,000; Mr. Herbert Greaves Rs. 5,000; Mr. Lalubhoj Samaldas Rs. 2,500; Rana of Porbandar Rs. 5,000; Raja of Rajpipla Rs. 10,000; and Nawab of Palanpur Rs. 4,000.

CALCUTTA.

A Research Scholarship.—The following graduate of the Calcutta University is granted a research scholarship of Rs. 100 a month for one year, with effect from the date on which he reports himself to the officer under whom he will carry on his work:—

Name.—Surendra Mohan Ganguli.

Subject in which research will be carried on.—Pure Mathematics, with special reference to the subject of Projective Geometry.

Place of work.—The Calcutta University Library.

The Directorship of Public Instruction.—The "Times" understands that Mr. Hornell of the Board of Education, has been appointed Director of Education, Bengal.

A New Museum at Dacca.—The Bengal Government has issued a Resolution approving the scheme of establishing a museum at Dacca for objects of historical and antiquarian interest. A large room in the Secretariat at Dacca has been set apart for the use of a museum and a representative General Committee has been nominated for the purpose of making detailed arrangements. It will probably be found desirable hereafter to connect the museum in some way with the Dacca University but meanwhile it is necessary to make provision for articles which have already been collected and which are at present stored in the Collectorate and in private houses while the establishment of a museum will stimulate and co-ordinate the energies and activities of many local workers whose labours have already produced valuable results.

ALLAHABAD.

Proposed Memorial.—An influential committee is being formed to commemorate the ten years' service rendered to the Central Hindu College and Indian education by Mr. G. S. Arundale, the retiring Honorary Principal.

Allahabad Christian College Literary Contest.—The annual literary contest of the first and third year classes of the Arthur Ewing Christian College was held in the West Hall on the 7th March. The officiating Principal was in the chair. This year the programme consisted only of declamation exercises. The Rev. Mr. Smith, Mrs. Ewing and Prof. Thompson acted as judges. There was a large gathering of students. The principal speakers were Messrs. John Rawat, Susbil Makerjee, J. N. Bannerji, Frank Rawat, and Benjamin. The subjects chosen were 'The Greatness of Lincoln', 'Vision of War', 'Speech of Spartacus to the Envoys of Rome', 'The South African Question', and 'Toussaint L. Ouverture.' Mr. John Rawat was awarded the first prize and his speech was highly appreciated. Mr. J. N. Bannerji got the second prize. Mr. Benjamin, though he was defeated, showed great preparation.

PUNJAB.

Primary Education in Sirmur.—In the celebration of his installation, the Raja of Sirmur has announced among other concessions, free primary education in State Schools.

Maharaja of Patiala's Charity.—His Highness the Maharaja Bahadur of Patiala has, on the birth of the Tikka Sahib, been pleased to make donations to the following institutions in the Panjab:—

	Rs.
Khalsa School, Gujranwala	10,000
Girl School, Kairon	5,000
Girl School, Bhasaur	5,000
Khalsa School, Pindi Gtep	5,000
Khalsa Orphanage, Amritsar	2,000
High School, Firoke	2,000
High School, Ambala	2,000
Dharamshala, Hyderabad, Sindh	2,000
Middle School, Sukho	1,000
Sikh Orphanage, Garjhak	1,000
Sikh Sewak Jatha, Maler Kotla	1,000
Temperance Society, Amritsar	1,000
Dharamshala Sant Bhai Siam Singh	500
Orphanage, Patiala	500
Sewak Jatha, Patiala	500
Total	38,500

MYSORE.

Kindergarten System.—The Government of Mysore recognizing that suitable arrangements in Mysore for the education of children below six years of age on the model of the kindergarten system in vogue in the advanced countries of Europe, America and Japan are necessary, have directed the starting of one in Shankarapur where there is already a small private school maintained by a few well-to-do gentlemen of the locality. The Government have

sanctioned the proposal of the President of the Municipal Council, Bangalore City, tentatively for a period of three years, but having regard to the circumstance that at present, the institution is required for the convenience mainly of a particular class, viz., the children of rich parents, they direct that at least half the cost be met from fees, the balance alone being borne by the Municipal funds.

School Buildings.—Provision had been made in the Mysore State Funds Budget of a lakh of rupees and of half a lakh in the Village School Funds Budget, for school buildings. The Inspector-General of Education had arranged with the Deputy Commissioners of Districts for suitable sites, and with the Chief Engineer for the construction of the buildings simultaneously in all the districts, so that the full amount of the two grants might be utilized before the close of the current official year. The lists of buildings proposed to be constructed have now been approved. The Comptroller has been requested to arrange for the transfer of necessary funds from the provisions for village school buildings in the current year's Education State Fund and Village School Fund Budgets to the Public Works Budget on requisitions from the Inspector-General of Education from time to time.

The C. E. Zenana Mission School.—There was quite a large attendance of ladies, both English and Muhammadan, at the Church of England Zenana Mission School, on the occasion of the annual distribution of prizes. Mrs. R. H. Campbell presided, and kindly gave away the prizes. After a hymn and prayer, the little girls and infants in the A class went through their musical drill very prettily. Miss A. E. Moore, the Lady Manager of the School, then read a brief report on the work of the institution during the past year.

The prizes consisted of dolls, work-boxes, bags, etc., which were the gifts of friends in England, and represented much loving sympathy. The expenses of the gathering itself were defrayed by friends in Mysore.

TRAVANCORE.

Retirement of a veteran professor.—It is understood that Mr. Maurice F. La Bouchardiere will retire from the Professorship of English in H. H. the Maharajah's College within a few weeks. The Educational Service will lose a good and popular Professor by his retirement. He has had a long and successful career, extending over 34 years, in Travancore throughout which he has won the good regard and genuine esteem of many hundreds of students. Mr. La Bouchardiere, it is stated, intends to settle down in Bangalore after he has severed his connection with the College. The Professor therefore, will be practically lost to the country where he spent the best part of his life and for

which he laboured and toiled with a willing heart, with a passionate devotion to duty and with a patriotism and loyalty which he has never bartered to the fleeting interests of faction or section. The name of Mr. Maurice La Bouchardiere will for all time, be treasured and venerated in the house of many a Travancorean.

Teachers' Examination.—It is notified that the practical examination for Teachers' Normal Certificates will be held on Monday, the 26th May 1913, at Trivandrum for all grades and at Kottayam for English Middle School, Lower Primary, Vernacular and Primary Normal Certificates.

Education in Travancore.—During the enterprising administration of Mr. P. Rajagopala Chari, its present Diwan, Travancore has made notable advance in the educational field, the policy now pursued being a combination of extension with efficiency. It has been wisely recognised that the mere spread of education, without at the same time insuring a really desirable degree of efficiency in the instruction imparted, would be a very questionable expenditure of money and energy, and so, it is now insisted upon that there should be no sacrifice of quality to quantity. At the same time, the boon of free primary education, together with the annual increase of expenditure incurred by the State, is a clear proof that the Darbar is earnestly desirous of seeing the great blessing of education extended as far as possible among the masses of the population.

COCHIN.

A Mopla School.—The Government recently sanctioned an extra subsidy of Rs. 30,000 to the Cochin Municipality for expenditure on the construction and equipment of elementary school buildings. The Council at a meeting held recently decided to construct a pucca Mopla School at Calvetty.

Scholarships.—There are at present twelve State scholarships being granted by the Cochin Darbar. In addition to the new scholarship for training in Mechanical and Electrical Engineering the Darbar have announced the following Scholarships to be awarded in 1913:—(1) One Scholarship for training in Forestry in Europe. This will commence from October next—time of return of the Agricultural scholar from Europe; (2) one Medical Scholarship for a female candidate tenable in the Madras Medical College to commence on the return of Miss D'Souza in July 1913; (3) the Technical Scholarship in Soft Wood Industry is again offered with effect from 1913, no suitable candidate having come forward in 1912.

Foreign Notes.

GREAT BRITAIN.

Congress of Historical Studies.—The Government will give a banquet at the Hotel Cecil, London, on April 3 to welcome the delegates attending the International Congress of Historical Studies, of which the King is Patron and Mr. Bryce the President. The Congress begins on April 3 and continues till April 9. Lord Beauchamp, First Commissioner of Works, is issuing the invitations to the banquet in the name of the Government. The chair will be taken by Mr. Pease, President of the Board of Education. There will be about 400 guests at the banquet, which will be followed by a reception, to which a large number of invitations have been issued.

Law Library for Indian Students.—It was announced on May 6 last, that arrangements were being made by the Secretary of State for India in Council to form a Law Library at 21, Cromwell Road, for the use of Indian students, the scheme having originated with a spontaneous offer from Sir Thomas Raleigh, a Member of the India Council, to make a gift of a part of his collection of law books. The presentation comprised some 750 volumes of English Law Reports, and it was at first proposed that the library should be named after the generous donor; but in deference to the wishes of Sir Thomas Raleigh himself it is to be known simply as 'The Law Library.' The Secretary of State made a grant for the purchase of new works, and with the sum 150 text or reference books were bought, while in addition some 400 volumes of Indian Law Reports have been transferred from the India Office library bringing up the total to 1,200 volumes. Further additions will be made from time to time in order to give comprehensiveness to the library. The formal opening ceremony took place on February 13 under the chairmanship of Mr. Mallet, the Secretary for Indian students. In addition to a large number of Indians, the company included Sir Thomas Raleigh, Mr. T. W. Arnold, Mr. O. E. Buckland (Chairman of the Managing Committee of the Library), Dr. F. W. Thomas, Professor Neill and Miss Beck. With reference to desires which have been expressed that the scope of the library should embrace non-legal departments of study, Mr. Mallet said that the Committee felt it was desirable to furnish a law library thoroughly and well with the funds at disposal, rather than to restrict its usefulness by obtaining at this stage books on other branches of study. But if generous donors presented books on other subjects these contributions would be gladly welcomed. Sir Thomas Raleigh hoped that as time went on the Indian centre would be not only of a domestic, but of a collegiate character. As the majority of young Indians in London were law students, their interests would be best served by a library of this kind. He laid emphasis on the knowledge required by a practising barrister being

superior to and distinct from the knowledge needed for passing law examinations. It has been arranged to hold moots, or mock trials, periodically, the arguments to be put by the students, under the presidency of retired High Court Judges.

Distressed Indian Students' Aid Committee.—The Distressed Indian Students' Aid Committee in the report for 1912 state that 44 applications were received but some were refused because the applicants were not students or declined to allow communication with their parents. Temporary advances were made in 27 cases, nine enabling repatriation. Advances repayable at the end of the year amounted to £305, but ultimately some of the debts will be wiped off as irrecoverable. A continuance of subscriptions is required to meet such losses and extend the Committee's usefulness.

Educational Requirements of London.—Some idea of the methods by which provision is made for meeting the educational requirements of London can be gathered from the annual estimates prepared for the London County Council by the Education Committee both under the heads of maintenance and capital estimates for the financial year ending March 1914. The General Purposes Sub-Committee, reporting on the estimates, state under the head of maintenance that the estimated gross expenditure for 1912-13 on education is £6,076,114, an increase of £271,514 over the previous year, and the estimated net expenditure is £4,247,234, an increase of

£269,674. These figures, however, include the expenditure of other Committees on education but as the estimates of the other Committees on education have not yet been presented it is not possible to give complete figures for an estimate for 1913-14. The total of the estimates of the Education Committee for the year 1913-14 are as compared with the total of those estimates of 1912-13 is as follows:—Elementary Education £4,100,620, Higher Education £934,750; total £5,044,370. Among the amounts to be voted are:—Books, apparatus, and stationery, £146,950; school-keepers and cleaning, £155,260; rates and taxes, £215,760; children's meals, £84,450; medical inspection and treatment, £28,005; salaries of teachers, £2,656,905; instruction in special subjects, £117,225; secondary schools, £213,025; scholarships, £137,690; training of teachers, £97,185; polytechnics and technical institutes, £214,890; Council evening schools, £121,365; special schools for blind, deaf, defective, and epileptic children, £134,330 and industrial and reformatory schools, £82,590. Commenting on the estimates, the General Purposes Sub-Committee state that the total estimated expenditure of the Elementary Education Sub-Committee amounts to £2,807,095, an increase of £53,795. There is an increase of £49,890 in respect of teachers' salaries. On higher education there is a net increase of £20,555. The total amount provided in the draft capital estimates for the year is £1,000,000, of which £565,000 is required for elementary education purposes, £100,000 for special and industrial schools, and £215,000 for higher education.

THE OXFORD GEOGRAPHIES:

Vol. III

THE SENIOR GEOGRAPHY

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The Educational Review.

The Government in the recent Financial Report, with reference to the Budget Estimate for the forthcoming official year, have made provision for one Professor on Rs. 500 and four Assistant Professors and a Curator to the Law College, a very much needed desideratum, especially when the Government have been working the Law College at a profit. The necessity for improving and strengthening the staff had been repeatedly brought to the notice of the Government by Mr. Nelson, the talented and the most popular Principal of the Law College. Government then did not see their way towards giving effect to his recommendations; but with a view probably, to have the whole question thrashed out, they recently deputed Mr. Nelson to visit the Law Colleges of other Presidencies and to make a report. Mr. Nelson submitted a scheme to the Law College Council which was approved by them and the Council submitted a report to the Government reiterating the urgent need for an increase in the staff to ensure the efficient working of the College. Now that the increase has been sanctioned by the Government, in the manner mentioned above, we offer our sincere thanks to the Government and would have willingly stopped here, but for the peculiar and almost indifferent manner in which the Law College affairs have been allowed to go. We regret we are constrained to observe that the way in which the two recent appointments of additional or temporary lecturers, as they may be, have been made is not such as to inspire confidence in the public mind.

The rules of the Government as regards the appointment of Professors and Assistant Professors were framed during the régime of the late Mr. Grigg who, with his usual foresight and gifted powers of administrative capacity thought that the interests of legal education required that the Law classes should be detached from the Presidency College and formed into a separate Law College with a Principal of its own. The qualifications for the College staff prescribed by these rules are to the effect that an Advocate of three years' standing or a Vakil of five years' standing should be considered eligible for appointment. About two years ago a Vakil who was only within a year's standing was appointed as an Assistant Lecturer to the Law College in the teeth of the above rule. In the matter of the second of the two appointments referred to above, from among a large number of about fifty applicants consisting of Advocates and Vakils of standing and distinction, the choice has fallen on one, whose only qualification would seem to be that he does not offend against the said rule. What exceptional merit the responsible authorities were able to discover in the two appointments referred to above, the public are yet at a loss to know. We never, for one moment, suggest or wish to be understood, that in making these appointments, the Government had no other motive but the best interests of the College. The destinies of the Law College are supposed to be presided over by a Council consisting of four Judges of the High Court, the two chief Law officers of the Crown and a distinguished Vakil of the High Court. But we doubt very much whether this august body, the Law College Council, was consulted in the choice

of these men. In the interest of Government, in the interest of the country at large, in the interest of true and genuine legal education that is quite necessary towards the up-bringing of young men as dutiful and loyal citizens of the State, we urge upon the Government the imperative necessity of appointing specially competent men to these places. The appointment of mediocre men particularly to professional Colleges does not only impair efficient instruction but also reflects a libel on the qualifications of really deserving men. The Law College Council consisting, as it does, of learned Judges of the High Court and eminent legal practitioners is in our opinion and ought to be in the opinion of all right-thinking men, the most competent body to advise the Government in the matter of appointments and other important measures concerning the Law College. If the Law College Council does not, or is not allowed to assert itself, the best course for it is to dissolve itself and save itself of a shadowy existence. The nature of these appointments and the manner in which the College has been managed recently have evoked criticism in many quarters. Fortunately, now, the Government have among their body the rare possession of one who has the largest experience of the legal profession and is an eminent judge of the sort of men that will do the best work in the College. Apparently the Council has been brought into existence for the purpose of advising the Government and the Principal in matters connected with the welfare of the College; but the Council do not seem to have done or to have been allowed to do any useful work, at any rate, to the knowledge of the public. In order to secure to the College the full advantages of the wholesome influ-

ence of the Law College Council, we have no hesitation to suggest to the kind and thoughtful consideration of Government that the Law College should be placed under the immediate control of the Government and relieved from the control of the Director of Public Instruction, who is after all, practically a layman and has to depend on others for information in matters connected not only with the Law College but with all professional Colleges. We would even venture to suggest that all professional Colleges be placed under the immediate control of the Government, a measure which will also relieve the Director of Public Instruction of a portion of his work to enable him to direct his undivided attention and energy to the general education of the Province. The Government may, as they have done in the case of the Law College, institute advisory boards of experts who may be of real help to them in the efficient management of these professional Colleges (Engineering, Medical, etc.). We are confident that His Excellency the Governor, who has already evinced a keen and abiding interest in matters educational will give his best consideration to the efficient management of the Law and other professional Colleges.

Chapter VIII lays down the methods of instruction and study.

The Dacca University Scheme. These methods are devised with an eye to economy and efficiency.

The training of students is to be effected by means of lectures, tutorial instruction, laboratory and seminar work and supervised private study. For purposes of economy the laboratory is to be a central one and the lecturing in Science is to be by University Professors and a free use is to be made of the inter-collegiate system. In Arts however, much of the work in the Junior or Intermediate stage in which the number of students would be large, the bulk of the work is to be done separately by each college, but in the senior classes the lectures are to be inter-collegiate. This arrangement is calculated to enable the Professors and their

Assistants to specialise in particular portions of the courses. In Madras where we have no such central University laboratory and where the different Colleges seem to have conflicting interests, all this seems impossible and much of the labour of the Professors and their Assistants goes to waste by one and all of them doing the same kind of work in the different Colleges. The largeness of the number of students in some of the Arts subjects such as English, may be a bar to the adoption of this method. But for most of the subjects such as History and Economics, Philosophy, and classical and vernacular languages, the various Colleges may join forces at least in the Honours classes. This is all the more desirable in Science teaching, and it is a question well worth the serious consideration of both the University and Government. Some of the Madras Colleges are unable to seek affiliation in Science subjects because they cannot afford to equip an adequate

laboratory, while the Presidency and other richer Colleges are wasting their resources in maintaining each its own laboratories—resources which might well be utilised in strengthening their professorial staffs and contributing to the payment of first-rate Professors who might be induced to come down from Europe for money as well as for love. A central laboratory for the city of Madras and a few common Professors will not interfere with the distinctive character of each College where the bulk of the instruction will continue to be given. A similar course may be followed in all centres where there are more than one affiliated college.

Another matter which calls for the notice of the Madras Colleges is the number of students in each class. The strength of the Intermediate classes in the more flourishing of these colleges rarely falls below eighty, while that of the B.A. classes in English is double that number. The Committee is of opinion, and very rightly too, that as the students in the Intermediate classes require a simpler and more explanatory form of instruction involving some degree of individual attention those classes should not contain more than 40 students. Again, in Madras, owing to the largeness of the classes, tutorial work cannot be satisfactorily done, and both the professor and the tutor do the same kind of work—each lecturing on different subjects and the latter doing very little of real tutorial work. A tutor should have small classes to deal with, but the Professor can assemble all the classes of the same year for his lectures. If tutorial work is to be satisfactorily and efficiently done the number of tutors must be considerably increased and the large classes divided into sections, each section being given to the charge of a separate tutor. The Committee propose a

very considerable measure of tutorial assistance to the Professor so that each tutor may not have more than 20 students to attend to in the Pass B.A. classes, and only two in the Honours classes in their special subjects. The question of the proportion of the number of teachers to the number of pupils is one which deserves more than a passing notice. From the latest statistics available (1912) we find that the proportion of Professors of all ranks (including Pandits) to students in the Colleges affiliated to the Madras University is 1 to 13.2. At Oxford it is said to be 1 to 7.2 and in Manchester 1 to 6.4. The Pachaiyappa's College, the Madras Christian College and the S.P.G. College in Trichinopoly are the worst offenders in this respect, the proportion in them being 1 to 25.3, 1 to 18.3 and 1 to 24.4, respectively. The Universities' Commission of 1902 recommended an average of one teacher to 15 pupils. We hope the University Periodical Inspection Commission will take this into consideration at the earliest opportunity and compel these Colleges either to reduce the strength of their classes or to add considerably to their staff.

Unlike in the Madras University ample provision is made for post-graduate study and research by the institution of the M.A., Litt.D. and D.Sc. degrees, and facilities are provided for it by means of seminars, special seminar libraries, a common University library and a museum and the granting of research scholarships. The encouragement, if it can be so called, which the Madras University has provided for post-graduate study can bear no comparison with what is proposed in the Dacca University by the provisions for the granting of the higher degrees and the other measures referred to.

Chapter IX is devoted to the methods of examinations and topics relating thereto. The system of estimating the value of answers to question papers is not to be by assigning marks to the different questions except in the Intermediate examination, but by the general impression left on the examiner after reading through the whole paper. The questions should be simple and straightforward, directed to discovering what the student knows rather than to test his ingenuity. A colloquial test in the language subjects, and a *viva voce* examination in other subjects in the case of examinations above the Intermediate are recommended to be used only in doubtful cases to determine whether the student should be held to have passed, or in what class he should be placed.

Chapter X deals with the most important question of the number and qualifications of the staff and the work to be expected of them. The proposal is to keep up the present division into officers of the Indian Educational Service, Provincial Educational Service, Subordinate Educational Service and Junior Assistants (i.e., young graduates appointed on temporary duty). Such a classification or something similar to it seems to us necessary from the nature of the case, but we hope that Indians educated and trained in England and not in any way inferior to Englishmen in attainments—men like Mr. Paranjpye, Dr. Bose, Dr. Ray and others—will be freely admitted into the Indian Educational Service and not relegated to the Provincial Service simply because they are Indians. The Committee calculate that excluding the Principals of Colleges there would be required 22 I.E.S., 43 P.E.S., 24 S.E.S. men and 34 J.A.'s for all the subjects both in Arts and Sciences. What we attach more importance to than the number

is the question of qualifications of the I.E.S. men. The Committee is evidently convinced that the present system of recruitment for the professoriate in Government Colleges does not secure the best men possible, and on this point public opinion is quite in agreement with their views. But the causes for this state of things are, we think, not exactly what the Committee assign. In their opinion "Young Englishmen however brilliant, who, having only just finished their examinations and started original work, come out to India, find in many cases their enthusiasm weakened by the lack of an inspiring environment and their difficulties exaggerated by the absence of the accustomed facilities and the help of the older men." The Committee therefore recommend that generally men of about 40 years of age should be appointed, as younger men will not have had the necessary experience, and that at least at the outset, a limited number of these should be men of eminence who have made names for themselves in Europe, whose services are to be got on special terms on salaries of Rs. 2000 or even more *per mensem* if necessary. The advantage of getting such eminent men is that they will serve "as a connecting link with Europe and so assist in keeping the University in touch with other centres of learning and research. They will put energy and high character into all branches of the teaching of their subject. They will in fact teach the teachers—the most important branch, perhaps, of the work of a modern professor." We hope these recommendations will be carried out in their entirety.

The present method of recruitment has given no satisfaction because so far from brilliant scholars being selected, the young men

sent out are not even third-rate men, and the principles which guide the Secretary of State in making the selection are not patent. People therefore suspect that nepotism prevails in this matter in the India Office. It is therefore desirable in our opinion that vacancies should be widely advertised in England and the best men available, men who have had distinguished University careers and have already had some experience in carrying on research work in England, should be appointed on salaries sufficiently attractive and on short terms if necessary. Young men fresh from the Universities may be appointed but they must be selected by a Board appointed for the purpose in England consisting of Professors of English Universities, and they must be made to visit Europe every four or five years and keep themselves in touch with the most up-to-date developments in Science in that country. They may be granted even their full salaries during these periods provided they produce satisfactory evidence of their diligence in this respect. We want as many such Europeans as possible in the professoriate provided they are men who will sympathise with the students in all their difficulties, and not develop Bhabhism, but associate with the students in and out of college as far as possible. Eminent men should be secured regardless of cost for the teaching of Sciences, History and Economics and English. We would recommend that all second-grade colleges should have at their head Englishmen or Indians trained in England or other European countries. It is only then that University education in India can come into line with that of the modern civilized countries of Europe and America.

The other noticeable point in this chapter is the classification of the whole teaching

staff into (1) Senior University Professors, (2) University Professors, (3) Professors, (4) Assistant Professors and Demonstrators, (5) Junior Assistants. A Senior University Professor is the Chief Professor of a subject in the University to be appointed by the Chancellor from among the University Professors. A University Professor is defined as a Professor who takes part in post-graduate instruction and on whom the title is conferred by the Chancellor. The term Professor used without qualification denotes the senior teacher of a subject in a college in which that subject is taught up to the B.A. stage. The term Junior Professor or Assistant Professor denotes the other permanent members of the staff according as they are, or are not, of the status of an officer of the Provincial Educational Service. Besides these there are to be Demonstrators and Junior Assistants. These last are young graduates, i.e. M.A.'s and M.Sc.'s and D.Sc.'s appointed to take part in the work of instruction, especially tutorial work, for the temporary periods of three years or until they secure employment outside or are absorbed into the colleges. This, we consider, is a very useful arrangement both from the point of view of the young men themselves and from that of the University. As pointed out by the Committee, the employment of such men will enable the Colleges, by increasing the proportion of teachers to students, to lessen the size of the junior classes and to give a larger measure of tuition in the senior courses, without incurring the enormous expenditure of making large additions to the Indian and Provincial Services. There is a loud complaint that the Educational Department in Madras, or for the matter of that in the

other Presidencies, does not attract the best talent from among the Indian University men. The practice here recommended would, we think, go some way in remedying this evil if Government would institute a large number of scholarships and choose men from among these junior assistants of the colleges to go to England and study in the English and other Universities for two or three years the latest methods of teaching and of inspection on the condition that they should serve in Government or Aided Colleges in the capacity of teachers or in the Inspectorate. Of course, in their case the age limit of 25 for employment in Government may be exceeded. The money thus spent would be certainly well spent. Besides, Aided Colleges are sure to have recourse to these junior assistants or may be compelled to do so for recruiting their staff and will be obliged to offer them larger salaries than they get as junior assistants and better prospects of promotion in the future, and this will indirectly improve the position of those entering the teaching profession even in private colleges which are now generally run on the 'cheap' principle.

Chapters XI and XII deal with Accommodation and Equipment and Fees and Scholarships. We do not propose to enter into the details of these subjects as they are not likely to interest our readers in this country.

Chapter XIII speaks of the Residential System. The Committee are of opinion that the new University will not fulfil its purpose unless it provides for the residence within the colleges of all students not living with parents or duly authorised guardians, and even this latter privilege they would limit by special conditions such as that the guardian should be such as are approved by the

College authorities as a fit and suitable guardian, and that in admitting students preference should be given, up to the limit of accommodation, to those who intend to reside in the Colleges. These rules as well as those proposed in the following chapter for discipline are in our opinion very necessary in the interests of the students, and it appears to us that the theory put forward by Sir Gurudas Banerjee that the residential system in Colleges and the discipline it involves are calculated to make the boys less fitted for withstanding the temptations of the world in after-life is a very novel one. His idea is that to students life in the midst of unwholesome surroundings and exposed to all kinds of temptations and hardships is the best preparation for the world they will have to enter. This is the theory of the survival of the fittest, carried to an extreme, and overlooks the fact that such a process of natural evolution involves much unnecessary waste of life, and that in the case of human beings their high intellectual development is intended as a means of preventing such waste. Dr. Clouston in his 'Hygiene of Mind' says that fifteen to twenty-five is an age of great mental and moral changes. It is more dangerous for a young boy in these 'maddest-years' of his life and at a time when his character is in the process of being formed to be exposed to all the temptations and hardships of life than in later years when his character and habits have been formed by the regularity and discipline of a college life and he is better equipped morally, physically and intellectually to withstand those temptations. Even in ancient times students are said to have lived with their *Gurus* in *Asramams* away from towns and their ways, and it is only after their education was complete that they entered the world as house-

holders. Thus whether we take our ancient and Eastern, or the modern and Western ideal of student life, the residential system is an important feature of it. The only other objection to the system is that it may be too expensive for the student of average means. But according to the scheme proposed, no rent is to be charged for the hostel rooms and therefore, the resident student has to pay only the actual cost of his feeding with an addition of Rs. 2½ per mensem towards the expenditure incurred for servants, upkeep of furniture and of kitchen and dining utensils, lighting, water, sanitary arrangements and medical attendance. Besides this, a large number of scholarships and free studentships are provided to enable very poor but deserving students to have the benefit of College life. These provisions, we think, are sufficient to remove this objection.

The last subjects we will deal with are those of physical training and the social life of the students. The Committee provide for a regular course of physical education compulsory for every student. The system recommended is that followed in the leading American Universities combined with the athletic advantages of Oxford and Cambridge. Every student is to receive individual care and training suitable to his constitution. A University Professor of physical education who is to be a medical man and the requisite number of assistants are to be appointed for this work. Every student will be examined on entering the University as to his health and physique and if he is found unfit in any way, special exercises of a therapeutic kind will be prescribed for him. Facilities are given for all kinds of out-door sports including swimming, and a record of the physical history of every student is to be kept. Social life is

to be promoted by means of a Club House for Professors, a Union and a Debating Society for students and an Amateur Dramatic Club.

We do not propose to enter into the details of the remaining chapters which deal with the special colleges for women, for well-to-do classes, for Islamic studies, for Engineering, etc., and with the sites, plans and cost of the buildings proposed.

We have surveyed the main distinguishing features of the scheme and it is our deliberate opinion that its aim is to remove some of the evils operating to make our older Universities inferior to those of other countries and inadequate to meet the special needs of our country. On the whole it is a noble scheme nobly conceived, and bears evidence of great care and an earnest desire on the part of the Committee to evolve a plan suited to Indian conditions and combining as far as possible, the advantages of the modern and the ancient Universities of the West, and as we remarked in the beginning, if the Government accepts the Committee's report in all its main features and eliminates therefrom the College for the well-to-do classes, we have no doubt the University sketched out will, in course of time, become to India one of its proudest possessions and a standing monument of the beneficence of the British rule in the country.

The Lord Chancellor delivered a speech at Manchester on January 10, chiefly dealing with education. He declared that education was the most

urgent of the social problems to be taken up for solution. In England the question of public education is hopelessly mixed up with arid religious controversies—a state of affairs

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which Government officers and others are trying hard to introduce into India from a foolish notion that the teaching of formal religion will promote loyalty, whereas it is as likely to promote the opposite. Lord Haldane's great ideal is the democratization of education. This is to be achieved by the extension of the work of—to use the luminous phrase invented by the Lord Chancellor—the civic Universities. Lord Haldane comes "from a country where democracy is very largely in evidence" and where there is "a University for every million and a quarter people." England is very slowly following this lead not by means of the ancient Universities of Oxford and Cambridge which are mainly for the Brahmins of England but of the modern Universities of Manchester, Liverpool, Leeds, Sheffield, Bristol, Durham, etc.,—real democratic institutions for the people. These Universities are serving to break down "the barriers between class and class." In India it will be centuries, we fear, before each important town will have its own University suited to its own local conditions and real centres of light and leading. What faint University education we have had till now is the real and the sole cause of whatever progress we have made. And it is the widespread of University education in the future that alone will raise the country and solve its many pressing social and political problems.

As in England, so in Germany, there is a widespread dissatisfaction with the aims and achievements of school education.

The complaint in Germany that the school-boy's head is burdened too much with learned lumber, and that he is not trained in self-reliance and initiative. This has led to the formation of a league for school reform and

the advocacy of the *Arbeitschule* or the work-school in contrast to the *Lernschule*. In the new model schools the pupils do not watch the master performing experiments as the ignorant mob watches a professor of legerdemain, but the pupils work for themselves; wood workshops are provided where pupils are encouraged to do what work attracts them; the history teaching is such as will evoke the interest of pupils in the investigation of local history; in the literary lessons, the active co-operation of the pupils is solicited. We in India can but read of these things with a sigh. For we have no money to organize our work even in far-off resemblance to modern lines, what with our illiberal Grant-in-Aid Code so desperately anxious to cut down grants every three years and with the disinclination of the people to pay for a really efficient education. The average schoolmaster has neither the ambition to learn modern methods nor the self-reliance to rise independent of departmental leading strings and the interference of ignorant parents.

1. The Resolution of the Government of India,* dated the 21st February 1913, forms the first fruits of the King-Emperor's announcement at the Delhi Durbar of his "wish that there may be spread over the land a network of schools and colleges." To enable that wish to materialize, the Government of India announces that it is going to give large grants from Imperial revenues to Local Governments to "extend comprehensive systems of education." Each province is to develop on its own lines. So far very good. But at

* Reproduced in *extenso* elsewhere.

the same time the Imperial Government will lay down general principles in its review of general educational policy. Some of these "principles" as laid down in this Resolution we should like to criticise. According to the Government of India, the "formation of character" is to be "the main objective" of education in the future. We protest most strongly against the assumption that education in the past has not led to the "formation of character." On the contrary, we are of opinion that the only benefit of education of the past sixty years has been a great elevation of moral tone which is manifesting itself in a very great diminution of the social vice, an increased purity of administration, a daily increasing appreciation of national as opposed to parochial patriotism, a real desire to attempt to break absurd, old-world, social conventions which throttle morality and altruism—if this is not "formation of character," we do not know which else is. It is in the field of intellectual creative effort that our education has miserably failed—not in the moral sphere.

2. The anxiety of the Government to compile moral text-books based on Direct Religious and Moral Instruction. Sanskrit, Arabic, Persian, etc., is rather difficult of explanation. Unfortunately some of our leaders of public opinion endorse this idea of "direct moral and religious instruction." As it is, there exist at present innumerable agencies and opportunities for children learning the legends and folk-lore. The grand-mother, the Pundit, the Moulvie, recitations at fairs and festivals, musical expositions of myths called Harikatha, we have got these galore, without the patronage of

Government. The *Iliad* and the *Odyssey* were read at the Panathena for these epics embodied Hellenic national ideals, and glorified the triumphs of Hellenism against the barbarism of Asia. The *Ramayana* which glorifies the Brahmin ideal of asceticism will now be expounded in schools in the interests of Hindu national morality, to prevent the lamentable "tendency of existing systems of education to develop the intellectual, at the expense of the moral and religious faculties." The modern psychologist will laugh at this talk that smacks of XVIII Century Psychology.

3. There is much in this statement of policy that reads like a School Pious Expressions of Opinion. Debating Society's paper on Education. The Government place on record remarks about hostels, school-buildings, traditions, hygiene, etc., which are so frightfully commonplace that we wonder that the Imperial Government has thought it necessary to lecture to Local Governments about them. This portion of the statement looks like a Secretariat summary of a number of popular addresses on educational aims and ideals and serves little useful purpose. Whoever denied that schools required "recreation grounds, gardens, gymnasias, reading rooms, common rooms, etc.," that "provision should be made for higher studies and research," that "among the essentials are good libraries, laboratories and collections, ample leisure and freedom in study, systematic collaboration of Professors and students, an atmosphere engendered by the simultaneous working of many minds on numerous but inter-dependent branches of research." Do we want a G.O. to tell us this?

4. Now we come to the "business" side of this G.O. The Government promises an expansion of the effort to break down illiteracy and announces its unhesitating acceptance of the view that primary education has a "predominant claim upon the public funds." But when the Government says that "it is not practicable at present in most parts of India to draw any great distinction between the curricula of rural and urban primary schools," we are unable to comprehend why. The bulk of India lives in villages and the main industry is agriculture. Hence schools in villages should be so organized as to evoke in village lads an intelligent interest in the occupations at his doors and not to turn them into clerks who despise industrial work. At present village schools aim only at the attainment of literacy and do not provide education that can make the village lad's life more efficient than it would otherwise be. The real reason why schools for literacy and not schools for education (we deliberately use education as antithetical to literacy) are alone possible in villages is this, that the Government regards Rs. 12 as suitable salary for a trained teacher who may be called upon to instruct 50 pupils. A man who may be called upon to cook for 50 people, will charge four times Rs. 12 per month! It is this miserable rate of pay, less than that of a head peon that is the most depressing feature of village school education.

5. We do not propose to take up all the questions dealt with in this Government Resolution. But we cannot refrain from pointing out what we regard as the very baleful spirit of patronage

of Orientalia evinced by Government and applauded by a small section of pseudo-nationalists. These latter are good-natured gentlemen who are totally ignorant of the splendid editorial and research work in Sanskrit done in Germany and in recent days in England and France and the United States and who therefore believe that Westerners have everything to learn and nothing to teach us in matters Sanskritic. It is the natural outcome of this belief that special protection should be afforded to Pandits. We quite agree that Pandits should be given a living wage but when this new-born love of Pandits goes hand in hand with the policy of depriving the country of the service of modern German and English scholars we feel that when we want bread we are given stone. How is it that scholars, profound and sympathetic, like Cowell, Bühler, Keilhorn are not nowadays imported into India? How is it that the Registrar of the Calcutta University is the solitary relic of an extinct species? By all means, pay Pandits to keep them alive, but give us scholars to teach us modern methods for modernism alone can save India. Mediævalism we have enough and to spare.

Sir William Ramsay and Professors Collie and Patterson recently read two papers at a meeting of the Chemical Society which form a notable contribution to the newer school of physical thought. In the opening years of this century Sir William Ramsay and Mr. Soddy proved the indestructibility of the atom—about which Tyndall and Huxley used to speak so much—was not a fact, by their discovery that the element radium spontaneously degenerated into helium and radium emanation; six years later

copper was subjected to the action of radium emanation and a part of it was found to be changed to lithium; similarly silicon as well as thorium yielded carbon dioxide. Radium emanation or niton was then found to be "extraordinarily energetic, more so than any other known substance, so that a cubic centimetre of it gave more than three and a half million times the energy of a cubic centimetre of explosive gas." When the emanation decomposed, 6 per cent. of the energy of the emanation appeared as β -rays; but as it was difficult to determine whether it was possible to find signs of chemical transformation through the β -rays, Sir W. Ramsay made the attempt with old X-ray bulbs. On heating them to 300° and collecting the gases, he found they showed the spectrum of helium and neon. Whence the helium? "It might have been derived from the electrodes or from impact with the cathode or anticathode or from the impact of the cathodic rays with the glass." Moreover water treated with the radium emanation produced neon, suggesting the equation, helium (4) plus oxygen (16) equals neon (20). Professors Collie and Patterson starting from different points of investigation and performing experiments too complicated to be described here, arrived at the same result. The upshot is this—that the experimenters assisted at the artificial production of elements of low atomic weight. This is the most momentous discovery of these days in which great discoveries follow each other in mad haste.

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PHONETICS AND ITS APPLICATIONS.

PHONETICS is the science of pronunciation, the science which deals with the analysis and classification of speech sounds and their distribution in connected speech.

The most widely known and on the whole the most important application of phonetics is its application to the study of modern foreign languages. The importance of the science here lies in the fact that it enables us to learn to pronounce foreign languages with great correctness, with far greater correctness than is possible by mere imitation.

It is a fact sometimes overlooked that the work of learning to pronounce a foreign language falls into two distinct parts. In the first place the student must learn to form

and reproduce readily the speech sounds occurring in the language, and in the second place he must learn to use the right sound in the right place.

The correct formation of the sounds is best acquired by careful imitation of good speakers combined with a study of phonetic theory. Ability to use the right sound in the right place in connected speech is arrived at by making use of phonetic transcription.

An illustration of the use of phonetic theory is found in the vowel sound occurring in words like *saw*, *short*. This sound is rarely pronounced correctly by Indians, but the correct pronunciation may easily be attained by observing the position of the lips. The lips should be very much 'rounded,' that is, drawn together so that the opening between them is quite small and as nearly round as possible. As this lip position is unnatural to many Indians it is often useful to practise lip exercises with the object of cultivating facility in this use of the lips. Such are:

u : i : u : i : u : i :
u : e : u : e : u : e :
o : a : o : a : o : a :*

* The phonetic symbols here used are those of the International Phonetic Association. u : is the vowel in *soon*, i : the vowel in *see*, e : the vowel in *bird*, o : the vowel in *saw*, a : the vowel in *calm*; the : indicates length of the vowel.

In practising these exercises care should be taken that the whole of the work is done by *horizontal motion of the corners of the lips*. There should be no vertical motion of the lower jaw. The tendency to lower the jaw for the i:, e: and a: may be corrected if necessary by holding the end of a pencil between the teeth during the exercise.

The use of *phonetic transcription* is exemplified in the two pronunciations of numerous small words such as *and, of, but, from, have*. In some cases, as for instance when pronounced by themselves, these words have strong vowels, *and* rhyming with *hand*, *of* having the same vowel as *not*, etc. In other cases, however, these words are pronounced with a very short indistinct vowel identical with that heard in the first syllable of *about* (often called the 'neutral' vowel; phonetic symbol e). The following are examples of sentences in which the above words have this vowel:

Father and mother,
The king of England,
All but one,
Away from London,
I should'nt have thought so.

It is very rare to find Indians who use this 'neutral' vowel correctly. They generally use strong vowels everywhere. As no simple rules can be given for the use of the neutral vowel, the fault can only be corrected by continual reading of phonetic texts. By this means the student gradually gets to know the circumstances under which such words should have strong vowels and the circumstances under which they should have the neutral vowel.

It should be observed that a knowledge of phonetics and the methods of applying it to the study of foreign languages is parti-

cularly valuable to explorers, missionaries and all others who have to learn remote and difficult languages. A good training in general phonetics will enable a person to acquire a good pronunciation of such languages even if there are no satisfactory books and no good teachers. A person who has had such training can analyse for himself the pronunciation of the language he is studying, and devise his own exercises for learning to pronounce the difficult sounds.

The writer has it on good authority that missionaries sometimes go to China for several years, and after studying the language the whole time, are still unable to make themselves understood and have to give up the language in despair. That such a state of things can exist cannot but fill a phonetician with amazement. From personal experience with the Cantonese dialect of Chinese the writer is able to say with confidence that a phonetically trained student can acquire at any rate a perfectly intelligible pronunciation of this difficult language with a few weeks' systematic work.

It should be observed further that a thorough knowledge of phonetic theory and experience in the use of phonetic transcription are absolutely essential for those who wish to take down in writing languages which have hitherto not been written or which have hitherto had no fixed orthography. Much harm has been done in the past by missionaries and others attempting to write down such languages without proper knowledge of phonetics. The result has been that the systems of writing adopted have often been not nearly so good as they might have been, and have sometimes been actually misleading or erroneous in some respects.

The writer would here like to urge the desirability of applying phonetics systematically to the study of Indian languages, not as they theoretically *ought* to be spoken but as they actually *are* spoken in ordinary conversation. What is wanted is that the formation of each of the sounds in the ordinary spoken form of each language should be carefully described, diagrams being drawn when necessary to show the correct positions of the organs of speech. When the formation of each sound has been determined, the appropriate phonetic symbols should be assigned to them and passages of a conversational style should be written out in phonetic transcription. It is suggested that for the sake of uniformity the recommendations of the International Phonetic Association with regard to the use of phonetic symbols should be adopted. These recommendations will be found in a pamphlet entitled "The Principles of the International Phonetic Association" (obtainable free of charge from D. Jones, University College, London W. C.). Such phonetic analysis would prove an incalculable boon both to Europeans desirous of learning to speak Indian languages and to Indians wishing to learn to speak languages of other parts of India.

Besides being of assistance in connexion with the teaching and learning of foreign languages, phonetics has various other uses. An application which is much in vogue in England at the present time is its application to the study of the mother-tongue. In England people have the idea, rightly or wrongly, that certain forms of pronunciation are good while certain others are bad. Thus most educational authorities regard Cockney as being bad, and it is a fact that cannot be disguised that a Cockney pronunciation may be a serious hindrance to a person in life. By means of phonetics, those who speak with Cockney or any other undesirable

pronunciation can learn to change their pronunciation if they wish, and adopt the form which is regarded as a better standard.

Phonetic transcription has also been used with success for the purpose of teaching children and illiterates to read. It is possible to teach an average child, at the ordinary age at which children start reading, to read phonetic texts pretty fluently in about two months. The child who has been thus taught has a considerable advantage over other children. He is able to go on improving his mind by reading* during all the time that the other children are struggling over the inconsistencies of conventional spelling.

Of course the transition to ordinary spelling has to be made sooner or later, but practical experience has shown that this transition is not nearly so formidable as might appear to those who are unfamiliar with phonetic methods. The actual result arrived at by those who have tried the experiment is that, in the end, the children who have learned on this method actually write in ordinary spelling more correctly than those who have never seen anything but ordinary spelling†.

Phonetics may also be used with advantage in connexion with the teaching of elocution.

* There are numerous suitable books; see under the heading Phonetic Reading-matter in the bibliography at the end of this article.

† See particularly V. Partington, *The Transition from Phonetic to Ordinary Spelling* (published by the International Phonetic Association, price 4d.) Miss Partington says (p. 1): "If the transition from the phonetic script to the ordinary spelling is carefully worked out, the children who have been trained on phonetic lines from the beginning invariably make better spellers in the end than those who have been so unfortunate as to have had no phonetic training at all." See also J. Spieser *Ein klassenversuch* (Leipzig, Scheffer), and *Das begriffliche Lehrverfahren insbesondere beim Lesen-lehren* (same author and publisher).

Pronunciation varies very much with the same individual according to the rate of speaking and the circumstances under which he is speaking. It is essential that the elocutionist should understand and study these differences, and he will find phonetics of the greatest assistance to him in this study*.

Similar considerations apply to singing. The pronunciation of English used in singing differs very much even from that used in the most careful style of speaking, and still more from the pronunciation used in conversation. Those who learn singing generally have to acquire the sounds which are recognised as correct or desirable in good singing simply by imitating their teachers. The same results may, however, be attained much more easily and much more surely by the study of a little phonetics.

Phonetics is further of the greatest importance to students of philology. Philology is the science which deals with the history of spoken words. Without phonetics philology is apt to degenerate into the history of written symbols. We still occasionally come across students who repeat in parrot fashion that "h became g by Verner's law" and that "z became y in vulgar Latin" and can tell us things about "closed e's" and "open g's" and "palatal k's" without knowing in the least what sounds are represented by these letters. Such cases are now fortunately the exception. Our best teachers now realize that philology *must* be based on phonetics. Students should be able to pronounce all the sounds with which they have to deal, and should be able to draw diagrams of the

* See C. M. Rice, *Voice Production with the aid of Phonetics* (Cambridge, Heffer).

organs of speech to illustrate the principal sound changes†.

In conclusion it may be well to give a few indications of the extent to which phonetics is at present being used in England. Phonetics is used not only in Universities and Training Colleges but also very widely in schools. Information with regard to this will be found in the Board of Education Circular No. 797 issued last summer. The appendix to this circular is particularly worthy of attention. It gives the actual time-tables and syllabuses of modern language instruction in several of the best schools.

In one of our Universities, Belfast, phonetics and the use of International Phonetic transcription are compulsory for all students taking French. In Scotland phonetics is a compulsory subject for all students in Training Colleges. In London the London County Council recommends all the modern language teachers in its schools to become proficient in phonetics, and provides free instruction in the subject for them.

Much other interesting information with regard to the extent to which phonetics is used will be found in a pamphlet entitled "*The Means of Training in Phonetics available for modern language teachers*" by L. H. Althaus (published by the International Phonetic Association, price 5d.).

The following is a list of works which may be found useful by those interested in the subject. (In those marked * the transcription of the International Phonetic Association is used. Those marked † are suitable for use with children).

† e.g., to show how the Old English vowel in words like *while* [i:] could not possibly have arrived at its modern form [ai] without passing through the value [ei].

On the Use of Phonetics in Language Teaching.

H. Sweet, *Practical Study of Languages* (Dent, London, 3s. 6d.)

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* F. Rausch and D. Jones, *Sound Charts* (London, Dent, 12s. 6d. the set of 9).

* D. Jones, *English Speech Sounds*

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* W. Viator, *Lauttafel* (English, French, German) (Marburg, Elwert; paper 2s. each, on linen 4s. each).

The names of numerous other useful books will be found in the bibliography contained in the abovementioned "Principles of the International Phonetic Association."

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THE IMPERIAL GOVERNMENT ON EDUCATION.

INTRODUCTION.

The recent Resolution of the Government of India on the subject of educational policy is bound to rank with some of the epoch-making documents in the History of Indian Education. If Macaulay and Lord William Bentinck are remembered as the pioneers of Western Education in India, the name of Lord Hardinge will go down to posterity as that of a statesman who settled it on a wider and more organised basis. Nothing has been more apparent in the work of Lord Hardinge, since he took up the onerous duties of the Viceroyship of India, than his strenuous endeavours in the cause of educational progress. The movement to start a residential University at Dacca, the practical sympathy extended to the two great national schemes of the Hindus and the Muhammadans for communal Universities, the attention bestowed on the question of the education of the masses, and the special grants that have been pouring in upon the Provincial Governments from time to time, testify to it in unmistakable form.

THE FORMATION OF CHARACTER.

It must be an interesting task to examine the resolution, with a view to appreciate the new

lines of development that have been suggested to those engaged in education and estimate the value of any work that may be entered upon in such directions. The most pressing of Indian educational needs is recognised to be the formation of character. The Government is only prepared to watch the experiments in moral education that are now being made in various parts of the country maintaining an attitude of strict religious neutrality. It is doubtful if the Government of India is right in thinking that the tendency of the existing systems of education in India is to develop the intellectual at the expense of the moral and religious faculties. But there cannot be any hesitation in subscribing to the ideal set forth by the Government, that in the forefront of their policy should be placed the formation of the character of the scholars and the under-graduates under tuition.

Allied to the question of the imparting of instruction in right conduct, is the contemplated creation of circumstances that will tend to moral purity. The supply of residential accommodation to the pupils in High Schools and Colleges is thus given a deserved prominence and the wholesome influence exercised on the inmates of hostels, by persons of character entrusted with the work of looking after them, will be among the most priceless benefits of the new system. It has been a long recognised truth that the physical surroundings of any being have a striking influence on his character, and the claims of sanitation and of general orderliness are also pressed by the Government for the same purpose. It is a wholesome idea indeed that the principles of health and sanitation should be inculcated in the pupils' mind as early as possible, and the Government has therefore wisely resolved that the work should begin even in the Elementary classes.

THREE CARDINAL PRINCIPLES.

After this preliminary survey of the conditions tending to improve character, the Government

passes on to a consideration of some cardinal question in relation to educational advancement in India. The following principles are laid down for future guidance:—

(1) The steady raising of the standard of existing institutions should not be postponed to increasing their number when the new institutions cannot be efficient without a better-trained and better-paid teaching staff.

(2) The scheme of Primary and Secondary education for the average scholar should steadily, as trained teachers become available, be directed to more practical ends, e.g. by means of manual training, gardening, out-door observations, practical teaching of Geography, school excursions, organised tours of instruction, etc.

(3) Provision should be made for higher studies and research in India, so that the Indian students may have every facility for higher work without having to go abroad.

The first of these principles takes a note of a real danger to the cause of education, which would injure it effectively, whenever it is allowed to be guided by idealistic enthusiasts, who are lured by the glamour of a mere increase in numbers. Sufficient emphasis cannot be laid on the idea embodied in the second principle that the ends of Primary and Secondary education must be made more practical. One has only to ponder for a moment on our educational system, to see how far it is from fulfilling Herbert Spencer's ideal of fitting every student for 'complete living.' Even the classes which can afford to indulge in what may be called the luxuries of education have often regretted the want of practical elements in education. The want is rendered much keener in the case of people who have to face the hard realities of the world immediately after leaving the class-room. The son of a merchant or a manufacturer, would hardly pick up anything that will be of special use to him in after-life, from the system of

education now obtaining in India and the sooner it is remedied, the better will it be for Indian education. The Government will not have to complain about the indifference of the community at large in these matters, with the same degree of vehemence and bitterness with which it does it at the present day. The third principle, of affording opportunities for research and higher study is only the necessary conclusion to the long series of efforts that have been made in this country during the last one century to introduce higher and higher classes of study. Though it must be admitted that for a long time to come the countries of the West must necessarily be in advance of Indian Universities in facilities for research, efforts must be made to raise the level here gradually, so that in course of time, education in India will not imply any stigma of inferiority, in even the most unsympathetic quarters.

ELEMENTARY EDUCATION.

The possible operation of these principles in the corresponding stages of Indian Education are dealt with in the next part of the document. It is satisfactory to see the Indian Government recognise the pressing needs of Elementary Education,—it proposes, in effect, to introduce the principles of Free Education. Special solicitude is to be shown to the poorer and more backward classes. Attention must also be bestowed on some new features which are sought to be introduced. Indigenous schools of the old type are also to share in the patronage of the Government. An attempt is to be made to regulate the courses of instruction in rural and urban areas, to suit the special requirements of village and town-life. Better facilities for the training of teachers, and for a periodical refreshment of their educational experiences are other noteworthy features of the scheme. The low financial status occupied by teachers of Elementary schools in the country has long been a disgrace to everybody concerned with them. But thanks to the generous

and practical sympathy of the present Viceroy, there is to be an appreciable improvement. The gladdening declaration has gone forth: 'Trained teachers should receive not less than Rs. 12 per month, special rates being given in certain areas. They should be placed in a graded service and they should either be eligible for a pension or admitted to a provident fund.' The message will cheer many an unfortunate soul, toiling for the very necessities of life, even when rendering to the community the valuable service of educating its young minds. Vernacular schools are also to be pressed into service, to subserve the work of expansion, and there is to be an extension of the benefits of education on a very large scale. It may not be difficult to realise the hope: 'It is the desire and hope of the Government of India to see in the not distant future some 91,000 Primary public schools added to the 1,00,000 which already exist for boys and to double the $4\frac{1}{2}$ millions of pupils who now receive instruction in them.' The claims of Female Education have not been forgotten and the Government of India draw particular attention to the necessity of making the curriculum somewhat different and more practical than that obtaining in boys schools. The larger use of women-teachers and the securing of continuity in control and inspection are other reforms that have been suggested.

SECONDARY EDUCATION.

Those who have been fighting for a more adequate support of private secondary institutions will welcome the Government's pronouncement that in accordance with the recommendations of the Educational Despatch of 1854 and the Education Commission of 1882, the work of Secondary Education must be left as far as possible to private enterprise. The Grant-in-Aid rules are to be revised so that each school which is recognised as necessary and conforms to the prescribed standards of management and efficiency obtains the special assistance which it requires in order to attain the fullest measure of

utility. The claims of a complete School Final Course, freed from the domination of examinations are urged, but we do not know if it is practical to attempt the examination of individual candidates in schools, by the Inspecting agency, with a view to examine and regulate the course. The expenditure of money in that direction, for which the Government seems to be prepared will only result in the waste of public revenue on a measure which seems destined to fail, owing to its extremely impractical nature. The practical recommendations of the Government are however, as follow, and every one of them is calculated to advance the cause of Secondary Education:—

(1) To improve the few existing Government schools by (a) employing only graduates or trained teachers; (b) introducing a graded service for teachers of English with a minimum salary of Rs. 40 per month and a maximum salary of Rs. 400 per month; (c) providing proper hostel accommodation; (d) introducing a school course complete in itself with a staff sufficient to teach what may be called the modern side with special attention to the development of an historical and a geographical sense; (e) introducing manual training and improving science teaching.

(2) To increase largely the grants-in-aid in order that aided institutions may keep pace with the improvements in Government schools on the abovementioned lines and to encourage the establishment of new aided institutions where necessary.

(3) To multiply and improve Training Colleges so that trained teachers may be available for public and private institutions

(4) To found Government schools in such localities as may, on a survey of local conditions and with due regard to economy of educational effort and expense, be proved to require them.

TECHNICAL AND PROFESSIONAL EDUCATION.

Quite a number of interesting and valuable suggestions have been made with regard to the

development of Technical and Professional Education of all kinds. The Government has undertaken an enquiry into the improvement of the conditions of technical and industrial education. It is interesting to note that institutions of all grades relating to the class are to be remodelled, so as to bring them as near Indian needs and conditions as possible. It is hoped that then at least, the interest of the Indian community will be evoked and Indian capitalists will be persuaded to take advantage of the products of such training.

Many an enthusiast of art-education in India has noticed the great gulf that exists between the artistic traditions of the nation and the exotic elements that have been introduced into the Art-Schools. It is to be bridged and an effort is to be made to combine Indian treatment of subjects with Western technique, though the Government proposes for the present, to take on hand the first step in the reform, namely, of preserving for, and in India, scientifically arranged collections of the products of its ancient and modern arts and crafts. Even the officialdom of India has come to realise that the understanding and appreciation of Eastern art-work in Europe and America is draining away from the country good specimens in an increasing volume into the public collections of those continents. Somewhat allied to this, is the proposed attempt to start an ethnographic museum at Delhi, designed to illustrate Indian civilisation in all its phases.

It is probably not possible to congratulate the Government of India on the attitude of complacency with regard to some other departments of technical and professional training, like education in Agriculture, Forestry and Veterinary Science. But as it is not very long since there was an instalment of reform in these directions, it may not be desirable to urge the need for further improvements immediately.

The strengthening of the Medical Institutions that exist at present and the opening of a School

of Tropical Medicine are some of the reforms contemplated in the teaching of medicine. The narrow basis of Indian Society has unfortunately prevented the female section from taking the fullest benefit of the medical treatment available in the country and the Government has wisely resolved to pay special attention to the training of a large number of nurses and lady doctors.

In spite of the large amount of fees accruing from students in Law Colleges, there has till now not been no adequate attention bestowed on them. It is now proposed to continue the recent policy of concentration and improvement which has resulted in such great benefits in Bengal. Suitable arrangements are also to be made for the residence and guidance of Law students—the pressing necessity for it will be patent when the period in life associated with a Law student is given some consideration.

To those who have watched the recent history of Indian Universities, it must be patent that commercial education is receiving recognition in high academical quarters. The Bombay University has opened a Faculty of Commerce, and there was an attempt in our Presidency for following in her footsteps. In response to a need which is thus evident in various parts of the country, the Government has sanctioned the establishment of a Commercial College of an advanced character in Bombay, and are even contemplating a scheme for the organised study of the economic and allied sociological problems of India.

Teaching Colleges, dealt with in another part of the resolution are also to be strengthened and increased in number. The interchange of ideas between province and province, on the subject of the training of teachers and the encouragement of furlough studies, are two suggestions which are as practical as they are valuable.

UNIVERSITY EDUCATION.

The desire on the part of the Government to make University Education in India as

modern and efficient as possible, must be patent to all who have had the privilege of reading the recent report of Dacca University Committee. The new features contemplated in that scheme are to find expression in various degrees, in other provinces and in the existing Universities. There is to be a multiplication of Universities and in every one of them an attempt is to be made to develop corporate life, and to train up young men whom the country will be proud to acknowledge as its citizens. If the Government of India has not thought fit to deal more exhaustively with the subject, it is probably because of the Viceroy's personal pronouncements that have been made already, and of the numerous opportunities that will soon be furnished for the treatment of the subject.

EDUCATION OF SPECIAL CLASSES.

The Government has all along been anxious to show particular consideration to minorities as well as important classes. In accordance with that policy the Chiefs' Colleges are to be improved, by a revision of their courses, so as to make them more useful, and higher in intellectual standards, and by a strengthening of their staff. The allowance of special concessions to schools for the domiciled community is another plank in the programme of educational reform. There is satisfaction expressed at the recent awakening of Muhammadans for the educational needs of the community and they are to meet with the liberal encouragement which they have received in the past.

ORIENTAL AND FOREIGN EDUCATION.

The institution of an Oriental College of an advanced character at Delhi has long been in the air, and a definite pronouncement has now been made about it. In addition to the facilities thus provided at a central place in India, encouragement is to be given to Oriental Studies throughout the country by large grants to indigenous Oriental institutions, the appointment of spe-

cially qualified Inspectors to supervise their work, the provision of posts for highly trained Pandits and Maulvis and grants of money-rewards for Oriental work.

While appreciating the Government's anxiety for the moral welfare of the youths sent to England for educational purposes, it is difficult to agree with its opinion, that the institution has been a failure on the whole. Nor will there be any approval from right-thinking men in the country of the scheme of the establishment of a school in the country, staffed entirely by Europeans. We do not see any special need that the institute can serve, nor do we desire in the least to see such an implied perpetuation of the alleged inferiority of the training offered by Indian teachers. The true solution of the educational problem in this direction, consists, not in the creation of wholesale European institutions in the country, but in bestowing upon Indians the training and experience necessary for such superior work.

THE EDUCATIONAL AGENCY.

If a benevolent measure of reform has been suggested, in the revision and expansion of educational courses and institutions in the country, the Government has not forgotten the need for having the agency fitted for such a task. The improvement of the educational services, Indian and European, has been thought of, and arrangements are also to be made for the general improvement of the educational agency. The appointment of experts, periodical meetings of the Directors of Public Instruction of various provinces are other interesting features of this new work of organisation.

CONCLUSION.

Enough has probably been said with regard to the details of the scheme, to demonstrate the wisdom and far-reaching character of the principles expounded by the Government. There could probably be no hesitation in the circumstances, in hoping that the Viceroy's appeal to

the Indian public will be responded to in a spirit worthy of the great occasion and the responsibility devolving upon every true son of India :

"The Governor-General in Council trusts that the growing section of the Indian public which is interested in education will join in establishing under the guidance and with the help of Government those quickening systems of education on which the best minds in India are now converging and on which the prospects of the rising generation depend. He appeals with confidence to wealthy citizens throughout India to give of their abundance to the cause of education; in the foundation of scholarships, the building of hostels, schools, colleges, laboratories, gymnasias, swimming baths, the provision of play-grounds and other structural improvements, in furthering the cause of modern scientific studies and especially of technical education, in gifts of prizes and equipment, the endowment of chairs and fellowships and the provision for research of every kind. There is a wide field and a noble opportunity for the exercise on modern lines of that charity and benevolence for which India has been renowned from ancient times."

P. SESHADRI.

THE TEACHING OF ENGLISH IN PUBLIC SCHOOLS.

Objects of English Education in India.—"The purpose in learning foreign languages," says Otto Jespersen, "must be in order to get a way of communication with places which our native tongue cannot reach," and to have "access to the best thoughts and institutions of a foreign nation, its literature, culture—in short the spirit of the nation in the widest sense of the word." The former is a utilitarian object, while the latter is an intellectual one. In Germany, according to the

authority of Mr. Sharp, the object with which English is studied is purely utilitarian. He says that the Germans have little sympathy for English Literature and that they learn English by the shortest cut in order to make their conditions of trade easy, and to equip the German business-man with the necessary command of the language. For this purpose the German requires a command only in speaking colloquial English. This gave rise in Germany to the adoption of the New Method or the Direct Method, as it is called.

It was Viator that first emphasised the necessity of revolutionising the methods of teaching English in Germany. In Holland and in Belgium also the object with which English is studied is utilitarian. Again, the Germans, the Belgians and the Dutch take up English only for certain purposes and do not learn English with the objects and for the purposes that we have in view in learning English in this country. Here English education was intended as a means to create a section of people who should form "the channel through which Western ideas should be conveyed to India," and to create a class of mediators between Government and the people. It was not for purposes of international communication or trade that we began to learn English. We did not, like the Germans and others, feel the need for English when we took to it. When the Government of India became British, a need was felt to educate the Indians in English for more or less administrative purposes. To conduct the Government of England in this country with ease and cheaply, it was necessary for the rulers to create a section of educated Indians. We took to English, therefore, for certain

practical purposes, which, in their nature, were different from those of the Germans and the Dutch. This is one side of the question.

I shall now turn to the other side of the question. The Oriental mind is mainly spiritual, while the occidental is mainly material. The orthography of our languages, the thought-content of our literature, the needs of our nation are all different from those of the English. But we have come under the influence of the British Government and having had access, through their language and literature, to their vast stores of knowledge, it is not possible for us to go back now and say, 'we shall have nothing to do with English,' how strange and unallied it may be to our own languages and literatures. Our purpose in learning English is only partly utilitarian. We have also in view the other and more important purpose of getting "access to the best thoughts and institutions" of the British nation, its literature, culture and spirit. We want to add to our stock anything that may be useful in the stock of the British. Our nation has a long history behind it. Our literature is vast. But it requires to be added to, in order that it may become modern. Our thoughts are traditional. Something new has to be added to them, so that we may move with the times. Our object in learning English is not to displace or disavow our ancient language and lore, but to improve them and bring them up to the level of modern needs. English people have got almost all our literature translated into English. Thus they have got access to all that is good and useful in our ancient literature; while, we have not succeeded in adding to our ancient literature much of the foreign that is good and useful for our purposes. One difficulty here is of

course the fact that our vocabularies are limited. But nothing is limited, if our will is not limited. If India should ever be great among the nations of the world, she should have a literature in no way behind the requirements of modern times.

Whatever we may have done in the line of improving our stock of literature and whatever we may still hope to do, it cannot be denied, for our purposes here, that we require special training in the art of *Translation*. Every one of us knows full well that, under the present system of education, we can translate any vernacular or Sanskrit passage more easily and more aptly into English than we can do the reverse process. Our knowledge of English is more perfect and more systematic than our knowledge of the vernaculars. In order to translate into accurate vernacular, a passage in English, we require an accurate knowledge of the vernacular and of English. We do not translate word into word, but thought into thought. We should feel the thought underneath a passage in English in order to put it into accurate vernacular language. We must also know how to attain accuracy of expression in the vernacular. Does it show that we have no command of English or no command of our own mother-tongue? For our purposes, we need, not so much of colloquial English, as the Germans and the Dutch require, but a mastery of literary English. But then we should also have fluency of expression in speaking. We should use our knowledge of English for translating the best thoughts expressed in English by able thinkers into our vernaculars and for enriching our stores.

For trade we have enough English already. For communication, we have enough of it too. For mediation between Government and the

people, we have enough and more of it too. We do now require a good command of English for other and more important purposes. We should enrich our stores, we should add to our literature and science, we must modernise our language and literature.

This is why I have not been able to understand the use of the adoption of the direct method of teaching English in this country, as it is understood in other countries. On the other hand it will be more useful for us to pay special attention now to a thorough and masterly study of our vernaculars and of our national tongue, viz., Sanskrit. If so, are we to adopt the direct method of teaching English or not? It would look as if my remarks above answer the question in the negative. But I have also an affirmative answer to it.

The Direct Method.—Let me first enunciate the principles on which the direct method of teaching English is based and consider the ends it has in view. "The Direct Method," says the writer on the Teaching of Languages in Belgium, "consists in utilising all available time in the study of the foreign language, instead of spending a large portion on the mother-tongue." The direct method seeks "to attain in one year all that has hitherto been acquired in three years of English instruction." For this purpose, the method is intended to "make the pupil at home in the foreign language" through the medium of "actual speech," and through the disuse of the mother-tongue, except where it leads to the quickest comprehension of the foreign tongue. Thus we find that three points are stressed on here, viz., the time needed for learning the foreign tongue, the command over the foreign language, and the purpose of

translation into the mother-tongue of the learner.

Advocates of the direct method freely say that a child of 3 or 4 years of age should be immersed at once in English surroundings and should be taught English, as if it were its mother-tongue. Greater denationalisation than this we cannot imagine. This false view of the method strikes at the root of our existence. The words of Mr. Nelson Fraser on this point are well worth noting: "I have not adopted," says he, "the view of some reformers that as soon as the pupil begins a foreign language he should be plunged into foreign surroundings. It appears to me, on the contrary, that, while the initial difficulties of the new tongue are being surmounted, the matter should be familiar; and the pupils should work under the impression that what they are learning would be useful in dealing in situations which they can readily imagine." Add to these words, the equally important remarks of Mr. Yates in his recent book on the Teaching of English by the Direct method. He says, "There is of course the difference in thought-content between their vernaculars and English, a difference which is not so marked in the case of French or German and English. For continental boys have a share in European civilisation, and are acquainted with many of the climatic and other phenomena known to English boys. Snow and frost," says he, "for instance, are no strangers to them, whereas South Indian boys can have, as a rule, no conception of these things." Such being the fundamental difference between the Indian boy and the English boy, how can we sensibly plunge our boys at 4 or 5 in foreign surroundings? Is it possible? Is it desirable?

If, then, we should have the boy acquainted

with his own familiar surroundings with consciousness enough to interpret and feel them in a foreign language, how can we try the method upon a child of 4 or 5? That the child at 4 or 5 speaks in its vernacular familiarly of all things it sees, is not due to training, but to imitation and instinct. How can a similar training be given to the child in English at that age? Is that ever to be imagined? Can an English child of 4 speak to any extent in Tamil or Telugu, however much we may try to train it? Even if it can, is it desirable to wreck the child's brain in this somersault? After experience, Mr. Nelson Fraser says that "the direct method is not intended for and is not suitable for the nursery. "It presupposes," he says, "that boys have already learned in their mother-tongue how to handle language with *conscious intention* and are capable of following explanations in this tongue." He fixes the age at 10 or 11 (after personal experience and on the authority of German practice), when the foreign language is taught to a boy. This, while not putting a needless strain on the child's brain, gives a place to the vernacular and simplifies the curriculum, making education more substantial and more useful, than it would otherwise be. The preservation of vernaculars, the encouragement of the study of Sanskrit, our common mother-tongue, the improvement of our languages and of our literatures ought to be our main object in education.

Early education of the child in its mother-tongue and in Sanskrit.—For this purpose, the child should first acquire a thorough knowledge of its mother-tongue and of Sanskrit and then an accurate and equally thorough knowledge of English. The Indian child is usually sent to school at 5. Some of

our modern reformers, following the psychology of European children, hold that our children also should not be sent to school till 7. Our children, owing to climatic and other reasons, are quite developed at 5 and they will surely be spoiled if two years are allowed to them to play when they ought to learn the elements of their mother-tongue. Between three and five, the Indian child should be taught to observe things, name them and distinguish them. Our Kindergarten system is not quite systematised. It will be well for us to study the systems of Froebel and others and to systematise our Kindergarten. If parents cannot take the trouble of learning the elements of Kindergarten and educate the senses of their children, it will be well if a few people in each village are trained in the Kindergarten system and employed for the early training of children. The best thing, however, is for the mothers to be trained systematically in Kindergarten and to take up the early training of their children into their own hands. None is greater to the child at 3, than its own mother. She can work wonders upon the child.

At five, it is time for the child's education, to be taken up by the father or by a *guru* or schoolmaster, preferably by the former. The child now becomes in a way conscious of itself and its surroundings. The father is the first man to whom it feels attachment, after its mother. It is the business of the father to begin the teaching of the elements of his mother-tongue systematically.

Method.—Our time-honoured method is to begin with the alphabet. The child is made to trace each letter on sand or on a rough surface, to name it and to write it. As there is no difference between pronunciation and

spelling in our languages, we find no difficulty in adopting this method. As the child's surroundings consist of familiar objects, we find no difficulty in acquainting the child with all its surroundings in a short time. The child is soon able, by instinct, imitation and training, to interpret objects consciously. At this stage, after sufficient oral and written training in the elements of its mother-tongue, the child may be sent to a regular public school, say at the age of seven. Now the child should come under the supervision of a trained teacher and into the company of other children. The child should now, for 3 or 4 years, be led on in its further studies and should be disciplined under strict supervision. Every movement of the child should be watched and guided by the teacher. The teacher should be a man of sterling worth and perfect character. He should love every child, whatever may be its frailties and however dull it may be. He should be all sympathy. Under the guidance of such a teacher, the child should learn systematically all the subjects of the curriculum in their outlines. The concentric plan of instruction should be followed. The child already knows the elements of its own language. The child is acquainted with its surroundings and has its power of observation developed. On this material the teacher should now work, and through conversation and observation lessons prepared by himself to suit his pupils and his aims, and not through manufactured booklets of cut and dried lessons, he should impart instruction in all useful subjects, such as Geography, History, and even Science. The child should also have a good training in practical Arithmetic and in Drawing. The physical, moral and above all, religious education of children should be carefully

provided for. The child should also be acquainted with Sanskrit. In passing, I might perhaps state that in teaching Sanskrit, the direct method may be very advantageously adopted. The usual method of teaching Sanskrit is not suitable at the present day, for it is not the only language to be learnt and it also takes away much time and energy. It was adopted in times when one was able and was prepared to spend his whole day in learning the language and its essentially religious literature.

Such should be the training given to a child up to the age of 9. At this age the child is no more a child with an untrained head or hand, but is a boy with his head and hands systematically trained to observe, think, feel and do.

Beginnings of English: (1) Age.—This is the stage when the teaching of English may be begun. The boy at 9, trained in handling language with conscious intention and trained to think in his mother-tongue, is now fit to learn the foreign tongue by the shortest route.

(2) *Use of Translation.*—"The first condition for good instruction in foreign languages," says Jespersen, "would seem to be to give the pupil as much as possible to do with and in the foreign language; he must be steeped in it, not only get a sprinkling of it now and then; he must be ducked down in it and get to feel as if he were in his own element, so that he may at last disport himself in it as an able swimmer." In order that this end may be attained, the first and the most important thing to do is, according to all the advocates of the method, to avoid translation, i.e. to avoid the use of the mother-tongue in teaching the foreign language. Mr. Yates says that "the intervention

of a vernacular medium postpones the period when the student can speak without *consciously* translating from his native speech into the foreign language." Mr. Yates's reason then for avoiding translation is the sparing of time. But he does seem to feel that the boy cannot but *unconsciously* translate ideas into and from his vernacular language. Otto Jespersen starts with the view that "it is not translation (or skill in translation) that we are aiming at in teaching foreign languages," and so naturally he has no place for translation in the teaching of a foreign language. German reformers, like Walter and others, whose object was to equip the Germans with a good and quick command of English for business purposes, find no need for translation, in order to spare time. Mr. Nelson Fraser, on the other hand, says that, "when the vernacular is the shortest path to our end, we must take it," and that "it is chimerical to think of excluding it from early lessons." For a boy of 9, with a good and more or less perfect previous knowledge of the outlines of every subject in his vernacular, will it not be little short of absurd to begin with naming objects in English and asking the boy to observe "the school-room and its tenant objects." If Mr. Yates desires this to be done in English for a child of 4 or 5, why should not that little child learn these things in its mother-tongue at 4 or 5, and translate these into English at 9? Will not the work of the teacher and the boy be made easier if the boy's brain is ploughed and manured with familiar things and sights, before it is sown with the exotic seed? The easiest method then seems to me to be to acquaint the boy of 9 at once with the foreign language in relation to his mother-tongue. But at a later stage, when the boy

has got a comparatively good grounding in the foreign language, he may be asked *consciously* to avoid translation and to express himself and work only in English in the English classes. According to the concentric plan, higher teaching of the advanced portions of all subjects of instruction might be through the medium of English and vernacular first and of English alone very soon. So as far as the subject of translation is concerned, I am against its exclusion at the earlier stages, but I am strongly against it at the later stages, say after the boy has reached the age of 13. The boy after 13 should not be allowed to speak to his teachers in the vernacular and if possible, at home also for some years. But it must be remembered that, even when the boy is steeped in English and asked to deal only in English, special hours must be set apart for conscious and literary translation of English into the vernacular as well as into Sanskrit and *vice versa*. *The art of translation should be consciously taught*. In this view I share with Mr. Nelson Fraser.

Having now disposed of the age question and the translation question, having tried to prove how the adoption of the direct method is suited only for a boy of 9, and having shown the position that translation should occupy in the teaching of English in this country and for our purposes, I shall now proceed to the other points of the direct method.

(3) *Use of observation*.—But before leaving the subject of translation in the teaching of English, I must refer to one or two points. My words above might seem to lay all stress on translation and to forget the importance of observation, which is proposed by the advocates of the direct method as a substitute for translation. I do strongly support the

view that teaching not only of English but also of all languages and subjects hitherto has been wanting in the element of training the pupils to observe and draw conclusions for themselves; and I do strongly also hold that if our boys should turn their lives to any purpose in these hard days, they should be taught more through the eye and the ear than they have hitherto been. I do not overlook the importance and value of pictures and other materials in the teaching of English as well as of other subjects in the curriculum. What I mean by my stress on translation is that we, in India, cannot sacrifice our real purpose to a little seeming ease and possibility of teaching English to our children on the lines proposed by the strong advocates of the direct method.

Now, I shall proceed to the other points of the method. The points that seem to me to be of the greatest importance for our notice and practice deal with the teaching of correct sounds and the teaching of grammar along sound and intelligent lines.

(4) *The Gouin method*.—I said that our boys should begin English at 9 years of age, after they have been equipped with the necessary material of thought, for easily and consciously interpreting the genius of a foreign language. How then should the boy of 9 now be taught English? The best method for teaching a foreign language at this stage is that known as the *Gouin method*.

The boy is already able to think for himself and express his ideas in his mother-tongue. The teacher, according to this method, first explains in the vernacular that he is going to describe certain actions, which he would put on the black-board. He names the actions in the vernacular and asks the pupils to recall them in their minds. The power of

reflection is thus developed in the boys. The matter is based on the pupils' previous knowledge. Imagination is developed in this process of recollection. There is also unity in the teaching as the teacher has to place the matter as a process, not in the form of unconnected words. When the teacher has done this preliminary work, he now abandons the vernacular and relates the action in English. The pupils repeat the English sentence after the teacher and each sentence is then written out on the black-board. The teacher employs the method of conversation freely. This is the way that a foreign language is taught according to this method.

The boy need not have a previous knowledge of the alphabet. We may conveniently adopt the "Look and say method" for teaching the alphabet. The sentence might be written on the black-board. The boy knows its meaning and its import in the light of the previous explanation. Not only the visual picture of the sentence, but also the mental image involved in it is before the pupil. Now the boy might be asked to analyse the thought and break up the sentence. The sentence might be consciously broken up by the boy in the first instance into word-sounds and letter-sounds. I am not for the boy now writing the letters or words. It will be enough if he can give out the sounds. The teacher must take great care to make each boy pronounce each letter and word correctly.

(5) *Sounds and script*.—At this point I might perhaps deal with the question of pronunciation at a little length. I cannot agree with those that say that boys should be taught sounds as sounds and made to exhibit phonetic experiments. Nor can I agree with reformers like Jespersen and

Walter, who want the boys to master a phonetic script and then master a natural script. The boy need not learn any script, but the natural one, for it is the only one that is useful. Even here the first script they ought to be acquainted with is the printed one and that for purposes of reading. The teacher should be properly trained in the correct pronunciation of English sounds and should also know the reasons for the difference between the pronunciation and the spelling historically. The teacher should be a well-read man with full resources and ready wit. It is not desirable to entrust the first teaching of language to a trained Lower Secondary or Primary man. Correct sounds must be fixed in the boy's head by mere repetition and imitation. The boy need not know, for instance, that the sound of *f* requires the upper teeth to be put against the lower lip and the air allowed to rustle through the narrow opening, and that *f* is unvoiced, while *v* is voiced. The teacher should sound *f*, the boy must imitate him and say *f*. If the boy should pronounce the word "father," the teacher should utter the word and the boy should imitate him. The teacher should pronounce each word and letter slowly, distinctly and firmly.

Jespersen says that Walter is "emphatically of the opinion that in class instruction phonetical transcription is much to be preferred to purely oral instruction, because the latter wastes an enormous amount of time, and the teacher cannot feel nearly so sure that the whole class is able to follow." Indeed Mr. Walter's arguments are strong and reasonable. But is not the teaching of one script and the displacing of it by another in a short time likely to confuse the little boys? Who is settled as yet on one script as

being the correctest or the simplest? The best thing will be for us to keep our existing spelling, as long as all literature is written in that spelling, whatever may be its defects and to make the boys learn the sounds by mere practice. The teacher in India might with very great and special advantage use the vernacular sounds for comparison and impressiveness. This method of teaching pronunciation is, in my opinion, certainly more easy and more useful than the adoption of learned scripts and phonetic explanations of sounds. Later on, when the boy has to write down letters, after a good training in sounds and in conversation, he might be taught the linguistic values of the letters through *actual words*.

Jespersen mentions four ways in which it is possible to communicate the material of a foreign language to pupils: (1) the teacher may not let the boys use any writing at all, but give them everything orally; (2) he may give them the orthography alone; (3) he may give them orthography and phonetical transcription together; (4) he may give the phonetical transcription alone. After considering all the four ways, Jespersen inclines to the last way and prefers "to let beginners be employed only with phonetical transcription for some time.....before they pass on to seeing the words in their orthographical shape too." For my own part, I would prefer the first of these four ways in the first stage, the second way being adopted at a later stage. At a still later stage, the phonetic symbols may be learnt by the boys with the historical reasons for the deviation between the orthodox spelling and the true pronunciation. The elaborate rules that are given for the teaching of Phonetics to young children, by Mr.

Yates, Mr. Nelson Fraser and others may well be learnt with advantage by the teacher and not by the boy.

Method continued.—To take up the thread of my essay, the boy should first be taught to express ideas in sentences, then to break them up into words and sounds. Boys may also be asked to break up the sentences logically and led to a knowledge of the grammatical construction of the sentences. Through a comparison of sounds with symbols, they may slowly be led to learn the written forms. When boys are able to wield the foreign language in simple forms, they might be engaged in light conversations, which should be so graduated as to train the boy in the interpretation and construction of sentences. Oral composition and decomposition of ideas might be taught by means of graduated lessons. In all this course of instruction, the concentric plan should be adopted and the lessons should slowly progress and widen out the sphere of the boy's knowledge. At this stage of teaching the foreign language, care should be taken to see that the boy is given no lesson to prepare at home. He should do all the work in the presence of and under the guidance of the teacher. Every day the boy should be made to feel his progress consciously. Lessons, conversations, composition should all be conducted orally at the first stage. The boys should slowly learn to write the words and sentences and to frame sentences to express familiar ideas. Care should be taken to see that boys do not get word-pictures into their heads and that boys do not mutter isolated words. In this respect, I am sorry that the first lessons in Mr. Yates's book are not quite suited for teaching according to this method. Care should also be taken to see that conver-

sation lessons are not indulged in to an undue extent, but that composition and reflection on the part of boys are encouraged at every point.

(6) *Grammar.*—Through conversation and composition, grammatical relationships should be taught. Boys need not be told of the rules. Grammatical relationships in the vernacular languages may be used for comparison whenever and wherever practicable and useful. The lessons given in the beautiful books of Mr. Yates and of Mr. Nelson Fraser indicate clearly the way in which grammar might be taught without much conscious effort on the part of the boy to manufacture sentences to answer the needs of grammatical rules and exceptions to rules and exceptions to exceptions. Jespersen says, "Theoretical grammar ought not to be taken up too early, and when it is taken up it is not well to do it in such a way that the pupil is given ready-made paradigms and rules. After the manner of Spencer's "Inventional Geometry," where the pupil is all the way through led to find out the propositions and proofs for himself, we ought to get an *Inventional Grammar*." That is, grammar should be taught inductively and not deductively, as it has hitherto been done. If the boy is sufficiently advanced, he might be allowed to use a grammar book. But then, as Jespersen says, "to go through the grammar from one end to the other, a section at a time, ought not to be undertaken until most of the phenomena have been treated in connection with the reading." Even when grammar is so taught at a later stage, I strongly believe that the text-book or at any rate a connected passage in a Reading Book should be made the medium of instruction in grammar. At this stage also, when the boy

is sufficiently advanced, standard books in prose and poetry or lengthy extracts from these should be placed in the hands of the boys, and they should be trained to appreciate the thought and to imitate the style of the authors. Even up to the Matriculation standard now, boys read only broken pieces of non-literary scraps mostly, so that they do not form any style and do not even appreciate style.

Conclusion.—I believe I have said enough. But before closing my essay, I feel bound to make mention of one or two things in particular, for the way in which we are disposed towards these points settles all the manner in which any successful work can be done either in the teaching of English or in the teaching of any other language or subject.

(i) *The bogey of examinations.*—Firstly, I should state that the one thing which stands in the way of any successful work in the school-room is the bogey of examination. No method can be adopted with prospects of success or with efficiency as long as we are afraid of examinations. I feel that no teacher can use the direct method or any good method of teaching English, unless he is free from that constant fear of examination, which makes him adapt his work to a fixed and crowded curriculum from time to time. At least in the early years of teaching English, the teacher should entirely neglect examinations and should teach children with the sole aim of making them talk fluently and correctly, read with ease and thoroughness, and write in neat, simple and correct English. The teacher should make his every day's lesson, an examination of the previous knowledge of the child, and a clear, slow and sure presentation of new matter closely allied to the old, however little that is new he may be able to

present in a day. The teacher should see that whatever is done by the boy is thorough and should not skip over things merely to see the end.

(ii) *The Teacher: his duties.*—How can a teacher do this honestly and satisfactorily unless the teacher himself is a perfect individual, conscious of his duty and conscientious in the discharge of his duty? One objection that is brought forward against the adoption of all novel departures in teaching any subject, not merely English, is that the teacher is not always what he ought to be. The teacher must be a man of vast resources, ready wit, and quick sympathy with children in all the situations in which they may be found. The teacher should, above all, be a man of character, for nothing influences character like character.

N. K. VENKATESAN.

TEACHERS IN COUNCIL.

PROBLEM OF THE PRIMARY SCHOOL.

Some 2,000 delegates attended the 44th Annual Conference of the National Union of Teachers, which opened at Weston-Super-Mare on March, 24:—

THE PRESIDENT'S ADDRESS.

Mr. Dakers, of Newcastle-on-Tyne, delivered his Presidential address at first day's morning session.

He said that the educational policy of their organization might be summarized as "equality of opportunity for all, regardless of rank, fortune, or social status." That was a doctrine which the State had not as yet recognized, for, although nearly half a century had gone by since the Act of 1870 was passed, there was still a great gulf of prejudice and class exclusiveness dividing the schools of the rich from those of the poor. That gulf existed in spite of the great reforms

carried out by many public-spirited Ministers, and until it was finally bridged no permanent and satisfactory settlement of their educational problems could be hoped for. The public school spirit had, almost from time immemorial, been landed as the foundation of their national greatness. If that were so, then it was the duty of their statesmen to afford every child in the country an opportunity of coming under the influence of that spirit, and class favouritism should not block the way. They could not accept Herbert Spencer's axiom that every individual was entitled to "life, liberty, and the pursuit of happiness" and yet deny equality of opportunity in education.

REFORM OF THE PRIMARY SCHOOL.

To secure that equality of opportunity they must first concentrate their attention on the Primary schools and reform their conditions throughout, for until that task was accomplished there could be little or no hope of solid educational progress. Many ardent educationists whose sincerity and zeal were undeniable, took it for granted that the primary school system was working very well and focussed their minds on Secondary and University education. But primary education was not on a sound basis, and never would be until its administration was so organized that the conditions in the primary schools were as good as those in the secondary schools. When that had been achieved the rest of the campaign would be comparatively easy. If the conditions in the Primary schools militated against efficiency, a large proportion of the children in those schools would be unable to profit by the best possible system of higher education. Only a small minority would be capable of extending their studies, and the class monopoly of the Secondary schools and the Universities would be more firmly established than ever. Reform of the Primary schools must come first, and the ideal to keep before them must be the levelling up of their conditions to those of the

Secondary schools. Even in the matter of school buildings the spirit of class prejudice stepped in. The Secondary school children must according to the Government regulations, have more air-space than Primary school brothers and sisters, though the home surroundings of the latter in many cases would seem to call for a complete reversal of the position. Of more importance than the buildings were the arrangements for carrying on the practical educational work and here the disparity between the two classes of schools was even more pronounced and more productive of evil results. The pupils in the Secondary schools must be taught in every case by fully qualified teachers, but little more than half of the staff of the Primary schools could be so described. Elaborate and in many respects admirable regulations had been drawn up for the training of Primary school teachers. Yet having obtained its qualified practitioners the State restricted their sphere of usefulness. They were forbidden to cross the sacred portals of the Secondary school but a host of unqualified or partially qualified men and women was sent to compete with them in the Primary schools. Any attempt to stereotype the grade of uncertificated teachers was not only to be deprecated but deserved the most unsparing condemnation from those who claimed to be educationists. Uncertificated teachers had been allowed and encouraged to remain unqualified and their continuance in the Primary schools was one more proof that they were still very far from the idea of equality of opportunity for all in education. The State which had led them that blind alley could not in justice dismiss them, since time had in some measure given the experience which made for efficiency. On the other hand, the interests of the children demanded that the grade should eventually become extinct, and that in all future appointments only certificated Assistants should count as effective members of the staff. The principle would then be established that both in Primary and Secondary schools fully qualified

teachers only should be responsible for the work of educating. And end would thus be put once and for all to the employment of those non-descript anacronisms known as supplementary teachers. Their existence was a national disgrace and a further insult to the workers whose children were condemned to these tender mercies. Their introduction into the Primary schools could only be justified on the supposition that the pupils in those institutions were marked with a perpetual brand of inferiority.

A SYSTEM OF "HUSTLING."

In the size of classes there was still a great gap between the worker and the plutocrat. Thirty or 35 pupils grouped for teaching were considered a full class in a Secondary school, but in the Primary school 60 was the recognized number, although no teacher, however capable, could educate or attempt to develop the individual faculties of 60 children. So long as classes of that size were possible so long would the work of the Primary schools fall short of the ideal which should be the aim of all educationists. The efforts made by various education authorities to realize the ideal of equality of opportunity were deserving of ungrudging commendation, but progress was by no means general and, in many quarters the reactionaries were decidedly in the ascendant. Under the plan euphemistically designated as "making the classes fit the room," children were being subject to a system of the most brutal and cold-blood "hustling." They were driven out of the infants' school at the earliest possible age and in all departments frequent reclassification had become the order of the day. If a child needed 12 months' training in a certain class, and in order to "make the classes fit the room" received only six, or three or less the result was a foregone conclusion. Children's lives were becoming a burden and their future ruined by that system. Were teachers free from blame? It was true that they had protested against the system and their protests

had been ignored. But unless they did something more than protest the plea of compulsion would not avail them very much in the day of reckoning. If they connived at the ruin of the children, they must accept the responsibility or such connivance. They could await with confidence the verdict of the nation on the teachers or the organization who refused to sacrifice the child to the Moloch of the Farthing Rate.

RURAL CONDITIONS.

Tribute must be paid to the ladies and gentlemen who served on the Education Committees of the administrative counties, for the spirit of class prejudice was more vigorous and more widespread in the country than in the town. There the child of the agricultural labours was in many quarters looked upon as a veritable Gibeonite, fit only to be a hewer of wood and drawer of water. They could not ignore the fact that in the country districts there was a section which detested the Act of 1870 and strived to make educational administration as difficult and unsatisfactory as possible. So influential was this section that when, for example it was proposed to put an end to the iniquities of the half-time system its members had to be placated by allowing the country child to leave school a year before his town brothers and sisters. It was true that "beneficial employment" was insisted upon as a condition of exemption, but experience in town and country alike had shown them what a fatally elastic phrase "beneficial employment" was. The State had a bad record with regard to the rural schools. Those schools were necessarily small, but they contained children of all ages from five to 14, who had a right to the best training the State could provide, and to that end they must be under the care of skilled teachers. The more isolated the home the greater was this need, but the State had so far taken exactly the opposite view and had sanctioned the appointment of imperfectly-qualified people as head

teachers of very small schools. The continued existence of those uncertificated head teachers was a scathing indictment of our class system of education. The rural areas simply swarmed with that interesting type of pedagogue, the supplementary teacher. The vagaries of some of them would be amusing if it were not for the tragedy in the back-ground—the tragedy of blighted child life, the starvation of latent powers, and, above all, the loss to the nation involved in impoverished and inefficient education.

EDUCATION IN THE WEST COUNTRY.

He feared that in educational matters the West Country sadly belied its glorious past. Great traditions carried with them great responsibilities, and the country of Alfred and Dunstan should look to its educational laurels. If agriculture was to be permanently revived, those engaged on it must have their faculties developed, not narrowed, and their characters moulded by the training which an intelligent teacher alone could give. That training should be as free to the labourer as to the farmer or his landlord. A sound general education should be given, and then those who desired it should be allowed the opportunity of finishing their course at an agricultural college. So far as the West Country was concerned, he was confident that the local education Committees would welcome a popular demand for equality of opportunity. When they received the necessary support from public opinion it would not be long before the West Country would retrieve its lost reputation.

While some areas, like Lindsey and Radnor, starved their schools and received twice their local contribution from an appreciative and grateful State, they saw, on the other hand, authorities striving to keep their schools efficient and being told that they must not expect from the Imperial revenue more than one-third of what had already been expended from the rates. Such methods would disgrace even the philosophers of Laputa or the Wise Men of Gotham and now that

whispers of coming reforms were rife they must insist that the first step should be to deal with Lindsey and Radnor and their imitators according to their deserts, and reward other authorities in proportion to their good works and their ideals. Every educationist should make the improved staffing of the Primary schools the first object of increased Government grants. When that had been accomplished the problem of the further development of Secondary, Technical, and University education could be faced with a surer prospect of success.

FREE SECONDARY EDUCATION.

Fees in the Secondary schools did not make those institutions self-supporting, but they erected an effectual barrier to the higher education of the worker's children. The ideal of Victor Hugo should become an accomplished fact in our country—"free and compulsory Primary education for all free Secondary education for all who had the ability and the desire." The time had come to cease talking of the ladder from the Primary school to the University. The welfare of the nation demanded not a ladder, but a broad, firm and well-laid highway along which the poorest might travel if they possessed the ability. The problem of University education presented a slightly different aspect. The great democratic University of England was being assailed by the forces of reaction. The classes having fastened their grip on Oxford and Cambridge, were now casting greedy eyes on London. Its external degrees were an eyesore to them and they demanded their abolition, to make London even as her sisters—the preserve of the wealthy and those of high degree. Lord Haldane had promised them great educational reforms, and the democracy relied on him to see that the external degree of London remained until the highway to the Universities was an accomplished fact.

The Conference received deputations from Teachers' Associations in Germany, Holland, Belgium, Scotland, and Ireland, from the Co-

operative Union, and from the Teachers' Guild. A letter was read from Sir George Kekewich, the only Hon. Member of the Union, regretting his inability to attend, and say that, as through all his official life so now his heart was with the teachers and the children. In the afternoon a private session of the Conference was held.

LORD HALDANE ON EDUCATION.

Lord Haldane addressed a special sitting of the Conference of the National Union of Teachers at Weston-Super-Mare, on March, 25:—

LORD HALDANE'S SPEECH.

Lord Haldane, who was very warmly received said that when he was at the War Office he tried to learn by putting himself in the closest contact he could with the soldiers. He now wanted to follow his old practice and get into the closest contact with the teachers. Having read the presidential address, he found himself on many points in close agreement with it. The President had done well to call attention to the state in which our Elementary schools were to-day in many parts of the country. The public had not yet realized how backward and how apparently hopeless some of these Elementary schools were, particularly where there were single-school areas. He did not believe that they could treat the problem of elementary education or undertake the reforms which were necessary without dealing with problem of education as a whole, and with secondary education, therefore, at the same time.

There had been rumours that he was about to unfold the details of the plan which the Government had fashioned. There were two very good reasons why that could not be. The first was that they were all working under the leadership of the responsible Minister whose duty it was to deal with those questions, and who alone could deal with them. Mr. Pease was attacking the problem with an earnestness and a diligence that

were beyond praise. He wished to add that his staff were working with him in the same spirit. Nothing could be more thorough than the way in which the Board of Education were throwing themselves into this great problem. Therefore the announcement must come from the President of the Board of Education, so far as details were concerned.

A COMMITTEE OF THE CABINET.

There was another reason why they could not come even from him, just yet. Since the beginning of December, a powerful committee of the Cabinet had been engaged on that problem in consultation with experts. There had been sitting on it Lord Crewe, and the man without whom they could hardly get one step along—he meant the Chancellor of the Exchequer. There were also Mr. Runciman and Mr. Arthur Acland, who had thrown himself heart and soul into the subject. With those gentlemen and with the experts they were busily at work but they did not intend to produce their scheme until they were sure of it and until it was completely ready. While he did not think it would be long before they produce plans, they did not intend to produce those plans until they knew exactly where they stood.

But there were some things involved in the announcement which was made in the King's Speech that their task was the development of national system of education on which he could well speak. What he was about to say represented his own views, but he would not refer to them unless he was treading on fairly safe ground.

THE NEED FOR DRIVING FORCE.

They required driving force from the nation because the problem of education was in very large part a problem of many. It had been the fashion to criticize the Board of Education, but, having looked into it, his marvel was that the Board of Education had been able to do so much with inadequate means. He was

gratified with what Mr. Dakers had said about the splendid work which had been done by some of the local education authorities without putting heavy burden on the rates, for the assistance which they had from the nation had been assistance which up to now had been inadequate to the magnitude of the task which was put upon them. It was a task which necessitated that they should have the mind of the nation at their backs, and have that enthusiasm without which the problem of finding ways and means was one they could never solve. Why was there that apathy about this tremendous feature of our national life? If they did not keep abreast in the training of the national mind with those other countries which were organizing their education systems and which in many respects were our superiors, it was inevitable that in these days, when science and knowledge were the conditions of all success, industrial and generally, they would fall behind in the race. It was a question of national safety, and nothing else, with which they were dealing. His observation of political life had been that enthusiasm came like the wind by fits and starts, and that what they had to do was, when they got the enthusiasm, to make the most of their opportunity. Before 1870 there was real enthusiasm about education. There were Huxley, Matthew Arnold, and William Edward Forster. They did a great deal, and they took the larger view, but their energies were exhausted by diverse circumstances before they could accomplish more than half their task. The enthusiasm which passed the Act of 1870 frittered itself away in a great religious controversy, which sprang up when they were dealing with education. They ought to put education first, and then make their arrangements for meeting the feelings of those who had strong religious convictions, which must be respected and for which provision must be made.

Between 1870 and 1879 the period was not barren but nothing very great appeared. In 1889

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there was a new movement. Wales was the pioneer, and the Welsh Intermediate Education Act set an example to the rest of the world. At that time secondary education was not so much in men's thoughts as technical education. People had begun to get alarmed about their industries. He was sometimes very much concerned about our industries when he thought of the backwardness of our educational system, but they did not live by bread alone and they would not get even a good technical education system unless they put it on a broad foundation of national education. The Act of 1889 did something and the whisky money which came in 1890 did a good deal but after that the enthusiasm of the nation seemed to have evaporated. There were wise men and women who said that a step forward must be taken, and authorities constituted in England which could deal with the whole problem somewhat in the fashion it had been dealt with in Wales. The Bill of 1896 was a notable attempt of that kind, but that Bill failed and other Bills failed because there was not driving power behind them and because the House of Commons which was a mirror of the feeling in the country did not reflect the enthusiasm which they must have if they were to make progress.

A FALSE VIEW OF SECONDARY EDUCATION.

If the Education Act of 1902 had followed out the ambitions of its authors, he believed it would have established large authorities charged with looking after Elementary and Secondary education, and Secondary education was not, as a great many people thought, another kind of education intended for a different social class. That notion had inflicted a cruel injustice upon pupils and upon teachers alike. They had got to break down the notion that secondary education was anything more than a successive stage in elementary education. But, in spite of all the difficulties it was really remarkable the progress

which had been made in the last few years with the combined efforts of the Board of Education, the local authorities, and the teachers. The number of children in average attendance in the public elementary schools in 1902 was 4,890,000. In 1912 it was 5,357,000. There were in 1902, 67,768 certificated teachers. For the year 1912 the number was 103,513—a notable advance. The number of children to each adult teacher had fallen from 40 to 33, and that pointed to the fact that people were beginning to realize that the teacher could not handle more than a limited number of pupils. The number of State-aided secondary schools in 1902 was only 272. To-day it was 885. The number of pupils in the State-aided schools in 1902 was 34,700. This year the number was 151,000. The number of pupils from elementary schools holding scholarships and bursaries from public funds in England and Wales in 1902 was 5,500. It had now risen to 49,120. The expenditure from public funds on scholarships was only £80,000 in 1902. To-day it was £400,000. The number of students at technical and evening schools on whom grant was paid in 1903-4 was 469,686. To-day it was 628,181. The number in day technical classes and technical institutions was only 1,507 in 1903-4. To-day it was 21,082.

A NATIONAL SYSTEM OF EDUCATION.

Those figures meant that the breeze had been stirring, and they had reached a stage in which in the national interests a national system of education was absolutely required. People complained that it was a vague word, that it was only an idea, but if they could get the idea clearly into the public mind he had little doubt that they would achieve their object. A national system of education would ensure a great many things. It would ensure that our workmen were on the level of the workmen of other countries, and it would do a great deal to break down the great line of demarcation that there was between the man who worked with his

hands and the man who worked with his head. The real democrat was the school teacher. Let him loose and he would break down the barriers which separated class from class. As part of a great democratic movement a true system of national education was vital. But it was for the sake of the things of the spirit that they required that broad foundation of knowledge and culture which was the making of the people. It was for that more than for anything else that he stood before them as a missionary in a great cause, the cause of the establishment of a true system on education. The State had a deep and direct interest in seeing that its people were educated, just as it had in seeing that they were healthy. A national system must take cognizance of all the means by which education was provided in a country like this. The highest means, the lowest means, the University, the Secondary and the Elementary school—they must all be fitted into their place in one system. More than that, the meaning of education must be wider than that they had been familiar with. They were learning that not only the brain but the eye and the ear and the hand could be the means of training the mind and moulding the character. They must get new views from studying what was being done elsewhere, in continuation classes, in what could be done for children while they were young, in seeing to their health, in seeing to their well-being, in looking to the life of the future generation in all its aspects. That point was essential to a national system. That did not mean necessarily that the State must be bureaucratic. They had always been strong in this country on the notion of devolving on local authorities the business of carrying out Local Government as much as they could, and he hoped they could not cease to have it, because without it they could not have that local enthusiasm which did so much beyond what the law could give. A system of that sort need not be a bureaucratic system. The most serious part of that work rested, and always must rest, with

the teachers. Until they got a high standard of efficiency among their teachers they could not get their national system up to its proper level. Of course that meant a great deal of expenditure, but it was not only for the teachers that money was required. It was required for buildings and for all sorts of things they did not possess at present, and without which they could not make their organization a real one.

ORGANIZATION FROM THE UNIVERSITY.

They must organize from the top. He wanted to see the University idea, which was a very high idea, everywhere present. He wanted to see it in the mind of the elementary teacher, and he wanted to see an understanding of the mind of the elementary teacher in the University. They could not put primary education on a proper footing without taking into account the next stage, and they could not put secondary education on a proper footing without considering that University education came after. It might be that very few went from the Primary to the Secondary school and, still fewer to the University; but still the great ideas ought to permeate from the top, and they could not separate the one from the other in fashioning out their organization. It was essential that they should deal with the whole of education simultaneously. He attached great importance to the Teachers' Registration Council because he saw in it the foundation a true *esprit de corps* among teachers as a body. It was through that Council that they would get co-operation and mutual understanding among the teachers which was necessary if the right pupil was to be picked out and selected for secondary education. The appointment of new Assistant Inspectors with eight years' experience of elementary teaching meant that people had begun to realize more and more that it was not through abstract ideas alone that they could deal with the question of education. The four years' course at present extended to only about a thousand students.

Still it meant that 1,000 teachers were taking their training in a University atmosphere. If University education had been carped at and had been unpopular, it was because Universities had been so few and so inaccessible that people had not been able to get the benefit of them generally. And yet the Universities and the facilities for getting to them were improving rapidly. Ten years ago there were only six teaching Universities, but since then five more had been established. That meant that there was a much greater access to the Universities than there was before, and much greater chance of bringing them to bear on the training of the teacher. Putting outside Oxford and Cambridge, the number of students working in the day-time had doubled in the last ten years. The number of degrees obtained by students in England and Wales in 1911 was more than twice the number obtained in 1901. Presently the Universities would be made much more accessible still, and the four years' course was the beginning of a movement which he hopes would end by getting rid of the uncertificated teacher. The four years' course not only means higher efficiency but higher ideas. There were things they could not get outside the atmosphere of the University. They got there that larger outlook which enabled them to see things completely, to see them whole, with a knowledge and a grasp of principle which made technical details easy. More and more people were coming to realize that teaching was a business which required very careful training. Mr. Dakers, in his address on the previous day, made a playful allusion to his connexion with external students. He (Lord Haldane) would never admit that an external student was the same thing as an internal student. The internal student had matured his mind in the University atmosphere. The external student was working hard, but only for the external examination, and some people with much less aptitude than their neighbours in what was best in the realities of education had

much greater aptitude in passing examinations. Therefore the external examination was not a real test of learning. The only real test of learning on which he would like to give a degree exclusively was the record of the student during his time at the University. Three years or two years spent within the walls of a University were worth anything. At the University the teachers and the taught were nearly on a level. They were dealing with great problems; they were searching after truths in which there was no certainty, and it was that common quest which gave the higher relation between teacher and taught that they could never get quite as well outside a University. It was not only that, but it was the association of the students and the feeling that they belonged to the world of learning. He wanted that for the teachers, and it could not be got merely by taking degrees with external examinations, but they had not yet got the opportunity for all the teachers to live in that atmosphere, although the four years' course was a start on that new path. Until they got the full opportunities for the teachers he did not think that it would be right to take away the chances of external degree.

THE POSITION OF SECONDARY TEACHERS.

Turning to the position of the secondary teacher and of secondary education in this country, Lord Haldane said that the quantity of secondary education properly organized and recognised by the State in this country was almost negligible. No doubt there had been improvements and there were some places where it was very good indeed, but in the more remote and less enlightened parts it was hardly an exaggeration to say that secondary education scarcely existed. It was the essence of a system of national education that their secondary system should be enormously strengthened. The German education system had its weaknesses. He doubted whether it was accessible to the democracy, as ours was, but it had one source of immense

strength—its pivot was the secondary school. Indeed, the secondary school had made their educational system a unified and a very powerful one. It was most unfortunate that so many children were withdrawn from the teacher on excuses that were altogether inadequate on the plea that there was a beneficial occupation that they could usefully follow: it might be right in certain cases to let children away from the schools before they were 14 but only on consideration that they began at once in some other kind of school. It was all very well to talk of an educational ladder but it was only very few who could go on to secondary education properly so called and still fewer on to the University. Let them make provision for that excellent minority, but let them remember the great majority, for whom they had to do something and whose educational career was all but short when it ended even at 14.

There was another case. Their rural districts particularly required some kind of treatment. He did not know of any spectacle more than that the education which the child of the agricultural labourer could hope for. That was one of the great points in the land question to which the Chancellor of the Exchequer would give his close attention. Until they had done that the future generation of agricultural labourers would not rise above the level at which they were today, and it was vital in the interests of the State that they should assist them to rise.

THE RELIGIOUS QUESTION.

He heard the other day that they must take the religious questions in their stride. That did not mean that they were to trample on convictions or to ignore them. What it did mean was that they must put education first if they would have faith and co-operation in the building up of a national system. They would find a spirit of tolerance and a deliverance from the lower plane of controversy which would get rid of many of their difficulties. There were some

things that they are recognized could not continue. For instance, in the single school areas the schools were mainly Church schools. What mattered was that they were very bad schools. In many cases they were run not for the benefit of education, but because there had been an old thing there and people had gone on with it. They would never get matters right if they selected a head teacher because he played the organ well. The single-school areas presented a very pressing problem and they had got to see to it that at the head of each school there was a good teacher. If they succeeded they would succeed by moving the people of this country to give money out of their national resources. The drain on the people was a heavy drain but the increase in the national income had been tremendous within the last generation, and they could well afford to do this. It was not a matter in which they really had an option, for unless they took this great step forward, they would be false to the generations which were to come.

LORD HALDANE AND SECONDARY EDUCATION.

A NATIONAL PROBLEM.

Lord Haldane attended on Saturday, March 29th, a joint meeting of Secondary and Technical Teachers, held in the Great Hall of the University of London. On this occasion, however, the Lord Chancellor was a listener for the greater part of the time, during which the views of the Secondary and Technical teachers on educational reform were laid before him. After two Resolutions had been adopted, setting out the teachers' desires, Lord Haldane delivered a short speech in which he dealt with the need for reform in Secondary education. The Headmaster of Eton presided over a large gathering.

The Chairman said that Lord Haldane's presence was an indication of the intention of the Government not to proceed without first taking counsel of the teaching profession. They had

no reason to doubt that the State was willing and indeed anxious to allow reasonable freedom, and they trusted that liberality and careful consideration would be the mark of any regulations which might now be contemplated. Referring to the question of a pension scheme for secondary teachers, he said that the presence of the Headmaster of Harrow and a letter he had received from the Headmaster of Winchester indicated that those who represented larger public schools no longer felt it possible to stand aloof from that question.

Cannon Swallow (Chairman of the Incorporated Association of Headmasters) moved a Resolution welcoming the announcement that the Government proposed to deal in the near future with the question of education; hoping that the State would leave to the school all reasonable freedom in such matters as time-table, curriculum and careful educational experiments; and, with the object of attracting into the schools a sufficient supply of able and efficient teachers, urging that the increase of salaries and provision of an adequate pension scheme should be a first charge upon any further grants for secondary and technical education. He did not think that there was much fear of the freedom of the Secondary schools being impaired for he took it that the Government would remove direct control from the local authorities, which were, with very few exceptions, disposed to find for their schools good Headmasters, and leave them free to work out the salvation of the school. At present experiments were stopped for want of means, and unless the country was prepared to spend six or seven millions a year more upon education they could not hope to make it worthy of the nation.

Mr. R. F. Cholmeley (Owen's School, Islington), who seconded the Resolution, said that one of the most favourable symptoms in the educational activity of the Government was that manifestation of desire to know what the teachers thought.

Mr. P. Goleman (Chairman of the Association of Teachers in Technical Institutions) supported

the Resolution, which was carried unanimously. A second Resolution was also adopted expressing the opinion that no pension scheme for secondary and technical teachers in England and Wales could be considered adequate which did not provide benefits approximately equal to those now secured to Scottish teachers.

A HOPEFUL OUTLOOK.

Mr. Arthur Acland said that since the conversations he had had during the autumn with the Chancellor of the Exchequer and the Lord Chancellor he had begun to hope that at last a national policy of education was in sight. They who were interested in secondary education were very timid folk. They were very much afraid of State interference. What they wanted was lots of money, and as little "red tape" as possible. The proper corrective to too much State interference was a united teaching profession taking constant counsel with the Board of Education. It was early yet to speak of what they hoped the Teachers' Registration Council would do but it was a splendid thing to find in the same room for the first time under an Order in Council 44 persons representing the whole of the teaching profession of this country.

LORD HALDANE'S SPEECH.

Lord Haldane said that he was one of a band who were on a voyage of discovery, and who wanted to know all they could before they committed themselves to details. It was plain that the Secondary teacher was vastly underpaid but that was not true of him alone. Before they got such grievances redressed they must interest the British public in their case.

"There was a notion in the head of the man in the street that secondary education was a luxury with which he need not trouble himself, and so long as that notion was in his head it would be very difficult to get him to pay any taxes for secondary education. But if they could bring home to him that the state of the education question in this country was at this

moment a peril to the nation and that it was a question of national safety with which they were dealing, then he would take a larger view. It was not that we were not going on. Magnificent work was being done and the London County Council had set a fine example. The Government had done a certain amount, but there was not progress sufficient to make up the leeway. They were behind the level which had been reached by several of their competitors, a level which would put them in peril. They must not think that he wished to base the case for education and especially for higher education on mere grounds of materialism, but they could not dissociate national progress from the basis of knowledge even when it came to the question of making money; and if the level of the national income was to be maintained, if their industrial pre-eminence was to stand, he said deliberately that the nation would have to make an effort to put its educational system in order."

Broadly speaking, the number of pupils who left elementary schools in each year was 600,000 and about one in 23 went on to some form of higher education; and about one in 48 had got a free place. As a result the demand for secondary teachers was increasing and there was a threatened falling off in the number of teachers, because as they were not properly paid people did not join the profession. They must not let secondary education be separated and isolated in the public mind from elementary education and from University education. A great step forward had been inaugurated in the shape of the Teachers' Registration Council. One result of the gap between the elementary and the secondary school was that some change must be made if the average boy or girl was to get the good of some form of higher education. It was not enough that selected pupils should go to the secondary school. They wanted to make some provision also for the average pupils. That meant they would have to do a great deal in the way of broadening the conception of Elementary education in justice to Secondary education.

EDUCATION IN THE MAGAZINES.

(INDIAN)

Elementary Education.

In opening the first model Elementary School in Triplicane, His Excellency Lord Pentland spoke on the importance of Elementary Education from which we take the following:—

If we look at the statistics of Elementary education throughout the Presidency, we find that naturally enough from the facilities it affords, from its wealth, from the foundation and the endowments which are established within its limits, Madras City stands first in the attendance of children at Elementary Schools, for I think there are something like 243 recognised Elementary Schools within the Municipal limits, and in these schools we find 15,206 boys attending and something over 10,000 girls. You will not find, I think, so large a number of girls, comparatively, attending in any other part of the Presidency, and that I think is a subject for congratulation. A great deal therefore has been done; but when we recollect that there are only 15,000 odd attending schools out of 38,000 that should be attending Elementary Schools in the City of Madras, we see what great need there is for such a building as is represented by the school. You have seen the premises, you have seen the class-rooms, you have seen the play-ground which, I think is an essential addition to a school of this kind, and I am sure there is not one of us that has not been glad to see the merry faces of the children and the cheerfulness with which they have taken part in the songs and exercises that they have given before us. Depend upon it that there is no better thing that any of us can do to our children than a good education as an equipment for life. Therefore we cannot but take a warm personal interest in an effort of this kind. I think this occasion is for one or two reasons more notable than the opening of an ordinary school. In the first place it indicates the opinion of the Corporation as to the importance of Elementary education, and as was wisely said already this afternoon, if I may so characterise it, it is of the highest importance that to take part in the industries of this great city, to appreciate the improvements introduced by the Corporation itself there should be intelligent co-operation on the part of its future citizens. Every rupee that the Corporation spends in improvements will be enhanced by value if that expenditure is rightly appreciated as a benefit by those for whom it is intended. I feel certain that as time goes on, the educational efforts of the Corporation will be warmly approved,

THE BURDEN OF THE UNIVERSITY.

It was an old and narrow notion that it was only with books and abstract subjects that they could give higher education. They were getting very much wider notions of education and they required them. Just as they had got to relieve the secondary school of a good deal of the burden on it because of the imperfections of the elementary school, so they had got to relieve the University of burdens put upon it by the deficiencies of the secondary schools. Reference had been made to the Intermediate examinations of the University being taken in the school. The preliminary studies which were tested at the Intermediate examinations ought to be taken in the secondary school. If they had a properly developed system of secondary education did they think medical student would have to wait for his general knowledge of chemistry and botany until he went to the University? Did they think that the Universities would be burdened as they were with giving instruction of a comparatively ordinary kind in the elements of mathematics, physics, chemistry, and other subjects?

THE GERMAN EXAMPLE.

One reason why the Universities had suffered was because we had never understood fully the significance in the educational system of secondary school. In Germany it had been different. The whole educational fabric there rested upon the basis of the secondary school. The boy went into the secondary school young and remained there if he went through the full course for about nine years, and at the end of the time he was so qualified that he went straight to the University. There was no matriculation examination, but the student had to produce his entrance certificate showing that he had gone through the mill and been in the atmosphere of the secondary school. They had outgrown the period of the old-fashioned examination. What they wanted was record, and he looked forward to the time when every body who went to the University would have that record. He believed that the new four years' course would be a great stimulus in that direction. The time had not yet come when they could deprive the external student of his chance of getting an external degree. That would come when people realized that the external degree meant nothing comparable to the degree which was the hall-mark of having lived in the atmosphere of the University. Education was the greatest reform they could take in hand and expenditure on education was productive expenditure which they were justified in making a sacrifice to incur.

Secondly as I have already hinted, this has a wider significance than a merely educational effort, for it is municipal effort in the best sense of the term. You want to see these young people growing up useful and industrious and intelligent citizens, and you are doing your best not only for the individual pupils who attend these schools in this respect but you are saying to all and sundry, rich and poor in this city "Here is an example of what we want to see provided for all the children. We shall not be content till we see it done and we shall welcome the aid of every body to attain that end." It has long been recognised that if you want to govern a country, you have got to pick your brains from all ranks and from whatever source you can find them. What better can you do therefore than to cultivate the whole field that is before you? I am quite certain that the Corporation will never regret the step that it has taken for introducing this scheme of establishing Elementary Schools, and I am sure that future generations of citizens will thank the Corporation for their foresight and their generosity in so providing.

Raw Material and Finished Product.

At the 12th anniversary of the Hindu High School Literary Society, Mr. K. B. Ramanathan delivered an interesting and instructive lecture on "Raw Material and Finished Product," in the course of which he said :—

The subject of my lecture is not of an economic nature. The pupils that enter the school here are raw products and they go out as finished products. Young men have to take the High School course sometimes as the highest educational course and they have to go out into the world after a career of fashioning which would be a help to them in life.

Referring to the school discipline I would say that it is at school that you learn punctuality.

As to thoroughness I would ask you to see that whatever work you might have to do is done to your satisfaction and to the satisfaction of your teachers. There is a tendency to attach too much value to the public examinations, but I am of opinion that the results of the public examination supplement the school-master's estimate of the boys' progress from day to day and when these two tests are taken together, they would give the public a much better estimate of the boys' real merit than the public examination is able to give of the boys' abilities in the earlier period. The pupils are there to get the full benefit of the school course and if they had realised their responsibility, if they had to the best of their abilities fulfilled such responsibility satisfactorily to themselves and to

the teachers concerned, I might congratulate them on the work that they had been doing and then they might consider, how very much that thoroughness in study went to the root of morality and honesty.

Turning to honesty, I would impress on you the necessity for being very honest and straightforward.

With regard to Library I would say that it is a very valuable adjunct to the school and that at the present day you are in a very advantageous position, having access to almost all the useful books, as compared with the old days, when the library was in its infant stage. I wish that all the members of the Literary Society should make the best use of the Library and hope that the Library will implant in all those getting out of the school, a taste for reading good and choice books.

With reference to games I would say that physical culture should receive the first consideration. Every one belonging to the school should take an active part in games and those who are in Triplicane have their play-ground provided by nature and hope that they would derive the full benefit of the play-ground.

In reference to the Society, I find from the report that nearly half the lectures are from outside public. I would say that it is very important to learn to express your ideas properly and that you should not neglect opportunities of cultivating that talent. For that purpose you will have to consult many books and you will get acquainted with all sorts of ideas.

If you have improved in all these directions, the teachers and parents would be satisfied with your work. The old feeling that the teacher was inhuman, inimical, etc., is all gone.

In conclusion I hope that you may turn out very useful citizens, for filling up the several responsible places with credit to yourselves and to the school you come from.

Economic Study.

The 3rd annual meeting of the Patna College Chanakya Society was held with Sir Theodore Morison, K.C.I.E., in the chair. The following abstract from his speech on the need for economic enquiry will prove interesting :—

There is a great work still to be accomplished. My own books, to which Mr. Russell has made a kind and courteous reference, are merely tentative and provisional; and I seriously express the hope that you would very soon make those books out of

date. It is now realized that what are known as "economic laws" are for the most part generalizations about the economic phenomena and the industrial structure of Europe; and that these generalizations do not necessarily hold good in this country. The economic structure of England is different from that of India. If you produced descriptions in the form of monographs of industries as they are conducted in India, you would be producing a kind of work which would take a most useful place among the economic books written at the present day. If you go on in this way making enquiries into details, your work would have real utility. There is an institution which works on these lines in England—the London School of Economics. Its members begin by making detailed enquiries and taking down notes as to what is actually taking place in some industry or social group. They form, e.g., a separate branch for studying Railways, another for studying Banks. Work of this kind done in India would be of extreme value to European students. Professor Marshall has said to me: "We suspect, but do not know for certain that the present economic structure of India resembles the economic structure of England before the Industrial Revolution." All that we have yet got is fragmentary evidence. I finally suggest that in the course of your enquiries it would be interesting to find out the present condition of the descendants of classes who had formerly been enslaved. There is a quite interesting report on the subject of slavery in India in 1840. The enquirers came out on behalf of the English liberators of slaves, and were a picked commission. But they gave a very favourable account of the condition of slaves in India as compared with those in Africa. It would be of interest to learn what had become of this class, and whether it had risen in the social and economic scale.

The Teacher.

In the course of his valedictory address at the 23rd annual meeting of the Teachers' College, Teachers' Association, Saidapet, the Hon'ble Mr. Justice P. R. Sundara Iyer dwelt on the subject of the "Teacher." He said :—

It is a tradition and practice that a teacher has to be satisfied with the feeling that he is performing a sacred task and take consolation in that fact for the absence of good emoluments. In India learning is never bartered for money and the teaching profession is placed above all pecuniary appraisal. A good deal could be done to improve the condition of teachers for the reason that life is becoming more and more costly. A teacher should

be placed above want, because his capacity for work will be diminished. I hope that the scheme for Provident Fund for teachers will be successfully carried through. A teacher should realise that large wealth is not his goal. At the same time he must also realise that his responsibilities and the sphere of his duty are continually widening. The teacher is thought of as the person who would put everything right, and courses of lectures on sanitation, agriculture and co-operation are delivered in the Teachers' College. A competition has been announced in this College in treating the subject of moral and religious instruction. A teacher is looked upon as the instrument for removing all grievances. A teacher is expected to see that the students are trained in a scientific attitude of mind to see that the treating is practical, and that he is also training the moral instincts. Young men should be so trained as they would be willing to change and adopt such modifications of existing things as might be demanded by the necessities of progress. It is often said that discipline is becoming lax and that a student should be kept under strict discipline. But I am not convinced that increasing strictness is necessary or beneficial. A student from highest to the lowest class has very little to do anything on his own account. Every hour of the student is absorbed in doing the work prescribed by the school authorities. What is required is not so much control of the student's act but is constant holding up of high ideals. There should not be too much of organisation and too much of discipline in the matter of education. Students should be disciplined in such a way as they would think that they were bound to act rightly without rules. More freedom should be given to teachers and probably that requires important changes in the manner of inspection in the Grant-in-Aid Code. Students should be trained in the habit of studying things in the concrete and should be made to take an interest in the external world. They should acquire the habit of methodical and persistent thinking and not be satisfied with their quickness and subtlety of thought. Instruction should also be given to students on the duties of citizenship. Teaching profession is the most noble and sacred profession.

Education in India.

At the 23rd anniversary and prize-distribution of the Madura College held on the 19th instant in the College Hall, the Chairman, the Hon'ble Mr. T. V. Seshagiri Aiyer, traced the history of the educational policy in this country from the very earliest times, i.e., 1835. He said :—As soon as the British Government was firmly established in

India the Board of Directors considered about the kind of education to be given to the people of this country, whether in the vernaculars and classics or in English and with the powerful advocacy of Lord Macaulay, education was resolved to be given in English. After a period of twenty years, the question was reconsidered whether higher education should not be given to Indians and in spite of much opposition Lord Halifax, who was the then Secretary of State for India, persisted in giving higher education to Indians taking a subterfuge, in pacifying the Board of Directors that if only the Indians had higher education they would be able to appreciate British merchandise and purchase their produce. Then came the troublous times of the Great Indian Mutiny. Many began to attribute it to the higher education given to the Indian. But Lord Canning, the greatest Viceroy, held a different opinion and proclaimed that the noble principles of Lord Halifax would be adhered to. In consequence of this, Indian Universities were established at Calcutta, Bombay and Madras. For 23 years after this, the progress was steady. In 1882 during the Viceroyalty of Lord Ripon the question arose whether higher education should be given at the expense of Primary and Secondary education; and a Commission with Mr. Hunter as its President, was appointed to examine the situation. The recommendations of the Commission were in favour of Primary and Secondary education and many private schools came into existence. It was also thought that Indians should have a share in the management of the educational institutions and hence many of the schools and colleges maintained by Government were handed over to private bodies and the Madura College was an instance. For 12 years there was rest. Then came Lord Curzon as the Viceroy and he took a distinctly retrograde step in regard to education. On the advice of the Committee appointment by him, the famous Resolution of 1905 was passed which said that higher and secondary education should be made self-supporting, that the fee should be enhanced and the fund of the schools should be provided by the managers of schools. This policy was surely not in furtherance of education; on the other hand it was calculated to do much harm to the progress of education. And the King-Emperor during his visit to India reversed that policy and declared that the progress of the country and the stability of the Government lay in the spread of education.

There are three problems to be considered in regard to education. The first is "How far shall

this education go and whom shall we educate;" the second "What shall be the nature of education that we shall give to our boys" and the third "What shall be our duty towards teachers who are charged with the duty of teaching." As to the first problem, in consequence of the policy of Lord Curzon higher education has become more or less the pastime of the rich and not the aspiration of the poor and talented. Everybody should receive primary education, the brightest among those secondary education and the brightest among those University education so that the country and humanity might best be benefited by such education. It is not sufficient to give education to those who are ordinarily in the habit of getting education but it should filter down to the down-trodden and depressed classes and the rejuvenation of India surely depends on it. As to the nature of education that should be imparted to the boys, there is at present too much of over specialisation and we should go back to the state of education 25 years ago when persons were given a good deal of general education to enable them to enter any profession. In this country it is not enough by specialisation only to produce graduates. What is wanted is persons having general knowledge in all departments able to take up their places as leaders of political thought and as men engaged in the administrative work of the country. As to the third problem the pay for the teachers is very poor and so it has not attracted good and able men to the Educational service. I should emphasize the necessity for the revision of the Grant-in-Aid Code and ask you to urge the Government to sanction the Provident Fund Scheme. Unless the differentiation of the Imperial and Provincial Service is removed, until the Grant-in-Aid Code is amended so as to enable the managers of schools to pay their teachers more liberally, and until the Provident Fund Scheme is established we cannot expect much progress in education.

Manual Training.

In his presidential address to members of the National Association of Manual Training Teachers at the London Day Training College on March 26, Sir John Cockburn said that where intelligence often led astray intuition led correctly. Manual work was the best avenue to the brain. Speech was the highest faculty of man, and this power of speech was called into function by the movement of the hand. If they wanted to reach the brain they must do it through the hand, and if they disregarded the use of the eyes and hands in education they were placing the brake on all mental

development on the part of the child. A command to "keep still" in a school was the greatest cruelty they could possibly impose on children, and often produced deformity. After speaking of Professor Findlay's contention—based on experience at Manchester—that delicate children grew more when away from school, Sir John Cockburn contended that physical and mental excellence went together. There were occasional exceptions, but as a rule the boys who were best at sports, especially those in which the muscles of intelligence entered, were also the best scholars. Children hurried to school when they knew they had manual work to do. The introduction of manual instruction meant that five or six hours a week could be knocked off class-room work, for its inclusion meant that the most abstract studies could be acquired in very much shorter time than otherwise. He himself was one of the mischievous results of the old University training, which turned a boy out at an early age with all sorts of useless knowledge. He never opened a book for 12 years after leaving the University, and at 30 he was much more ignorant than many of those competitors he had left behind at 20. Dealing with the ordinary school curriculum, Sir John said it was only when one got to years of discretion that grammar could be properly studied and understood, and he was inclined to think that it would be a benefit if they abstained from it all their lives. Grammar was not learnt by rule but by experience. Very soon there would be nothing but manually trained teachers in the schools, and the sooner the educational world realized this the better.

The Primary School.

At the National Union of Teachers which opened at Weston-Super-Mare on March 24, Mr. Dakers in his presidential address dwelt on the reform of the Primary School. He said:—

The educational policy of our organization might be summarized as "equality of opportunity for all, regardless of rank, fortune, or social status."

To secure this equality of opportunity we must first concentrate our attention on the Primary schools and reform their conditions throughout, for until that task is accomplished there could be little or no hope of solid educational progress. Many ardent educationists, whose sincerity and zeal are undeniable, take it for granted that the Primary school system is working very well and focuss their minds on Secondary and University education. But Primary education is not on a sound basis, and never will be until its administration is so organized that the conditions in the Primary schools are as

good as those in the Secondary schools. When that has been achieved the rest of the campaign will be comparatively easy. If the conditions in the Primary schools militate against efficiency, a large proportion of the children in those schools would be unable to profit by the best possible system of higher education. Only a small minority will be capable of extending their studies, and the class monopoly of the Secondary schools and the Universities will be more firmly established than ever. Reform of the Primary schools must come first, and the ideal to keep before us must be the levelling up of their conditions to those of the Secondary schools. Even in the matter of school buildings the spirit of class prejudice steps in. The Secondary school children must according to the Government regulations, have more air-space than Primary school brothers and sisters, though the home surroundings of the latter in many cases would seem to call for a complete reversal of the position. Of more importance than the buildings are the arrangements for carrying on the practical educational work and there the disparity between the two classes of schools is even more pronounced and more productive of evil results. The pupils in the Secondary schools must be taught in every case by fully qualified teachers, but little more than half of the staff of the Primary schools could be so described. Elaborate and in many respects admirable regulations have been drawn up for the training of Primary school teachers. Yet having obtained its qualified practitioners the State restricts their sphere of usefulness. They are forbidden to cross the sacred portals of the Secondary school but a host of unqualified or partially qualified men and women is sent to compete with them in the Primary schools. Any attempt to stereotype the grade of uncertificated teachers is not only to be deprecated but deserves the most unsparing condemnation from those who claim to be educationists. Uncertificated teachers have been allowed and encouraged to remain unqualified and their continuance in the Primary schools is one more proof that we are still very far from the idea of equality of opportunity for all in education. The State which has led us that blind alley could not in justice dismiss us, since time has in some measure given the experience which makes for efficiency. On the other hand, the interests of the children demands that the grade should eventually become extinct, and that in all future appointments only certificated Assistants should count as effective members of the staff. The principle would then be established that both in Primary and Secondary Schools fully qualified teachers only should be responsible for the work

of educating. And end would thus be put once and for all to the employment of those non-descript anachronisms known as supplementary teachers. Their existence is a national disgrace and a further insult to the workers whose children are condemned to these tender mercies. Their introduction into the Primary schools could only be justified on the supposition that pupils in those institutions are marked with a perpetual brand of inferiority.

Woodrow Wilson.

The following is an abstract of the career of Woodrow Wilson, the President of the United States, by Reginald R. Buckley.

Woodrow Wilson was the son of the Rev. J. R. Wilson, a Presbyterian pastor of Wilmington, North Carolina. As a school-boy he was manly, but at the same time a keen worker. Neither a swotter nor a mere athletic implement, Wilson was popular. He was fond of his home and his people. Before Woodrow Wilson was eighteen, he was sent to Davidson College, but a year later (1875), he entered Princeton, the history of which goes back to 1746. There he read hard and played baseball. He rejoiced in oratory, especially in the speeches of Edmund Burke. Moving on to the University of Virginia Law School he won the Jefferson Medal for oratory. He practised as a lawyer, but found that "the law has ceased to be profession, and has become a trade." When Mr. Wilson had taken his degrees he became Professor of Political Science at Bryn Mawr. He married Ellen Louise Axon, a beautiful lady from Savannah of Cavalier extraction. They have three daughters: Margaret Wilson is a soprano singer, training in New York. Her sister, Jessie, is a painter and social worker, and Eleanor, who also is studying painting. The mother has a reputation as housewife and cook.

In 1890, Woodrow Wilson became Professor of Jurisprudence and Political Economy at Princeton. He learned shorthand, and in every possible way qualified himself as an organiser. In 1902 he became President. Instead of delivering lectures mechanically, he got into personal touch with students, and even tried to modify the club system (an exaggeration of our own collegiate and non-collegiate method.)

In 1910 he resigned, leaving Princeton prosperous and of greater importance and influence than ever before. Like all big men, his aims had far exceeded the results. But much had been done. His personal record was a literary one. "Division and Re-Union," his work on the Civil War, appeared in 1893. The same year gave to the

world "An Old Master and other Political Essays." The "Old Master" was not Rembrandt but Adam Smith, of the "Wealth of Nations." In 1896 appeared a volume of essays entitled "Mere Literature." That title was characteristic of the man.

Word-spinning he valued as a means to an end. In his "George Washington," which has been revised quite lately, the new President deals with the social and domestic qualities of the man. The famous "History of the American People" appeared in 1902. In order to understand the value of his appointment, one must look at his latest publication, "The New Freedom."

THE UNIVERSITIES.

MADRAS UNIVERSITY.

M.A. DEGREE EXAMINATION, 1913.

Branch II-A. (Physical Science.)

The following are the names of the successful candidates:—

Kuppana Aiyangar, D. Parthasarathi, III Class.
Manikkam, Jonathan P., II Class.
Sivaramakrishna Aiyar, V., II Class.
Subramanyan, P. E., I Class.
Venkata Rau, Ankola, I Class.
Visvanatha Aiyar, Vellayanur N., III Class.
Yagneswaran, P., III Class.

Branch III-C. (Zoology.)

Channappaia, Halsand, III Class.
Devanesan, David W., II Class.
Karunakaran Nayar, Kolazhi, III Class.
Moses, S. Tangaiya, III Class.

Branch V. (History.)

Babu Rau, Kollipara G., II Class.
Jagadisan, S., II Class.
Joseph, Panjikaran C., III Class.
Khalifullah, P., III Class.
Nilakantan, A., I Class.
Raman Nambissan Tekkepat, III Class.
Seshan, T. R., III Class.
Sivaramakrishna Rau, Kaza, III Class.
Srinivasachari, Chidambaram S., II Class.
Subbaiya, N. R., III Class.
Venkataraya Aiyar, Subrahmanya, III Class.

CALCUTTA UNIVERSITY.

University Institute.

The annual meeting and prize-distribution of the Calcutta University Institute was held at the Institute Hall, College Square. His Excellency

Lord Carmichael presided, and there was a large attendance.

On the motion of the Hon. Mr. J. G. Cumming, seconded by Sir Gurudas Banerjee, the annual report for 1912 was adopted.

His Excellency gave an interesting speech in the course of which he said:—I know how devoted you students are to your Chancellor. I know that an interest our Chancellor takes in all connected with the University and especially in all that goes to promote the welfare and happiness of you students. I know how sorry you all were that His Excellency Lord Hardinge could not preside at your last Convocation, as we had hoped he would. We know the reason, we deplore the reason, but it is not to that I want to refer. I want to say that I believe that you are all proud of your Chancellor, of the way in which he met the evil fortune which came to him, of the way in which he has done his work, fearlessly and uncomplainingly ever since. You were, I am sure, proud when you read the speech which he made at the opening of his Legislative Council in Delhi, now almost to-day 2 months ago when you read how he clearly declared that his faith in India remains unshaken. Gentlemen, it lies with you the students of Calcutta University as much as with anyone to show to the world that your Chancellor is justified in his faith. What you think and what you feel must affect the feeling of all Bengal, and we believe that what Bengal feels and thinks must affect all India.

A lecture.

Under the auspices of the Calcutta University Institute Prof. Radhakumud Mukerjee, M.A., F.R.S., read a paper on "The fundamental unity of India" on the 31st ultimo. Sir Gurudass Banerjee presided.

Dr. Bruhl appointed Registrar.

The appointment, recently announced, of Dr. G. Thibaut as the first Regius Professor of History at the Calcutta University, caused a vacancy in the position of Registrar, which Dr. Thibaut has held for many years. About a year ago, Dr. Thibaut was given a five years' extension of his appointment as Registrar, but he could not continue to hold this office as well as the Regius Professorship, and the Syndicate offered the Registrarship to Dr. P. Bruhl, who had recently retired after a long period of service as Professor, and on several occasions acting Principal of the Sibpur Engineering College. Dr. Bruhl did a great deal of work in connection with the organisation of the Physics Laboratory and the Mineralogical and Geological Museums at the Sibpur College; and it is under-

stood that he will be entrusted with the organising of the Palit Science Institute from the endowment placed at the disposal of the University authorities by Sir Tarak Nath Palit.

University Lecturers.

At a meeting of the Senate of the Calcutta University, the Senate accepting the recommendation of the Syndicate, resolved that Dr. P. C. Mitter, M.A., Ph.D., be appointed University Lecturer in Chemistry, and Professor R. N. Gilchrist, M.A., as University Lecturer on Political Economy and Political Philosophy for the Session 1913-14 to deliver a course of lectures on the comparative study of Social Institutions.

Ananda Mohan College.

In addition to the affiliation already granted, the Ananda Mohan College was further affiliated to the B.A. Pass Standard in the following subjects with effect from the commencement of the ensuing Session:—English, History, Philosophy, Sanskrit, Persian and Vernacular Composition.

Lecture by Dr. J. C. Bose.

An interesting and instructive discourse on "Electric Response" was delivered by Professor J. C. Bose in the hall of the Calcutta University Institute. The Hon'ble Mr. P. C. Lyon presided, and the hall was crowded.

PUNJAB UNIVERSITY.

Lectures.

Mr. Gordon Sanderson, of the Archaeological Survey of India, delivered a course of six lectures in the University Hall, Lahore, commencing on Tuesday, the 25th March and terminating on Monday, the 31st. The first lecture was introductory. The second and succeeding ones were on the following subjects:—Architecture of Khilji and Tughlak dynasties; Afghan Architecture; Early Moghul Architecture; Middle Moghul Architecture, and late Moghul Architecture. The subjects are important. But the lecturer could have increased their value if he had also included early Hindu Architecture.

ALLAHABAD UNIVERSITY.

Mr. E. F. Harris, the Principal of the Ajmer Government College, has been re-nominated to be an Ordinary Fellow of the Allahabad University.

LONDON UNIVERSITY.

Appointments.

The London University Professorship of French Literature, recently endowed by a London County Council grant, has been filled by the appointment

of Dr. Gustave Rudler, D.ès L. of Paris University. Dr. Rudler, who was first on the list of *Agrégés des Lettres* in 1895, took his Doctorate four years ago, and is now Professor at the *Lycée Louis-le-Grand* in Paris. Dr. A. du Pré Denning, B.Sc., London, Ph.D., Heidelberg, has been appointed Secretary to the London University Appointments Board.

Mr. T. Ll. Humberstone, B.Sc., has been appointed by the University of London to the Mitchell Studentship. The Studentship, which is of the value of £100, is awarded to the selected candidate to enable him to study and investigate some definite feature of business or industrial organization at home or abroad. Mr. Humberstone proposes to investigate a scheme of Industrial Fellowships in the Universities of Pittsburgh and Kansas, under which research work in Applied Science is promoted with funds provided by, and to some extent under the supervision of great industrial and commercial organizations.

New Senator.

The vacancy of the Senate of London University caused by the death of the late Lord Macnaughten has been filled by the nomination of Mr. N. Micklem, K.C., who from 1906 to 1910 represented the Watford Division of Herts in Parliament in the Liberal interest. Mr. Micklem took his B.A. of London in 1873 and his LL.D. in 1881.

EDINBURGH UNIVERSITY.

At the spring graduation at Edinburgh University, Sir William Turner, Vice-Chancellor, referred to the number of Indian students who had come to the front in Arts, no fewer than eight gentlemen having received the degree. In looking at the Bachelor of Science list he found that the Indian students were also prominent, as four gentlemen who had graduated in Science came from that great country. He emphasised these two facts, and said they were evidence that the natives of India appreciated the training they received in the University. They were familiar with the names of Indian students who had for long come to Edinburgh for a medical education, and it was very pleasing to see the Indian students now arriving in Edinburgh for education in the other Faculties.

ABERDEEN UNIVERSITY.

The University of Aberdeen at a recent Senate meeting resolved to confer the Honorary Degree of LL.D. on its distinguished alumnus, Sir James Meston. In these days Aberdeen University does not perhaps contribute so many men to the Indian Civil Service as it did thirty years ago, but the

names of, let us say, Sir James Thomson (now on the Secretary of State's Council), Sir Benjamin Robertson, and Sir James Meston are enough to show that the quality is not falling, remarks the *Pioneer*.

TECHNICAL EDUCATION.

TYPEWRITER TOPICS

Head-Lines.—Head-lines and titles must be balanced at the centre of the page. If the title is long it is best to write it without spacing. If it is short and compact, the letters must be spaced to avoid a cramped appearance. The line-spacing between the head-line and the first line of matter that follows it should be wider than the spacing allowed between the lines of the matter. If an ornamental line intervenes, this difference need not be observed, and the line-spacing may be uniform throughout. The ornamental line or tail-piece must be a simple one; the ornamental line is centred with reference to the heading. A head-line may be under-scored in some cases.

DUBASH KADER COMMERCIAL SCHOOL.

The Anniversary and Prize-distribution ceremony of the Dubash Kader Commercial School, Madura, was held in the School Hall. The Hon'ble Dewan Bahadur L. D. Swamikannu Pillai, M.A., LL.B., Registrar of Co-operative Societies, presiding. There was a large attendance of the *élite* of the city. The premises were tastefully decorated with greens. The proceedings commenced with prayer in Sanskrit, Tamil and Hindustani. The Headmaster, Mr. K. A. Sankara Iyer, read the school report for the year 1911-12.

Then the Chairman gave away prizes to the successful pupils. Special prizes also were given for some of the students.

The Chairman in the course of his remarks said that he took very great interest both personally and officially in the progress of commercial education in this Presidency.

He congratulated the students who were declared winners of prizes in the various subjects taught in the institution and also the Headmaster and his Assistants for the success which has attended it in the past, and wished all success in the future.

Mr. D. K. Syed Ibrahim, the Manager of the Institution, garlanded the Chairman and proposed a vote of thanks to him. With the distribution of flowers and with the singing of the National Anthem, the meeting was brought to a close.

THE COIMBATORE AGRICULTURAL COLLEGE.

A very pleasing function was performed by Mr. D. T. Chadwick, I.C.S., the Director of Agriculture, Madras, at one of the spacious lecture-halls on the top-floor of the College in the presence of the students, the staff of the College and the Farm employees. Mr. R. Cecil Wood, Principal of the College, in an appropriate speech, requested Mr. Chadwick, I.C.S., to distribute the diplomas.

After presentation Mr. Chadwick addressed the students in an interesting speech and wished them all success in after-life and a happy holiday. A group photograph was taken and the meeting terminated.

THE MADRAS ANJUMAN.

The 29th annual meeting of the Anjuman, Madras, was held in the Victoria Public Hall, with the Hon'ble Sir John Wallis in the chair. The meeting was largely attended. The Secretary read the Annual Report which was adopted. The Chairman in the course of an interesting speech said:

An institution of this sort cannot stand still, and the difficulties of creating an efficient technical school will be always with us and have always to be combated. One of those difficulties is that we cannot always get boys to remain long enough to acquire the full benefit of the course, because they are tempted away by the prospect of more remunerative immediate employment than we can give them. That is the great danger which attends the new scheme which we are trying and against which we shall have to fight to the utmost of our capacity.

INSTITUTE OF ENGINEERS.

An interesting paper on Technical education in India was read at a meeting of the Calcutta Section of the Institution of Electrical Engineers, by Mr. F. J. Robins. He gave a description of the course of training which could profitably be followed by all Technical students. He said:—Having passed his Matriculation examination or some recognized equivalent the student should then take a Technical College course of at least three years, to be followed by a two-years' apprenticeship in a work of recognised standing.

Once in the workshop the student's destiny is a good deal in his own hands. The very best proof of an apprentice's success in the shops, and the most reliable indication of his merit, is the offer of a permanent job at the expiry of his time; if he is considered a bad indifferent worker and no use can be found for his services he may

be looked on as not having achieved a great measure of success.

ASSOCIATION FOR THE ADVANCEMENT OF SCIENTIFIC AND INDUSTRIAL EDUCATION.

The ninth annual meeting of the Central Council of the Association for the Advancement of Scientific and Industrial Education of Indians was held at the Town Hall, Calcutta. About sixty members of the Association were present and among those present were Maharajas of Burdwan and Nashipur, Nawab Sujat Ali Begg, the Hon'ble S. N. Roy, the Hon'ble Mr. K. K. Chanda, the Hon'ble Mr. F. Huq, Messrs. A. Rasul, Ishfak, and J. Chaudhuri. The Hon'ble the Maharaja of Burdwan, President of the Association, took the chair.

The annual report was read by the Maharaja of Nashipur, and a number of resolutions were adopted. His Excellency Lord Carmichael came and inspected the various articles exhibited. The Maharaja of Burdwan gave sound advice to the students and the meeting came to a close.

Reviews and Notices.

"ACHIEVEMENTS OF CHEMICAL SCIENCE," BY JAMES C. PHILIP, M.A., D.Sc., Ph.D., IS ONE OF A SERIES OF BOOKS PUBLISHED BY MESSRS. MACMILLAN & CO. UNDER THE GENERAL TITLE: "READABLE BOOKS IN NATURAL KNOWLEDGE." 1s. 6d.

Starting with a brief summary of the pioneer work of Priestley, Cavendish, Lavoisier and others which laid the foundations of Chemical Science the author discusses in some detail the primary sources of power or the different kinds of fuel supplied by Nature and the different forms into which these are often converted by man on the score of economy or convenience. In the 6th chapter enough is said to convince the reader that it has often fallen to the lot of Chemistry to suggest remedial measures to safeguard the lives and health of industrial workers engaged in certain dangerous trades and occupations. The two chapters that follow clearly show how the advance of chemical knowledge has led to the utilisation of the waste products of certain industries as starting points in the manufacture of many useful and valuable bye-products. The two succeeding chapters show to what a great extent synthetic chemistry has already succeeded in the artificial production of several inorganic and organic natural products whose supplies from

Nature's laboratories is deficient or fitful. The invaluable nature of the services rendered to society by the analytical chemist is the central theme of the 11th chapter. The 12th chapter brings home to the reader that "the power of littles" is as great in chemistry as anywhere else and that small quantities cannot safely be left out of account. The striking examples of the next chapter show how even trifling observations carefully made and followed up often lead to results of a far-reaching character and how the labours of the man of pure science prepare the way for the applied science of a subsequent epoch. The last chapter directs attention to the services rendered by chemistry to its sister-sciences.

This little book neatly got up and with good portraits of some of the most eminent chemists is sure to stimulate the interest of the reader in chemical science by helping him to realise the important part played by chemical forces in daily life and in the life of the community. The numerous examples of great men who at the risk of personal comforts and worldly profits devoted their lives to unselfish search after truth cannot fail to inspire the reader with higher ideals and nobler aspirations. We can therefore cordially recommend this book to the students in the higher forms of our High Schools and the lower classes of our Colleges and hope that copies of this book will find a place in every High School library.

LESSONS IN CITIZENSHIP, BY H. J. WALDEGRAVE. (NELSON AND SONS). 1s. 6d. net.

This is a recent addition to the volumes prepared in accordance with the syllabus of the Moral Instruction League, and like its predecessors of the series is intended for the use of teachers. It follows closely the details of the syllabus laid down for Standard VII for pupils of 13-14 years of age. It is more suited to the conditions of life prevailing in England than to Indian conditions and the illustrations are all taken chiefly from English history. Still the principles it is intended to inculcate are common to all civilized countries. Unlike other books on civics it is not a mere description of the system of government prevailing in the country, but seeks to teach the duties of a citizen. A feeling of civic duty is particularly weak in India and it is therefore highly desirable that a sense of individual responsibility as members of society should be cultivated in our students. We have to teach our youth to become first and foremost good citizens, as they have to take on

them the responsibility of managing business, public and private, of taking their part in politics and in municipal life, in originating laws, sitting on tribunals, etc., especially now when we have been given enlarged Legislative Councils, and the right of electing a large number of members in them, and educated men are claiming more and more the right of self-government and a larger share in the administration of the country. The very first chapter in the book is on the nature of voting and the responsibilities of the voter in exercising this privilege. It is unnecessary to dwell on the importance of such a knowledge to every one seeing that a large number of people, literate and illiterate, have the privilege of electing not only members of Taluk and District Boards and Municipalities but also of our Legislative Councils. The author seeks to help the teachers in leading their pupils to understand why people should pay taxes to Government, why the law should be respected, how society is an organism in which the well-being of each and every member is the concern of one and all, and to develop in the students the ideal of human brotherhood—n short, to "teach the pupils to think of the 'We' rather than the 'I'." It is impossible to exaggerate the importance of such a book in the modern life of the Indian people and we wish that some capable educationist would write a book on the lines laid down here adapting it to the present conditions of India.

CHARACTER IN THE MAKING, BY ABEL JONES, M.A. (JOHN MURRAY). 2s.

The problem of keenest interest to the educationist in India to-day is the proper development of the character of the young ones in schools and colleges. The recent resolution of the Government of India on education placed the subject in the forefront of its contemplated policy. Mr. Jones's *Character in the Making* comes at an opportune moment to teachers in this country, and we have no doubt that if the moral education of youths is regulated by the principles enunciated in the volume, the results must be of the most encouraging kind. An appreciation of the conditions affecting the development of character is absolutely necessary for the teacher who professes to impart moral instruction and we cannot conceive of a better book for the purpose than the one under review. Mr. Jones is no faddist forgetting his sense of perspective under the stress of too much enthusiasm for the moral life. He is as calm and scientific, as he is stimu-

lating in interest. There is a hearty attempt at the practical interpretation of character and remarkable care is exercised in warning the reader from pursuing the good too far. The book is an admirable manual which must find a place in all school libraries and prove of the greatest benefit to teachers as a class.

CITIZEN OF THE EMPIRE, BY IERNE L. PLUNKET. (OXFORD UNIVERSITY PRESS). 1s. 4d.

The principles of citizenship do not lend themselves to attractive treatment in the elementary classes. The Oxford University Press supplies by this volume a very efficient manual for teaching the subject. The manner of exposition is quite suited to the young minds to which it is intended. There is a spirit of cheerfulness pervading the volume and there is a laudable attempt at the infusion of a spirit of pride in the empire. The details of every day administration are brought before the student, by means of a series of interesting pictures. Their association with things with which children are generally familiar is a sure means of guaranteeing their being remembered by them. There are a very large number of interesting and educative illustrations.

OXFORD ELEMENTARY BOOKS: *Old Time Tales*, BY LEWIS MARSH, M.A.; *Tales of the Fairies*, BY LEWIS MARSH, M.A. (OXFORD UNIVERSITY PRESS). 1s. each.

The two volumes consist of romantic stories, judiciously selected and attractively told. A special feature is their relation to the mythology and folk-lore of varied nations, representing diverse systems of civilisation. It is probably not too much to say that one of the surest means of inculcating cosmopolitan sympathy in the young mind is by interesting it in the legends and folklore of other nations. The Oxford University Press is evidently bent upon making the books as attractive as possible. The illustrations and the get-up are excellent, and the books are a marvel of cheapness. We are also glad to note in them one or two stories relating to India.

GREEK LEGENDS, BY MARY AGNES HAMILTON. (THE CLARENDON PRESS). 2s.

It is hardly necessary to point out that a knowledge of Greek mythology is one of the

most essential things for a well-regulated scholastic course. It is not possible for the young student to make any great progress in literature without being troubled constantly by allusions to tales in Greek mythology at every step. The student probably imbibes some knowledge of Greek legends by their occasional treatment in books. But Mary Hamilton brings together the most important of them, and tells them in a simple, attractive manner for children. Such a systematic and comprehensive survey of Greek mythology must be of the greatest value to the student. We have great pleasure in recommending the book to teachers in this country. The price is however a trifle high, considering the nature of the publication.

NORSE TALES, BY EDWARD THOMAS. (THE CLARENDON PRESS). 2s.

We had the privilege, sometime ago, of reviewing a collection of *Celtic Tales* by the same author and we now welcome this book of Norse Tales with equal pleasure. William Morris has already worked in the precious mine and has enshrined the most valuable in them in undying poetry. Mr. Thomas does the more humble service of narrating the tales in prose, but he does it with remarkable power and discrimination. It will serve as a very useful hand-book, for study and reference. But it is also sure to be of use to the serious and more advanced student, who desires to enter upon a comparative study of early English and Norse Literatures which are bound by numerous ties of kinship. Mr. Thomas has been enabled by his special scholarship in the line, to make his volume thoroughly reliable.

A SHORT HISTORY OF ENGLISH LITERATURE, BY SAINTSBURY. PARTS I—V. (MACMILLAN & Co.). 2s. each.

Professor Saintsbury's book has been too long a classic on the subject to need any fresh review of its merits. Reviewing his *Specimens of English Prose Style* years ago, Walter Pater expressed his appreciation by the remark that it required a really great scholar to do the work. The remark applies with greater force to this well-known chronicle of literature which has been a monument of the most admirable scholarship and critical discrimination. We are aware of the merits of all the histories of English Literature that can be used as College

manuals, and have no hesitation in saying that this is the most comprehensive and authoritative exposition of the subject. Mr. Gosse has indeed a more attractive manner, and Mr. Lang has an occasional felicity of expression which is a qualification of no ordinary importance for his work, but a student of English criticism will find the most praiseworthy sanity and balance of mind only in Saintsbury's pages. The inter-chapters supply a connected survey of the development of English Literature in all its aspects. The publication of Saintsbury's manual in parts will be welcomed as a real convenience by students. The volume enjoys a very large measure of popularity in the Universities of this country and we have no doubt it will go on increasing as long as the study of the history of English Literature has any place in their curricula.

'A FIRST ENGLISH GRAMMAR' BY LLEWELYN TIPPING, M.A., INDIAN EDUCATIONAL SERVICE.
Price: 4s. 4.

The direct method is used in teaching parts of speech to Standard IV. The exercises given will help teachers in their work, though in this Presidency most teachers already know the method themselves.

PUBLICATIONS RECEIVED.

Elementary Economics, by S. J. Chapmann, M.A. London: Longmans. 2s. net.

The Last Century in Europe, by Hawkesworth, M.A. London: Edward Arnold. 5s. net.

The Oxford Geographies, Vol. V., North America, etc., 1s. 6d.; Vol. VI, The Three Southern Continents, 1s. 9d. The British Empire. Oxford: Clarendon Press. 2s. 6d.

Matriculation French Essays, by H. G. Chaytor, M.A., and W. G. Hartog, M.A. London: University Press. 1s. 6d.

Intermediate French Reader. London: University Press. 2s. 6d.

The New Junior French Course, by G. A. Roberts, M.A. London: University Press. 2s. 6d.

Oxford Elementary Readers: Ierene Plunket's Citizens of the Empire, 1s. 4d.; Old Time Tales, by Lewis March, M.A., 1s.; Tales of the Fairies, by Lewis Marsh, 10d.; Greek Legends, by Mary Agnes Hamilton, 2s.; Norse Tales, by Edward Thomas, 2s. Bombay: Oxford University Press.

Reform Arithmetic, Teachers' Book, No. VI (Girls' Edition), by Pollard Wilkinson, B.A., B.Sc., F.R.S. and F. W. Cook, A.C.P. London: Macmillan. 9d.

Tales from the Story of India, by P. T. Srinivas Iyengar, M.A. Bombay: Oxford University Press. 10 as.

Examples in Algebra, by H. S. Hall, M.A. London: Macmillan. 2s.

Essay-writing, Rhetoric and Prosody, by Egerton Smith, M.A., I.E.S. Bombay: Oxford University Press. Re. 1-8.

Practical Hints on the Direct Method of Teaching English, by V. Venkatarama Dikshadar.

VII Annual Report of the President of the Carnegie Foundation for the Advancement of Teaching.

Indian Arts and Industries, Vol. XV, Issue of January 1913. London: W. Briggs & Sons. 2s.

A Book of Historical Poetry. London: Edward Arnold. 8d.

The Children's Story Books: Donkey Skin and Tales from the Midi, by Alice M. Bale, 6d.; Tales from Grimm, by Alice M. Bale, 6d.; Little Red Riding Hood, and Other Stories, by Alice M. Bale, 6d. London: Macmillan.

The Children's Classics, Nos. 33 and 34, 3d. each. London: Macmillan.

Indian Educational Notes.

MADRAS.

P.H.S. Literary Association.—The First Anniversary Meeting of this Association was recently held in the Pachaiyappa's Hall, with the Hon'ble Mr. Justice Tyabji in the chair, when Mr. C. P. Ramaswami Aiyar delivered a lecture on "Moral and Religious Instruction in Schools." The report was read by one of the Joint Secretaries. Mrs. Besant and Mr. S. V. Subramaniam addressed the meeting after the lecture by Mr. C. P. Ramaswami Iyer was over. The Chairman in concluding the proceedings of the Meeting said that eminent people had thought that intellectual advancement was nothing when compared to moral advancement. They should go ahead in the development of their character. He then congratulated the Society on its efficient work and wished it success in future. With a vote of thanks to the Chairman and the Lecturer the meeting terminated.

Teachers' Association.—The twenty-third annual meeting of the Teachers' Association, Teachers' College, was held recently in the College Hall, Saidapet. The meeting was preceded by a social gathering, the proceedings of the Meeting commencing with recitations. The Secretary read the report of the Association for the year 1912-1913. The report traced the history of the Association from 1910, the year of its origin, up to the year under report. The Association is divided into three Sections—Mathematics, Science and History, each section being in charge of a Secretary of its own. The strength of the Association at the close of the year was 93 and the average attendance was 83 per cent. There were 18 General Meetings of the Association, 11 meetings of the Mathematics Section, 12 of the Science Section and 13 of the History Section. The Hon'ble Mr. Justice P. R. Sundara Iyer delivered a valedictory address. With the usual vote of thanks to the chair proposed by Mr. H. S. Duncan, the meeting terminated.

Madras Literary Society.—The annual general meeting of the members of the Madras Literary Society was held recently in the Society's premises under the presidency of His Excellency Lord Pentland. A larger number of members than usual were present and the proceedings were of a very interesting character. The Honorary Secretary Mr. W. F. Grahame read the annual report. The Hon'ble Sir John P. Wallis moved the adoption of the report in an interesting speech. After the adoption of the report and the usual vote of thanks to the chair, the meeting terminated.

Pachaiyappa's College.—The Seventieth Anniversary Meeting of Pachaiyappa's Charities and Prize-distribution took place recently with H. E. Lord Pentland in the chair. The meeting was attended by a very large gathering, and the body of the hall

was packed with an enthusiastic assembly of students. Among those present were the Hon'ble Sir Ralph Benson, Mr. Justice Tyabji, the Zamindar of Kapileswaram, Messrs. R. F. Austin, S. Ramaswami Iyengar, John Adam, R. W. Brock, N. Pattabhirama Rao, T. Pattabhirama Iyer, C. P. Ramaswami Iyer, V. Masilamoni Pillay, V. Tirumalai Pillai, Pandit Vidyasagar Pandia, Pandit D. Gopala Charlu, the Hon'ble Messrs. T. V. Seshagiri Iyer, B. N. Sarma, V. S. Srinivasa Sastri, Dewan Bahadurs P. Rajaratna Mudaliar and M. Audinarayana Aiyar, Rao Bahadur A. C. Pranatharthihara Iyer, Khan Bahadur Ghulam Muhammad Mahajir, Rao Sabib V. A. Parthasarathi Mudaliar, Rao Bahadur P. Parankusam Naidu, Rao Sahib S. Bhavanandam Pillay, Mr. J. C. Rollo, Principal of the College, and the whole staff of professors and teachers.

Their Excellencies Lord and Lady Pentland were received by the Trustees and the Principal at the entrance and conducted to the hall upstairs.

The commemoration address of Dewan Bahadur P. Rajaratna Mudaliar, President of the Board of Trustees, was read by Dewan Bahadur M. Audinarayanaiah. Mr. V. Tirumalai Pillay, a Trustee of the Charities, and Mr. Rollo, Principal, then read their respective reports. The financial condition of Pachaiyappa's Charities during the period under report was as follows:—Total receipts of Religious Charities excluding opening balance Rs. 31,746. Total charges excluding closing balance Rs. 33,175; opening balance to end of June 1912, Rs. 18,798; closing balance to end of the same period, Rs. 17,369. The total receipts of Educational Charities exclusive of opening balance Rs. 2,23,894. Total charges exclusive of closing balance Rs. 2,50,771; opening balance was Rs. 39,125; closing balance Rs. 12,248.

Her Excellency Lady Pentland then distributed medals and books to the prize-winners. At the conclusion of the distribution of prizes, His Excellency made a most interesting speech, and said: It seems to me, as a well-wisher of education, that this is an institution in the highest degree deserving public support. I am sure that we wish to see it thoroughly equipped, to hold its own in competition with the other colleges in this city and throughout the Presidency not only in academic laurels but in every branch of its service, in the Commercial School, in the Industrial School, and in the other schools attached to it. I am glad to think that it holds its own also in the matter of athletics, for I have before me here a row of athletics trophies, which are held by this College.

Imperial Grants for Education.—The Government of Madras have just published an order, dated 27th ultimo, approving generally of the proposals of the Director of Public Instruction for the utilisation of the special Imperial grant to the aggregate amount of 23 lakhs which has been made available for expenditure during the year 1913-14. They consider that the proposals will form a suitable working basis for the coming year. The memoran-

dnm has been communicated, states the order, "to additional Members of the Legislative Council in order to give them an opportunity of comment and suggestion at the ensuing Meeting of the Council." This grant of Rs. 23 lakhs is comprised of two portions, one the non-recurring portion of 16.20 lakhs, being approximately one-third of a grant of 49 lakhs the expenditure of which has to be spread over three years and which cannot be funded under financial rules, and the other the recurring portion of 6.80 lakhs. As regards the 49 lakhs, the Government of India have specified that the following should be the plan of distribution:—Colleges and Secondary schools and Training institutions (a portion to be used for the Engineering College), 6 lakhs; Elementary schools, 17 lakhs; Educational hygiene, gymnasia, play-grounds, swimming-baths, gardens, reading rooms, common rooms, etc., 6 lakhs; Manual training, 1½ lakhs; Girls' schools, technical and special schools, 6 lakhs; European education, 5½ lakhs. University, 3 lakhs; Hostels, 4 lakhs. The Director of Public Instruction has proposed that 16.20 lakhs of this grant which has been set apart for expenditure in the next financial year, be expended as follows: the provision of slates and books for poor and backward pupils, 2 lakhs; establishment of temporary training schools operating for 2 or 3 years, 1 lakh and buildings (for Board and Municipal schools-boys and girls, 8 lakhs; Engineering College, 1 lakh; University, 1 lakh; Colleges and Hospitals, 2 lakhs), 12 lakhs. As regards the provision of slates and books, the Director says that the absence of such a provision had been urged by various Inspecting officers as a very potent obstacle to larger attendance at schools already in existence. Other measures such as exemption from the payment of fees and the offer of small prizes and scholarships for attracting more attendance are dismissed as being impossible for they would entail recurring expenditure. The balance of 1.20 lakhs is proposed to be held in reserve for any other scheme which may be matured within the next few months. It would appear that a small Committee is proposed to be appointed to inquire as to what educational expenditure should be incurred as to hygiene and cognate matters. As regards the extra recurring grant of 6.80 lakhs the Government of India have suggested the following plan:—Primary education, 3.50 lakhs; Girls' education, .87 lakhs; College and training institutions, .30 lakhs; Secondary education, 1.35 lakhs; Technical and special education 0.9 lakhs; Manual training, .12 lakhs; European education, .57 lakhs. In regard to the first of these heads, the Director proposes to distribute the amount among the following objects; (1) securing a larger measure of freedom from payment of fees in the case of poor and backward pupils by adding considerably to the present list of backward classes or castes on the basis of 1911 census; (2) increasing the emoluments of trained teachers by increasing the rate of annual grants per teacher by the following amounts: lower elementary grade Rs. 6, higher elementary grade Rs. 12, and secondary grade Rs. 24, in the case of

teachers in institutions under public management, the grant of capitation allowance to schools with the fourth and higher standards being extended, these measures being intended to increase the number of higher elementary schools, (3) provision for opening higher standards in some of the existing schools, and (4) provision for extra teaching in existing schools under public management. Local Boards and Municipal Councils will be given more money for enabling them to start more new girls' schools. The Director says that the available funds will suffice to do only a little in the direction of carrying education in the more advanced existing schools to a higher stage, for arranging for a certain number of more highly paid mistresses, for improving the facilities for training women teachers and for making special arrangements for educating and training more child-widows who might become teachers. A portion of the grant for college and training institutions as well as of that for secondary schools will be set aside for scholarships in colleges and training schools and general education. A maximum amount of Rs. 20,000 is set apart for this purpose. As regards secondary schools, Dr. Bourne tells us that the bulk of the grant will be distributed among aided and Local Board and Municipal secondary schools. He tells us further that any alteration made in the Grant-in-Aid Code must be based upon the amount available and "they will be very simple in nature and intended to allow Managers to rely upon such larger share of the expenditure as the funds will permit." The Director invites suggestions as regards the best way of using up the grant for technical and special education, but indicates that it may be utilised for a small technical institution at Davalaishwaram or elsewhere.

S. I. T. Union.—H. E. Lord Pentland received a deputation from the South India Teachers' Union at Government House. Capt. H. Colmore, A.-D. C. conducted the deputation consisting of the Rev. A. F. Gardiner, President of the Association, Mr. J. P. Cotelingam, M.A., Vice-President, Mr. P. Lakshmi Narasu Naidu, B.A., Mr. S. Vasudeva Chariar, B.A., L.T., Mr. K. B. Ramanadhan, M.A., B.L., L.T. and Mr. A. Panchapakesa, Iyer, M.A., L.T., General Secretary, to the Drawing Room where His Excellency received them. The Hon'ble Sir Alfred Bourne and Mr. C. B. Cotterill, Private Secretary, were also present. The Rev. A. F. Gardiner then read an address, and at the conclusion of the reading of the address, it was presented to His Excellency in a very handsome circular silver casket. His Excellency made a suitable reply, thanked the gentlemen for the kind sentiments they had expressed and assured the sympathy of the Government towards the requests they had made. After His Excellency had concluded his reply he was introduced to the members of the deputation and remained conversing with them for a few minutes. The deputation then withdrew.

A Students' Gathering.—The Madras students of the International Correspondence Schools of London were in full force at the Horticultural Gardens to meet the General Manager for India, Mr. Arthur W. Wise, and to welcome the newly-appointed District Manager, Mr. J. W. Hoyle. Mr. W. Wise welcomed the students and their friends and gave an interesting account of the very valuable work turned out by I. C. Schools. He then requested Mr. John Adam who was present to address the gathering. Alluding to the value of technical education Mr. Adam gave most interesting reminiscences of the start of a commercial school in this city, and related the difficulties they had had to contend with at first, but stated that finally the results achieved more than compensated for the difficulties met with and overcome. He mentioned the names of several Indian gentlemen who were at the time of the inception of the commercial school practically unknown, but who now occupy responsible positions in the commercial world, and who are considered authorities in the particular branches which they have adopted. The principal among these, he said, are Mr. K. Subramania Iyer and S. Vaidynatha Aiyar, both well-known to all present.

Conjeevaram Girls' School.—The anniversary meeting of the Conjeevaram Hindu Girls' School Union was celebrated in Mr. Colla Raghava Chetty's bungalow with Mr. Justice Sundara Iyer in the chair. There was a large gathering of the well-wishers of the institution present, including Dewan Bahadurs L. A. Govindaraghava Iyer, Justice T. Sadasiva Iyer and M. Adinarayaniah, Mr. C. P. Ramasami Iyer, Mr. V. Masilamani Pillay, Mr. A. Ramasami Sastriar, and the leading officials in the town, such as the District Munsiff, the Tahsildar, and the Municipal Chairman. The proceedings began with recitations in English and Sanskrit by the girls. The girls then enacted scenes from "Harischandra" in Sanskrit to the accompaniment of excellent music. The Honorary Secretary then read the report of the school for the past year. The Chairman distributed prizes to the successful pupils of the school and gave an interesting speech. Dewan Bahadur L. A. Govindaraghava Iyer proposed a vote of thanks to the Chairman and the meeting then terminated.

Corporation Model School.—A very interesting function took place when H. E. Lord Pentland formally opened the first Madras Corporation Model Elementary School at Vallabha Agraharam, Tiruvattiswaranpetta, Triplicane. The meeting was attended by a large gathering of most of the Commissioners of the Corporation headed by Mr. P. L. Moore, C.I.E., (President) and the heads of the executive branches of the Corporation. Among others present were Dewan Bahadur K. Krishnaswami Rao, C.I.E., Mr. T. E. Moir, Mr. R. G. Grieve, the Hon'ble Mr. P. S. Sivaswami Iyer and Messrs. P. T. Tharyan and A. Subramania Iyer. Some of the

members of the inspecting agency of the Educational Department were also present. Mr. P. L. Moore requested His Excellency to formally open the school. His Excellency then opened the school with a silver key amidst loud applause and His Excellency and party then made a full inspection of the buildings which was fitted up with the necessary equipments for a school, and then moved to the school garden and play-ground adjoining the main buildings of the school. Some of the school children then sang welcome and loyal songs in Tamil. His Excellency and Mr. A. C. Prantharthihara Iyer made interesting speeches on the importance of elementary education. Mr. A. C. Parthasarathi Naidu proposed a hearty vote of thanks to His Excellency for having kindly opened the school. Mr. V. C. Sesha Chariar called for three cheers for Their Excellencies and they were responded to in a most enthusiastic manner.

The gathering dispersed to the strains of *Mangalam* and the National Anthem.

Government Subsidies.—The Government have been pleased to sanction the distribution of a further sum of Rs. 3,74,930 to the undermentioned Municipalities and District Boards for expenditure on the construction of elementary school buildings and the payment of a sum of Rs. 70 to the District Board, Kistna, for the equipment of a school newly opened. The Accountant-General has been requested to place the amounts specified at the disposal of the local bodies concerned.

MUNICIPALITIES.

Mangalore Rs. 2,550, Cannanore 1,000, Tellicherry 1,000, Palghat 1,300, Tuticorin 1,000, Mannargudi 1,000, Cuddapah 1,500, Nandyal 3,000, Anakapalle 1,000, Parlakimidi 1,500, Coimbatore 4,000, Salem 8,500, Kumbakonam 16,000, Negapatam 5,000, Vellore 4,000, Kurnool 1,500, Chingleput 500, Cocanada 5,000, Nellore 1,000, Masulipatam 1,000, Vizianagram 2,000, Walajapet 3,500, Tirupati 2,000, Bellary 2,500, Cochin 3,000, Tinnevely 1,350, Cuddalore 500, Guntur 2,500, Berhampur 2,000, Palamcottah 1,650, Anantapur 6,000, Tiruvannamalai 1,000, Bezwada 8,000, Tanjore 3,300, Chicacole 2,500, Madura 15,000, Erode 4,000, Vaniambadi 4,150, Palni 4,200, Karur 7,000, Conjeevaram 6,000, Gudiyattam 5,500, Dindigul 5,200, Calicut 9,600, Srivilliputtur 2,500, Rajahmundry 11,000, Chidambaram 6,000, Bimlipatam 2,500, Ongole 3,000, Tenali 7,250, and Trichinopoly 6,650.

DISTRICT BOARDS.

Anantapur Rs. 12,000, South Arcot 9,000, Bellary 10,000, Canara (South) 10,330, Chingleput 10,000, Chittoor 8,000, Coimbatore 5,000, Cuddapah 7,000, Ganjam 7,000, Godavari 8,000, Guntur 10,000, Kistna 17,800, Kurnool 2,000, Madura 5,000, Malabar 4,000, Nellore 6,000, Ramnad 6,000, Salem 5,000, Tanjore 10,000, Trichinopoly 12,100, and Vizagapatam 7,000.

Madanapalli High School.—The Telugu New Year's Day was celebrated on the 7th instant in

commemoration of the twenty-five years' run in the life of the Madanapalle High School. The organisers of the celebration were the students of the institution headed by Mr. K. S. Kuppu Row, B.A., an old student of the High School. The students subscribed to meet the expenses on that day. The meeting was very largely attended. The buildings were gaily decorated with festoons, flags and green leaves.

Pachaiyappa's Telugu Literary Society.—The Second Anniversary of the Andhra Bhashabhi Banjani Samajam was celebrated in Pachaiyappa's Hall under the presidency of Mr. P. Nagabhushanam Pantulu, M.A., B.L. Mr. S. Y. Rangachari, one of the Secretaries submitted a very interesting report of the activities of the Samajam during the past year. There was then a presentation of a medal to Mr. A. Ankamma; and of choice Telugu books to other winners in competition in Telugu Essay, Writing and Recitation of classical Telugu verses. The most important function of the evening was the learned and critical discourse on "Telugu Literary Criticism," by Mr. K. Brahmayya Sastri of Cocanada.

Srirangam High School.—The Ninth Anniversary of the High School Students' Union, Srirangam, was celebrated in the premises of the School Hall, with Dewan Bahadur T. Desikachari, B.A., B.L., in the chair. After the reading of the Annual Report by the Secretary which showed a record of useful work done during the year Mr. S. P. Rangachari, B.A., B.L., P. C. S., Deputy Collector of Kollegal, delivered an interesting lecture on the Study of History. The Chairman in a few well-chosen words advised the students to take up this useful branch of culture and suggested that a society like the High School Students' Union should have a fine library containing historical works, adding to it epigraphic and archaeological report issued by the Government of Madras which students of Indian History could not prize too high. With the usual vote of thanks to the lecturer and the chairman the meeting terminated.

The Senate and the Vernaculars:—

Vizagapatam.—At a public meeting of the citizens of Vizagapatam held in the Victoria Diamond Jubilee Town Hall, Vizagapatam, on the 2nd instant, to protest against the decision of the Madras University making the study of Classical and Vernacular languages optional for the Intermediate and B.A. pass courses, the following resolution was passed:—

That this Meeting of the citizens of Vizagapatam protests against the decision of the Senate of the University of Madras, refusing to make the study of the Classical or Vernacular languages compulsory for the Intermediate and the B.A. pass courses and requests the Government of Madras to require the Senate to reconsider the decision in adopting the report of the Committee.

Chidambaram.—Under the auspices of the "Senthamil Sangam," Chidambaram, a public meeting of the residents of Chidambaram was convened in the premises of the Town Incomplete Secondary School, Chidambaram, with Mr. S. R. M. M. Ramasami Chettiar in the chair. The Chairman explained the objects of the meeting in an impressive speech and then resolutions were passed.

Cocanada.—Under the auspices of the Literary Association, Cocanada, a large and representative public meeting was held in the Association premises to protest against the decision of the Senate of the Madras University on the position of the Indian languages in the courses of study. Mr. J. Mallaparaaju, B.A., B.C.E., was voted to the chair. The Chairman in opening the proceedings, made an interesting speech and a number of resolutions were passed.

Kumbakonam.—A public meeting was held in the Porter Town Hall with the Hon'ble Rao Bahadur V. K. Ramanuja Chariar in the chair, to memorialize Government as regards the recent resolution of the Madras University Senate about the Indian Vernaculars. Resolutions were passed.

The Chairman then spoke on how the general public could co-operate with the specialists in the improvement of the Vernaculars, and added that the protest should take the form of publicly disapproving the action of such of the Indian members of the Senate who had voted in favour of the Committee's report against the Vernaculars. With the usual votes of thanks to the Chairman, the proceedings, all in Tamil, terminated. Mr. K. B. Ramanada Iyer, of Madras, was also present at the meeting during the discussion.

Prodattur.—A public meeting was held in the Town Hall, Prodattur on the 27th ultimo, to protest against the recent decision of the Senate of the University, regarding the study of Indian vernaculars in the curricula of studies for Intermediate and B.A. courses. Mr. K. Krishna Rao, B.A., L.T., of the local High School, presided, and a number of resolutions were passed.

Tanjore.—A public meeting was held on the bank of the Vadavar in a choultry there for the purpose of discussing the Resolution of the Madras University Senate making Vernacular studies optional in the course. Mr. T. Sambamoorthy Row, who presided, made a short introductory speech. A number of resolutions were passed regretting the attitude of the Senate in regard to the vernaculars and requesting their kind reconsideration of their last Resolution under protest. A sub-committee was nominated to send a memorial on those lines. With the usual vote of thanks to the Chairman the meeting closed.

Palghat.—A special meeting of the Malayalam Academy was held on the 6th instant, in the Native High School Hall, to protest against the recent decision of the Senate of the University regarding the position of the Indian vernaculars in the curricula of studies for the Intermediate and the B.A.

Course. On the motion of Mr. M. P. Kannan Nair, B.A., B.L., Mr. K. Kunhikuttan Thambao, the President-Founder of the Academy, was unanimously voted to the chair. The Chairman in a short and neat speech, explained to the audience the object of the meeting, and urged upon them the necessity of their entering a protest against the decision of the Senate. A number of resolutions were then carried unanimously and with the usual vote of thanks the proceedings terminated.

Pudukotah.—A largely attended public meeting of the citizens of Pudukotah town and suburbs was held in the premises of the Veda Sastra Patasala, to protest against the recent decision of the Senate on the study of the vernaculars. Amongst those present were:—Messrs. S. Radhakrishna Iyer, B.A., F.M.U., G. Sunderasa Sastrial, B.A., B.L., Rao Bahadur J. Dharmaranga Raju, A. Mahalinga Iyer, B.A., V. S. Krishnaswami Aiyangar, B.A., B.L., and S. Narayanaswami Iyer, M.A., besides several others. Mr. G. Sunderasa Sastrial, who was voted to the chair, made a few introductory remarks explaining the objects of the meeting and observing that since the Indians were accustomed to their own vernaculars, from their early childhood, they would be losing their national characteristics if the study of vernaculars was not made compulsory. Resolutions were passed and the meeting came to an end.

CALCUTTA.

Director of Public Instruction.—A *Communique* of the Education Department states:—On the recommendation of the Government of Bengal and the Government of India, the Secretary of State has appointed Mr. Hornell, formerly of the Indian Education Service in Bengal and now occupying a responsible post at the Board of Education in England, to the Indian Education Service. Mr. Hornell is also appointed Director of Public Instruction in Bengal for five years. The Government of Bengal and the Government of India contemplate an active policy of improvement and expansion of education in Bengal particularly in Primary and Secondary education. For carrying out this policy the Government of Bengal required an officer with special experience and qualifications and knowledge of modern developments in education. While recognising the attainments of officers serving in the Province, the Local Government considered that none had the special experience and qualifications required. They therefore applied to the Government of India under the terms of the Government of India Resolution No. 679, dated the 12th September 1906, and suggested the appointment of Mr. Hornell who possessed in an exceptional degree the experience and qualifications required for a period of five years only in order to carry out the desired reforms. The Government of India while recognising the attainments of several members of the Indian Educational Service were unable in the special circumstances of Bengal at this juncture to make a suitable selection from the ranks

of the Indian Educational Service in other provinces; their decision involves no departure from the declared policy, the procedure of which had been strictly followed and certainly there was no reflection on the professional capacity of the members of the Indian Educational Service. It was governed solely by the peculiar needs of Bengal at the present time. Mr. Hornell having been in touch with modern developments of education in England and having served as Inspector and Assistant Director of Public Instruction in Bengal, has exceptional qualifications for the post. Indeed another Local Government has recently applied for his services as Director of Public Instruction in that Province.

The Presidency College.—A distinguished party of European and Indian ladies and gentlemen met at a *Conversazione* held in the Baker Laboratories of the Presidency College. The distinguished guests included His Excellency the Governor of Bengal and Lady Carmichael. Arrangements were made to hold, in the different rooms, a number of simple experiments and demonstrations, in which the guests took great interest. The list of the experiments shown was as follows:—In the Histology room—Method of preparing objects for the microscope and the process of cutting extremely thin slices (1/2500 of an inch!); circulation of the blood; the sucking power of transpiring plants; life in a drop of water; flow of living matter in vegetable cells; various objects under microscopes. In the Optical room—Mixing colour sensations; how to take magnified photographs of exceedingly minute objects; measuring one's field of vision; how to examine the interior of the eye; flame picture of voice. In the Lecture Theatre—Lantern demonstration:—Complementary colours of shadows; a process of colour-photography. In the Preparation room—How to measure one's blood-pressure, breathing capacity, strength of muscular contraction and acuteness of touch. In the Experimental room—The experiment that gave birth to electricity; graphic records of:—Fatigue of muscle; the character of heart-beats, autographs of the pulse; how emotions affect breathing. In the Research room—Psychological experiments:—Measuring "personal equation" for sight, touch, hearing and mental calculation; graphic study of fatigue and the conditions that influence it; massage by electric vibrator; X-Ray apparatus. Keen interest was taken in the experiments by the guests. Their Excellencies appeared to be thoroughly interested in everything which was calculated to add to the success of the function.

The National Council of Education.—The prize-day celebration of the National Council of Education, Bengal, was held at 4, Panchabati Villa, Muraripuker Road, Manicktolla, Mr. Justice Choudhuri presiding. The reports presented by the Secretaries were on the whole satisfactory and showed progress during the past year. The Rector,

Mr. P. N. Bose and the Chairman gave interesting speeches.

Victoria Institution—The annual distribution of prizes of the institution took place at the school premises under the presidency of the Hon'ble Mr. P. C. Lyon, C.S.I., when Her Excellency Lady Carmichael was kind enough to distribute the prizes. There were present many respectable ladies and gentlemen of the city. At the request of the President and gentlemen present, Her Excellency made an interesting speech amidst loud cheers. After a hearty vote of thanks to the chair, the meeting separated.

The Research Scholarship—The Research Scholars named below are re-elected for another year, the place of work being the Presidency College, Calcutta. Kirti Bhusan Bhaduri, M.Sc.—Subject.—Chemistry with special reference to the subject of molecular conductivity. Bhojanga Bhusan Mukherjee, M.A.—Subject.—Indian Economics with special reference to the subject of the growth and development of Indian Finance. Sarat Chandra Jena—Subject.—Inorganic Chemistry with special reference to the subject of ferments and fermentations.

Shahzadpur H. E. School—A handsome building grant of Rs. 21,580 has been sanctioned by the Government to the Shahzadpur High School for the construction of its "pucca" buildings estimated at Rs. 32,000. A bill for Rs. 7,150, being one-third of the total grant, has been already passed and the building work is shortly going to be commenced. The Tagore Zemindars of Calcutta have kindly made a free gift of the School land and promised to pay Rs. 1,000 towards the building fund. The public are indeed very thankful for their kind patronage and generosity.

BOMBAY.

Education in Bombay—The Bombay Government have issued the quinquennial review of education in the Presidency. It states that during the period covered the total number of educational institutions of all kinds rose from 13,967 to 16,460, while the number of their pupils increased from 720,547 to 922,888. The latter figure represents 34 per cent. of the total population of the Presidency and 22.7 of its population of school-going age, the corresponding percentage at the commencement of the quinquennial being 2.8 and 18.9 respectively. The Secondary schools now number 559 with an attendance of 74,601 scholars as against 517 with 57,988 scholars. In the case of Primary schools the advance, as might be expected, is more marked, the number of such schools having risen from 10,482 to 12,763 and the figures of attendance from 159,629 to 257,180. During the quinquennium the total annual educational expenditure, both direct and indirect, from all sources rose from Rs. 10,643,000 to

Rs. 13,617,000 an increase of 27 per cent. Of the latter amount the Provincial revenues contributed Rs. 5,39,800 as against Rs. 43,08,000 at the commencement of the quinquennium. The total expenditure from all sources on Primary education is now 58 lakhs or 42 per cent. of the whole, and towards this provincial revenues contributed nearly 23 lakhs mostly in the shape of grants to Local Boards and Municipalities.

The statement prepared by the Bombay Government for the Royal Commission regarding the Indian Civil Service has been issued by the Government in a pair of blue books. The history of the recruitment system of the I.C.S. is reviewed and the merits discussed at length, while the alternative method suggested together with questions relating to age and training of candidates are also carefully considered. The general conclusions arrived at may be summarised as follows:—

1. The system of recruitment for the Indian Civil Service by the open competition examination in England has given efficient results.
2. The subjects for the examinations cannot be improved upon.
3. The age of candidates might with advantage be lowered.

4. There are drawbacks incidental to combining the Indian Civil Service examination with that for the Home Civil Service, and it would be an advantage if the former could be for men two years younger than the age for appearance for the Home Civil Service.

5. Simultaneous examinations in India and England may be considered as impracticable. They are open to the most serious objections for the reasons given from the point of view of Indians themselves, and also because their adoption would violate a fundamental principle, upon which the examination system is founded. They would involve a reconsideration of the system of the Provincial Civil Service which supplies one-sixth of the higher appointments formerly reserved for the statutory civilian on the presumption that the remaining five-sixths are held by Englishmen recruited in England.

The Government proceed to propose a scheme of scholarships for assisting Indian lads to go to England to prepare and compete for the examination on the present lines.

Fergusson College—Addressing the students at the Fergusson College on the occasion of the nineteenth anniversary of the College, the Hon'ble Mr. Lallubhai Samaldas dwelt upon the necessity of some agency to correlate the existing social movements, educational as well as political. The growth of the base and the superstructure must, said the speaker, go hand in hand. There should be intelligent thinking combined with the work and fields of work should not be confined to a few cities only. The advancement in civil politics will

Foreign Notes.

GREAT BRITAIN.

National Education—A memorial, urging the Government to undertake at once a comprehensive reform of national education, has been presented to the Prime Minister by a large number of well-known educationists. The memorialists, referring to Lord Haldane's declaration at Manchester on January 10, say they realize that his speech raises educational policy to a higher plane, and believe that public opinion can now be roused to a serious consideration of this great problem. They urge that large measures of social reform require for their full realization the compelling power of lofty ideals which only a truly national education can inspire, and they believe that all sections of the nation are now more than ever disposed towards effective mutual endeavours to develop the intellectual, moral, and spiritual faculties of each citizen as the surest means of alleviating the present discontent. Education treated as an affair of the spirit world, they argue, unite all the spiritual forces of the nation, and they, therefore, urge that in order to meet immediate needs the serious concern of all schools should be the inculcation of those fundamental moral qualities upon which the welfare of States depends. The memorial goes on to insist that adequate provision for education in all grades, from the Primary school to the University, be made in every defined area of the population, and that the artificial barriers between grade and grade should be, so far as possible, broken down. The memorial concludes by referring to the need for smaller classes, a broader curriculum, and more teachers, better trained and better paid; and urges that the State should assume some firmer guardianship of youth, linking up the family with the school and instruction with wage-earning employment, whilst paying due respect to the rights of parents and the interests of employers.

University College, London—The Senate of University College, London, has issued an important memorandum upon the scheme of development of the college, dealing with the site, buildings, and equipment, the steps now being taken towards their completion, and the funds provided and required. We gather from particulars which have been published in regard to the scheme that the extensions projected are comprehensive, but of vital importance to the welfare of the college. University College is becoming more and more prominent in London as a school for the preliminary medical studies and for research. Pharmacology and Physiology are adequately or even sumptuously housed, and Chemistry, when the new laboratory is completed, will be in a most favourable condition, but Anatomy is still scattered throughout the college, and urgently requires concentration with the other departments in the medical institute of the college. The estimated cost of a building suitable for it is £45,000. The school of applied

be useless which can only be acquired by deep industry. In this connection the speaker eulogised the Servants of the India Society as the only institution whose members try to educate the people so as to bring them into a line with themselves. As regards the assistance to be given by individuals in the work of nations' progress, Mr. Lallubhai said that if we keep our social conscience awake and work with will according to the dictates of our conscience, we need not despair of doing good and useful work. Even if that work does not end in visible good results we will have the satisfaction of having done our duty.

TRAVANCORE.

A Retiring Professor—The Maharajah's College in Travancore has been exceptionally fortunate in having possessed Professors who were not only good educationists, but men of character who wielded a wholesome influence over their students and won their esteem and affectionate regard. The names of Professors Ross and Harvey are still household words, for they were the pioneers of higher education and their character more than their abilities have won for them an abiding place in the educational history of Travancore. Among the many men who were moulded by Professors Ross and Harvey is Professor LaBouchardiere, M.A., who obtained his early education in the Trivandrum schools, and who graduated from the Maharajah's College in 1878, passed his Master of Arts examination in 1879 and was appointed an Assistant Professor immediately. Since that time 34 years ago Mr. La Bouchardiere has laboured wholeheartedly in the College and has won the esteem and appreciation of hundreds of students, many of whom are holding high positions in South India and Madras City. Mr. LaBouchardiere coached the late first Prince of Travancore for the B.A. which he passed; has superintended the education of the children of H. H. the present Maharaja, and has been Warden of the Caste Hindu Hostel where his knowledge of Indian life and character enabled him to give every satisfaction. There has not been a public movement of any kind in Trivandrum for the last 30 years in which Mr. La Bouchardiere has not had a large share of responsibility. He was appointed examiner for the M.A. Degree in English for the University and as Chairman to the Board of Examiners, and Honorary Secretary to various public institutions. His popularity is great and his retirement from the Travancore Educational Service is very widely deplored. The Dewan Mr. Rajagopalachari recognised as soon as he assumed office in Travancore the anomalous and inequitable treatment given to Mr. LaBouchardiere in comparison with his colleagues from England and unhesitatingly placed Mr. LaBouchardiere on equality with them in rank and pay, and there is no doubt that in his retirement he will, in consideration of his long and loyal service and his public spirited work, enjoy the same privileges in regard to pension. A public movement to establish a memorial is on foot both in Travancore and in Madras.

statistics and the Galton Laboratory represent a type of work in which University College has been a pioneer, and it is proposed that these and the new school of architecture should be accommodated by completing the main quadrangle. Much of the money required for this is already available, but to complete the scheme £28,600 will be required. The proposal to convert All Saints' Church into a hall for the college should meet a real public need. The college has nearly 1,700 students, but their largest room, the Botanical Theatre, can only seat 400. The cost of the new hall will be £12,085. The chemical laboratories now in course of erection will place the college in the forefront of the chemical schools throughout the country. To complete it £28,652 is needed. In Egyptology the influence of Professor Flinders Petrie, and his assiduity as a research worker and a collector have made the college one of the few recognised centres for the subject, and the authorities are anxious to take advantage of the opportunity that offers to purchase his collection at what is virtually the cost price of £5,985. In its library, again, the college is far ahead of most other institutions, both by the quantity of its rare volumes and their arrangement into special libraries. The work here is greatly restricted for want of funds, and to make it thoroughly efficient and to carry out the necessary structural alterations £31,415 is required. For engineering the college is asking for £10,500, while for various structural improvements £13,600 is needed. The total cost of the projected scheme is estimated at £182,562. In the course of the memorandum, the Senate point to the special services that University College has rendered to education.

Professor Dowden.—General regret will be felt at the announcement of the death of Professor Edward Dowden, the great Shakespearean scholar, who had occupied the chair of English Literature in the University of Dublin since 1867, a period of 46 years. Professor Dowden was born in Cork in 1843, the son of John W. Dowden and Alicia Bennett; and he married, first in 1866, Mary, the daughter of David Clarke, and in 1895, Elizabeth Dickinson, daughter of the Very Rev. John West, Dean of St. Patrick's, Dublin, by which lady he leaves one son and two daughters. He was educated by private teachers and at Dublin University. Besides his standing Professorship, he was Clark Lecturer in English Literature at Trinity College, Cambridge, from 1893 to 1896; a Commissioner on National Education in Ireland from 1896 to 1901, and a Member of the Academic Committee of the Royal Society of Literature. He filled also many other offices of literary distinction. His valuable publications are known to be many and scholarly.

LITERARY NOTES.

The following are some of the recent and forthcoming books of the Oxford University Press:—

The Science of Etymology, by the Rev. Walter W. Skeat, Litt.D., 4s. 6d. net; A Text-book of Elementary Trigonometry, by R. S. Heath, M.A., D.Sc., 3s. 6d.; Thoughts on the Present Discontents, Speech on Conciliation with the Colonies, Speech on American Taxation, by Burke, with Introduction and Notes, 2s. 6d. each; A Handbook of Anatomy for Art Students, by Arthur Thomson, M.A., M.B., 16s. net; The Early Education of Children, by Laura L. Plaisted, 4s. 6d. net; Shakespeare's The Tragedy of King Richard the Second, edited with Introduction, Notes, Glossary, Appendixes on Staging and Prosody, and an Illustration of the Shakespearean Theatre, by Henry Newbolt, under the General Editorship of J. C. Smith, 1s. 6d. net; The Indian Treasury of English Verse, selected and edited with Introduction and Biographical and Explanatory Notes, by S. G. Dunn, M.A. (Oxon) Re 1; Text Books in Chemistry, by A. M. Kellas, B.Sc., Ph.D.:—Introduction to Practical Chemistry, 3s. 6d. net; Manual of Practical Inorganic Chemistry, Qualitative and Quantitative, 5s. net; Hegel's Doctrine of Formal Logic, being a Translation of the First Section of the Subjective Logic, with Introduction and Notes, by H. S. Macran, 7s. 6d. net; English Literature and the Classics; Tragedy, Platonism, Theophrastus, Greek Romances, Ciceronianism, Vergil, Ovid, Satura, and Senecan Tragedy, collected by G. S. Gordon, 6s. net. Sesame and Lilies: two lectures, by John Ruskin, edited with Introduction and Notes, by G. G. Whiskard, B.A.; The Oxford Book of Victorian Verse, chosen by Sir Arthur Quiller-Couch; Shakespeare's The Merchant of Venice, edited with Introduction and Notes, by H. M. Percival, M.A. Re 1 8 as.; An Introduction to Psychology, more especially for teachers, by T. Loveday and J. A. Green, 3s. 6d.; Swift's: The Battle of the Books, edited with Introduction and Notes, by Sir Henry Craik, 2s.; Macaulay's Essay on Lord Byron, Paper 3d., Cloth 4d.

Ready shortly.

Macbeth, King Lear, Hamlet, Much Ado About Nothing and the Tempest; Plays of Shakespeare, edited with Introduction and Notes, by G. S. Gordon, M.A. Five volumes now ready—Hamlet, Coriolanus, A Midsummer Night's Dream, As You Like It, and the Tempest, 1s. net each; General Outlines of Inorganic and Organic Chemistry, by A. M. Kellas, B.Sc., Ph.D.; A Treatise on Hydrostatics, by George M. Minchin, M.A., F.R.S., Second Edn., Revised: Vol. I. 4s. 6d., Vol. II. 6s.

"Simple Economics" for Indian schools and colleges, by J. R. Cornat, B.A. This useful book has just been published by Messrs. Longmans, Green & Co. The first part of the book deals with the theory of Economics and the second part goes on to

apply the theory to Indian conditions. The second part is especially very instructive as it gives in a small compass and in an interesting manner an account of the present economic conditions in India.

Forthcoming Books of the University Tutorial Press: A new volume in the special series of books for the Cambridge Senior Local Examinations will shortly be published under the title of *Senior Volumetric Analysis*. A number of examples are fully worked in the text, and in addition, problems are given for extra practice in the application of the methods. The book is provided with an index, table of atomic weights, and table of logarithms and anti-logarithms.

Another book on Chemistry which will appear shortly is *Qualitative Analysis*. This book together with the companion volume already published—*Elementary Quantitative Analysis*—provides a course of Inorganic Analysis of the standard of University Intermediate Examinations. *Qualitative Analysis* has been taken with slight alterations from the well-known *Chemical Analysis, Qualitative and Quantitative* by the same authors. The object of the book is to keep the student in touch with the fundamental principles of the subject and at the same time to guide him successfully through the many practical difficulties of manipulation.

Preliminary Arithmetic, which is now in the press, provides a course of Arithmetic suitable for pupils of ten to fourteen years of age, based on methods which have been tested for many years with excellent results. It should prove especially useful in classes preparing for the Preliminary Cambridge Local Examination, and includes sufficient work for the pass standard of the Junior Paper.

A Teachers' Manual of English Grammar and Analysis, by Hiram Roy Wilson, A.M., Litt.D., Head Department of English, State Normal College, Ohio University, Athens, Ohio. This book will doubtless revolutionize the teaching of English Grammar. The student is taught how to use English through a study of good English by the best English and American authors. The sentences quoted cover a wide range of the best literature and the book virtually becomes a book of value quotations as well as a manual of English.

The following are some of the recent publications on Geography:—

Historical and Economic Geographies, Book I., *World Studies*, by Horace Piggott and Robert J. Finch, illustrated, (Dent), 3s. 6d.; *Physiography for High Schools*, by A. L. Argy, F. L. Bryant, W. W. Clendenin, and W. T. Morrey, illustrated, (Harrap), 4s. 6d.; *An Introduction to Physical Geography*, by M. I. Newbigin (Dent) 3s. 6d.; *The "Educational Journey Series"—To the West of England by Canal*, by E. J. Finch, illustrated, (Dent), 9d.; *Home University Library, Canada*, by A. G. Bradley (Williams and Norgate.), 1s.; *Map Projections*, by

A. R. Hinks, Diagrams, (Cambridge University Press.) 5s. net.; *New South Wales*, by A. W. Jose, T. G. Taylor and W. G. Woolnough, edited by T. W. Edgeworth David, illustrated, (Whitcombe and Tombs.) 4s. 6d.; *Physical Geography for South African Schools*, by A. L. Du Toit, illustrated, (Cambridge University Press) 4s. 6d. net.; *From Pole to Pole*, by Sven Hedin, illustrated, (Macmillan.) 7s. 6d. net.; *A History of Geographical Discovery in the Seventeenth and Eighteenth Centuries*, by Edward Heawood, well illustrated, (Cambridge University Press.) 12s. 6d. net.; *An Elementary Historical Geography of the British Isles*, by M. S. Elliott, illustrated, (Black.) 1s. 6d.

Asia, by David Frew, (Blackie) 6d.; *General Survey of the World*, by David Frew, (Blackie) 6d.; *Atlas of the World*, by J. Bartholomew, (The People's Books), Jack, 6d. net.; *Regional Geography, Europe*, (McDougal) 6d.; *A Practical and Experimental Geography*, by F. Morrow and E. Lambert (Meiklejohn), 2s. 6d. net.; *The Physical and Political School Atlas*, by J. G. Bartholomew (Oxford University Press.), 1s. net.

Manual Training for Secondary Schools in India, by A. H. Mackenzie, (the Indian Press, Allahabad). The author is the principal of the largest and the best equipped institution of the kind in India and the book represents practical inquiries and experiments carried on there. The book is very fully illustrated and severely practical.

Introduction to Physical Geography, by M. I. Newbigin, (J. M. Dent), 3s. 6d. This is a really scientific and advanced book written in a somewhat difficult style. It is probably beyond what Indian teachers would read at present.

A Hand-book of English Literature, by W. T. Webb, M.A. and J. A. Aldis, M.A., with an introduction, by C. H. Tawney, M.A., C.I.E. It is entirely novel in its treatment and style. Unlike ordinary manuals of English Literature, it is no catalogue of names and dates, but it aims at giving a thorough and systematic grasp of the subject. The book begins with a survey of the whole of English Literature clearly showing the movements that constitute English Literature and introducing authors only as illustrations of these movements. The authors are particularly and individually treated, with all up to date criticism, and sustaining every remark upon the authors with copious illustrations from their works. The book will be found very useful to all the students in English of all the Indian Universities.

History of Aurangzeb, Vols. I and II, by Prof. Jadunath Sarkar, M.A., of Patna College.

Anecdotes of Aurangzeb and Historical Essays, by the same author. These three books are the result of the devoted labours of a life-time given to the

study of the reign of Aurangzib. Mr. Jadunath Sarkar has collected from a variety of sources an enormous mass of materials, which he has used with judicious care and with the painstaking particularity of scholarship.

English Readings for Schools, General Editor: Wilbur Lucius Cross.—Selections from Tennyson's "Idylls of the King," by John Erskine, (Henry Holt and Co., New York); the following are included: "The Coming of Arthur," "Lancelot and Elaine," "The Holy Grail," and "The Passing of Arthur."

Gold Nuggets of Literature, by Alfred O. Tower, (Boston: Educational Publishing Co.), Books. I, II, III. This is a graded Anthology of Poems for memorizing.

Illustrative Examples of English Composition, by James W. Linn., (New York, Charles Scribner and Sons, 1913).

A companion to the author's *Essentials of English Composition* and published in the same style. Most of the selections are presented for the first time in a book of this kind. The emphasis is upon comparatively recent writers, and the book as a whole has the same unconventional and practical air already noted in the case of its predecessor.

The following are some of the recent books on History:—

Essentials in Early European History, by Howe (Longmans), 7s. 6d. net.; *The Government of Europe*, by Ogg (Macmillan), 12s. 6d. net.; *Life of Mary II: Princess and Queen of England* (Paul), 16s. net.; *A History of Europe*, by Prof. Arthur J. Grant, with maps and colour chart (Longmans), 7s. 6d. net.; *Lectures on American Civil War*, by J. F. Rhodes (Macmillan), 5s. net.; *British History from the Earliest Times to the Present Day, with a History of the Overseas Dominions*, by L. Cecil Smith, R. L. Giveen and F. W. Bewsher, (Rivington), 3s. 6d.; *A Sketch of General Political History from the Earliest Times*, by Arthur D. Innes, in two parts with Maps (Rivington), 3s. each; *A Class Book of English History*, with maps, plans, lists of important dates, subjects for class, blackboard illustrations, etc., by Arthur Hassaai in two parts (Rivington), each 2s.

The common burden of the following books is that character-building is the supreme end of education:—

Character in the Making, by Abel J. Jones (Murray), 2s. net.; *High School Ethics*, by J. Howard Moore (Bell), 2s. 6d. net.; *The Rights and Duties of a Citizen*, by Henry Elliot Malden, Eighth edition, revised, (Methuen), 1s. 6d.; *Lessons in Citizenship*, by A. J. Waldegrave, (Nelson), 1s. 6d. net.; *Our Empire*, by F. J. Gould, (Longmans), 1s.; *The Minister and the Boy*, by Allen Hoben, (Cambridge University Press), 4s. net.; *Sundays at the Royal*

Military College, by M. G. Archibald (Macmillan), 3s. 6d. net..

A History of the British Nation, by A. W. Innes Jack, 3s. 6d. net. It is eminently readable and its impartiality, especially in the critical times of the Tudors and Stuarts, will commend it to all but bigots. The character of Oliver Cromwell is sympathetically yet critically drawn.

SCHOOL AND COLLEGE SPORTING NEWS.

SPORTS AT THE MADURA COLLEGE.

The eleventh College Day was celebrated with great éclat by the former pupils of the Madura College on the 13th instant, at 7-30 A.M. Sports were held and the following were the results in the various events:—

Seniors.

220 YARDS' DASH.—R. Narayan.

HURDLE RACE—(1) Dadamiah, (2) Suryanarayan.

PUTTING WEIGHT.—C. S. Sankaran.

CYCLE RACE.—C. S. Rama Rau.

Juniors.

POTATO GATHERING.—A. Venkatasubban.

THREE-LEGGED RACE.—(1) M. V. Sundaram.

(2) L. Jagadeesan.

100 YARDS' DASH.—M. Sreenivasam.

MATHEMATICAL TRIPOS.—R. Gopala Krishnan.

S.I.A.A. Football Tournament.

ENGINEERING v. MEDICAL.

The final of this tournament was played between the above teams on the S.I.A.A. ground. There was a fairly large gathering of spectators assembled to witness this match and the play, though it was not as fast as one would have wished was none the less quite interesting to watch. The Engineers won the match by 2 goals to nil, and there is no gainsaying the fact that on the day's form the better team won. The Engineers owed their victory not so much to their forwards who scored the two goals in the first half in which, with the wind greatly backing them up, they had everything their own way as to their defence which held out splendidly against the wind in the second half, when the Medical forwards time after time made determined efforts to score. In the first half, the Medical defence was hopelessly uncertain and it was this more than anything else, that accounted for their defeat.

Students' Badminton Club Tournament.

The Triplicane Muslim Association played the Egmore Shunmuga Vilas Club and the former won by 58 to 18 in the two innings. The Madras Students' Club then faced the Madras Social Club,

the latter winning the match by 58 to 28 in two innings. On the second day the Napier Park Badminton Club "A" team and their opponents the Masulipatam Friends' Union played, the latter winning by 53 to 27. In the evening of the second day the Napier Park Badminton Club "B" team and the Tanjore Shining Star Club played a splendid game and the latter won the game by 58 to 35. The next morning the winners "A" the Triplicane Muslim Association and the winners "B" the Madras Social Club played and the former won by 58 to 6. In the "C" team the Masulipatam Friends' Union faced the "D" team in the Tanjore Shining Star Club, Masulipatam, winning the game by 48 against 36.

The Triplicane Muslim Association and the Masulipatam Friends' Union played again. The Muslim Association proved too strong for Masulipatam and won by 53 to 52. The prize consisting of a Silver Cup and Medals were presented to the winners by Mr. P. V. Doraswamy Mudaliar, High Court Vakil. The President of the Muslim Association has won the Cup the second time. Medals not being ready will be presented later on.

HOCKEY AT ALIGARH COLLEGE.

The Aligarh College played the Bombay Customs in the Aga Khan Tournament. The game was a fast one, neither side scoring in the first half. In the second half Aligarh gave the Customs an easy goal, which they followed up by a second, beating Aligarh by two goals to love.

SPORTS AT NAGPUR SCHOOL.

22nd March was an important day in the history of the Neill City School, Nagpur. There was a

programme of sports and games in which not only the students of the school took part but the teachers also. The teachers of the school of their name and position on this occasion taxed themselves exclusively for the distribution of prizes and it may be said to their credit that they succeeded excellently in the purpose that they cherished at heart. The programme consisted of sports and races in the morning, music in the afternoon, hockey match in the evening and magic lantern, distribution of prizes and address to the students at night.

STUDENTS' SPORTS AT YEOTMAL.

On the Dhulwad day during the Holi festival, students' sports were organised by Mr. Kaikini of the Servants of India Society. A committee was formed with Mr. Armstrong, D.S.P. as the Chairman. Students from all schools—numbering several hundreds were present and a large number participated. Wrestling, running, high jump, long jump, three-legged races, sack races, potato picking tug-of-war, &c formed part of the programme. All the officials and non-officials were present and a big crowd witnessed the sports. Prizes of Rs. 50 were distributed.

LONDON UNIVERSITY ATHLETIC UNION.

The date of the London University Athletic Union Sports, originally fixed for May 21st, has been changed to Thursday, May 22nd. Not only does the Union arrange these sports, but it also controls a number of clubs, among them the Golfing Society, Cruising Club, Rifle Association, and Chess Club, membership of which is open to graduates and under-graduates of the University.

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Vol. III

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The Educational Review.

In our last issue we published the Resolution of the Government of India on education which we criticized as dealing with generalities as a merely academic discussion would do. Ample amends have been made in the Government of India's Notification No. 51, dated Delhi, the 29th March 1913. This Notification teems with interesting statistics, which prove that since His Imperial Majesty announced at Delhi the "Imperial Durbar grant of 50 lakhs recurring," the Government of India has mightily increased its solicitude for the spread of education. The "Educational Summary—March 1913" gives the statistics of expenditure as follows:—"The total expenditure (in round number) was Rs. 785 lakhs, of which 405 lakhs were met from public funds and 270 lakhs from private funds." We also learn that since "the new department got to work in January 1911" "Imperial grants for education have aggregated, non-recurring grants to 479 lakhs and recurring grants to 115 lakhs." These figures by themselves are satisfactory, but a careful study of the Government of India Notification reveals the fact that no definite policy, no previously thought of scheme of work underlies the distribution. The Government of India says that it called upon Local Governments to give a rough estimate of their requirements and partly guided by these estimates and partly by the population and other statistical considerations, it had made, off and on, doles to the various Local Governments. This is clearly a rather haphazard method of developing education. Instead of have

your plan and find the money for it, it is rather, take so much and spend it as soon as possible. The non-recurring grants have especially been inconvenient guests in the office of the D. P. I. The only way of getting rid of them was to divide them into small sums, guided again by financial considerations and dole them out to schools to spend as they like. Schools, like Governments, have no definite plan of expansion, not being prepared for such windfalls; so they have spent the monies given in all sorts of haphazard ways.

There is much talk nowadays about technical education, but neither the Government nor its critics seem to have attempted seriously how much real work in developing it is urgently necessary. In the ensuing year a grant of 1.5 lakhs is made for this purpose. A more ridiculously small grant cannot be conceived. This itself is enough proof that there has not been a serious attempt to grapple with the problem of technical education. Madras will get Rs. 9,000 out of this lakh and a half. What scheme of technical education is going to be financed with this handsome figure it will be interesting to learn. So much with reference to recurring grants. There is besides a non-recurring grant of 25 lakhs for girls' schools, technical schools and special schools. Madras gets the largest share of this amount, 6 lakhs. We again contend that 6 lakhs is an absurdly small sum to be used as capital expenditure for girls' schools, technical schools and special schools in a Presidency so large as Madras. If this sum were again to be sub-divided according to statistical and other considerations, it would be frittered away. We recommend that the whole amount

be devoted to one institution—say a school of mines. The old fiction that Indian pupils do not take kindly, to hand-work and the Indian workmen do not take kindly to improved methods and apparatus has been thoroughly exploded. A school of mines to train young men to exploit for minerals, test them and work at factories for making them fit for commercial purposes is a great need, now that the country is being vigorously exploited by mining syndicates. Numerous similar technical institutions can be started year after year, if only people were earnest about the spread of technical education.

At the last meeting of the Madras Legislative Council, there was an academic discussion about the necessity of the revision of the Grant-in-Aid Code by the Government with the help of a committee of non-officials. The D. P. I. deprecated the proposal because a few years ago a conference containing a majority of non-officials did sit and discuss the question. The real vital defects that render the present Grant-in-Aid Code harmful to education were not mentioned in the debate. In our view the greatest defect in the Grant-in-Aid Code as at present worked is the haphazard way in which grants are given. No school can be sure how much grants it will get or continue to get unaltered for any length of time. The grants of a school can be cut away at any time. What is still worse, the more efficiently a school is worked, the greater chance there is of its grants suddenly disappearing. If a school increases in popularity, say in a particular year and gets higher fees than usual, unless the management spends the additional revenue immediately for some useful or use-

less purpose, it will lose its grants for all time. In fact increase of efficiency leading to increased popularity is immediately visited with a mechanical reduction of grants. This is not a question of officials *versus* non-officials but of red-tape *versus* common sense. There are many other similar questions regarding the distribution of grants which the Managers of schools can give useful advice about. In fact the general principles of the distribution of grants require to be discussed from various points of view and decided before the Grant-in-Aid Code can be revised usefully.

Early in July next will be witnessed the unseemly sight of pupils with their S. S. L. Certificates under their arms flitting from College to College soliciting admission. The S. S. L. C. scheme was invented for reducing the dominance of external examinations on school work. But Principals of Colleges have rendered the scheme nugatory by selecting pupils for Matriculation solely guided by examination marks. The result has been that schoolmasters have become lax in their marking and school-boys do not care at all about earning marks at school. The Government of India recently congratulated Madras on its system of School Leaving Certificate but it bids fair to degenerate into *something worse* than Matriculation. Such congratulation is undeserved. We say "something worse than Matriculation" for Matriculation marks are moderated first by the Board of Examiners and secondly by a moderating Board, whereas in the case of the S.S.L.C. the mark of a single examiner, unchecked, unmoderated, has become the ruling factor in directing the destinies of our young men. Will the S.S.L.C

Board, or the D.P.I. or the University Syndicate enquire into this and remedy this evil? In this connection the following passage from Lord Haldane's speech to secondary and technical teachers will be of much interest:—"One reason why the Universities have suffered is because we have never understood fully the significance in the educational system of the secondary school. In Germany it has been different. The whole educational fabric there rests upon the basis of the secondary school. The boy goes into the secondary school young, and remains there, if he goes through the full course, for about nine years, and at the end of that time he is so qualified that he goes to the University. [With us it is regarded as a fat year, if one-fourth of those that study in a VI form are considered fit to enter the University!] There is no Matriculation examination, but the student has to produce his entrance certificate showing that he has gone through the mill and has been in the atmosphere of a secondary school. We have outgrown the period of the old-fashioned examination. What we want is a record, and everybody who goes to the University should have that record." Here in Madras we have the shell of the German system. We have the record but don't read anything of it except the entry examination marks! The best system loses its vitality if worked badly.

In a recent issue we gave an account of the organization of secondary school work in Scotland. New South Wales is introducing a similar scheme of two courses (1) a preliminary two-year course called intermediate; (2) a complete leaving certificate course of four years. Till recently Australian Universities were

holding Matriculation examinations of their own, but now it is changed. Written examination forms a part and it is hoped a minor part of the scheme. As a sop to the University the Board of Examiners will consist of four University Professors and four officers of the Department. There is no mention of school teachers as members of the Board and this is its grave defect. The Scotch system is much better.

Mr. Daniel Jones, who lectured on Phonetics and on Simplified Spelling, writing in the *Pioneer* (of Simplified Spelling), after referring to his work in Madras, says:

"I gaiv tuu uthertz, wun at Lahore and the uther befor the Bombay Teecherz' Asoesiaishon (held at Sur Mangalda'z hons, Girgaum, Bombay, on Janyuari 23). The audiens at Lahore numberd about three hundred, neerli aul being Indianz. At Bombay the audiens woz smaun, select—about sicsti I shoold thinc, including meni whist peepl. Mr. Nelson Fraser, Prinsipal ov the Training Colej, woz in the chair. (At Lahore thair woz no chairman.) The Secretari at Bombay toeld me this woz a much larjer audiens than yuzhyuali asemblz at the Teecherz' Asoesiaishon meetingz.....Aul I can sai iz that the Indianz ar aul veri ceen on S.S., but moest ov the English peepl (with a fyu brilliant eesepshonz) stil recwier convinsing. Madras iz far abed ov eni uther senter, boeth az regardz fonetics and az regardz S.S. I thinc, houever, I hav been aibl tu paiv the wai for fonetics and S.S. in the Punjab and Bombay."

There is no question that in the matter of educational reform Madras is as far ahead of the rest of India as it is behind-hand in social reform and industrial development.

The Senate has, by a large majority, thrown out the proposal to make the study of ancient Indian literature compulsory. The real question at issue has been much darkened

by counsel by the expedient of describing the proposal as "the compulsory study of the vernaculars." Those who advocate the measure want to *destroy* the compulsory study of the vernaculars that exists now in schools and colleges as a result of the recent reforms and to substitute for it a compulsory study of two or three ancient Indian literature, Sanskrit or vernacular. The Senate has been wide awake in dealing with this question. It is noteworthy among the 15 or 16 Fellows who voted for the proposal, there was not one *pukka* Telugu or one Canarese or one Malayalee Fellow and there was only one non-Brahman. This proves that the question affects different languages and different castes in different ways and cannot be solved off-hand in deference to the sentiments of one party. It is also to be noted that all European Fellows voted against the proposal for they understand how all the recent growth of scientific work in colleges will be killed out by this proposal and education in the Presidency will receive such a set-back that Madras will lose its premier place in the educational world of India. Unworthy suggestions have been made to the effect that the European vote is due to racial hatred of the Indian languages and Missionary hatred of Indian national literature. As a matter of fact even if all the Indian Fellows had voted, the proposal would have been defeated. It must also be remembered that of the people who voted for it, there was not a single educationist except Professor K. B. Ramanathan. Any one that has had anything to do with organizing the work of the Intermediate classes, nay, any one who has been inside a college any time during the last three years and seen the equipment and the work can realize how mischievous the proposal

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is likely to prove. Yet this question has been taken up by political organizations and is being fast turned into a political question. Numerous public meetings have been held, in which educationists are conspicuous either by their absence or by their opposition to the proposal. We deprecate to introduce into the serene atmosphere of the Senate the methods of the hustings.

The following critique on the B.A. Telugu Translation Paper by an eminent Telugu graduate of a quarter of a century's experience as a teacher, is an

eloquent commentary on the results of teaching Indian literature in our colleges for half a century:—"I have shown the passage to a Telugu gentleman of this place who has read through the Andhra Bharatamu and Bhagavatamu any number of times and is also a poet. He curved his lips over the first sentence. After wrangling with it for some minutes, he said he could make out little. It follows English idiom and contains an adjective in the comparative degree, whereas the Telugu idiom requires the plain adjective. In another sentence where one would write 'many men,' the author of the passage writes 'men possessing extensive numbers.' It is impossible to guess from what language this idiom has been borrowed." Our correspondent then proceeds to give more instances of what he calls "outrageously un-Telugu ways of expressing common ideas." We understand that most of the Telugu Examiners are B.A.'s and if this is the result of fifty years of University teaching of Telugu literature, surely one should think twice before proposing to revive it. We wish the Senate had resolved that the advocates of the proposal should not make their speeches in English but

each in his vernacular, then there would have been a sudden shrinkage of eloquence.

The educational districts of France are called *arrondissements*. All the Government schools in an *arrondissement*, primary, secondary and superior, form one *academie* presided over by a *recteur*. There are about 16 such academies, each corresponding to the seat of one French University. These academies together form the *Université de France*, ruled by the Minister of Public Instruction; but as he changes with the changing government, continuity is secured by three permanent Lieutenants of the Minister, in charge respectively of the primary, secondary and superior education. This looks like a remarkably centralized scheme, but it is not half so bad as the Indian system. Here the Director of Public Instruction is the one authority on all parts of educational work. Through the hierarchy of Inspectors, Asst. Inspectors, Sub-Asst. Inspectors and Supervisors he controls primary education. He is supreme ruler of secondary education through the same officers or through his being the Chairman of Secondary Certificate Boards. Besides, his place in the Senate and the Syndicate enables him to be the head *de facto* of University education. There is so much talk of decentralization but this is centralization with a vengeance. Primary education is for the masses, secondary for the classes, and collegiate for the few. These three have different aims and sometimes conflicting interests; they are not and cannot be three rungs of one ladder but three pyramids of differing heights; and unless three different men are in charge of the three, one or two will suffer, while the third may be unduly benefited. Another result of this centralization of authority is that a man

who understands and sympathizes with secondary education is pitchforked into collegiate work, another who has been inspecting primary schools for years and knows nothing of secondary schools has suddenly to begin inspecting them and criticising the work of men who have been teaching for years and yet a third who could lecture sweetly on the fascination of differential equations is suddenly turned on to balance the claims of old, civilized Telugu and modern, vulgar Telugu.

France is the land of so many great mathematicians that the organization of mathematical work in French schools is well worth studying. In

the primary stages, 3 to 4 hours a week are devoted to elementary arithmetical operations including the rule of three, intuitive geometry and one hour to drawing of regular figures. The next stage, called *premier cycle* is a cycle of 4 years and is the first part of secondary education, followed by a *second cycle* of three years ending with *Baccalaureat*. 14 to 22 p. c. of the time of school work is devoted to mathematics. Almost all the teaching work is by means of lectures. The pupils must take notes, answer questions and be tested frequently otherwise, so much so there is no possibility of "learning parrot-fashion." The note-books are required to be "as neat as copper-plate." The kind of work done in the mathematical course of the *premier cycle* is indicated in the following brief syllabus:—Equations and trinomials of the second degree; calculation of the derivatives of simple functions; study of their graphic and graphic representation; study of rectilinear motion by means of the theory of derivatives; velocity and acceleration; uniformly changing motion,

Mathematics
in the French
Lycees.

elements of solid geometry and descriptive geometry; plane trigonometry including the use of 4 or 5 place logarithm tables; the solutions of triangles and trigonometric equations. We call on our teachers in India to compare this with our C Group Mathematics. The next higher course of Mathematics is as follows:—

Arithmetic.—Properties of integers, fractions, decimals, square roots, greatest common divisors, theory of errors, etc.

Algebra.—Positive and negative numbers, quadratic equations (without the theory of imaginaries), progressions, logarithms, interest and annuities, graphs, derivatives of a sum, product, quotient, square root of a function, of $\sin x$, $\cos x$, $\tan x$, $\cot x$. Application to the study of the variation and the maxima and minima, of some simple functions, etc.

Trigonometry.—Circular functions, solution of triangles, applications of trigonometry to various questions relative to land surveying.

Geometry.—Translation, rotation, symmetry, homology and similitude, solids, areas, volumes, poles and polars, inversion, stereographic projection, central projections, etc.

Conics.—Ellipse, hyperbola, parabola, plane sections of a cone or cylinder of revolution, etc.

Descriptive Geometry.—Rabatments, application to distances and angles, projection of a circle, sphere, cone, cylinder, planes, sections, shadows, application to topographical maps, etc.

Kinematics.—Units of length and time. Rectilinear and curvilinear motion. Translation and rotation of a solid body. Geometric study of the helix, etc.

Dynamics and Statics.—Dynamics of a particle, forces applied to a solid body, simple machines in a state of repose and movement, etc.

Cosmography.—Celestial sphere, earth, sun, moon, planets, comets, stars, co-ordinate systems, Kepler's and Newton's Laws, etc. On the top of this is the special mathematics course.

"In *Algebra and Analysis* we find developed, the fundamental ideas concerning irrational numbers, convergency and divergency of series, the elements of the theory of functions of a real variable, power series, their multiplication and division, their differentiation and integration term by term. Taylor's formula, the theory of algebraic equations, including symmetric functions, but omitting the discussion of infinite roots. The latter part of the course treats of differentials of several variables, elementary ideas concerning definite integrals, integration of such functions as are considered in a first calculus course of the best American colleges, rectification of curves, calculation of volumes, plane areas, moments of inertia, centres of gravity, differential equations of the first order, solutions of simpler differential equations of the second order, which occur in connection with problems of mechanics and physics. Whenever possible in the discussion of these topics the power to work numerical examples is emphasised.

Plane Trigonometry and the discussion of spherical trigonometry through the law of Cosines are treated in class and five-place tables are used.

"In the course on *Analytical Geometry* is given a thorough discussion of equations of the second degree, of homography and anharmonic ratios as they enter into the dis-

discussion of curves and surfaces of the second degree of points at infinity, asymptotes, foci, trilinear co-ordinates, curvature, concavity and convexity, envelopes and evolutes. The professor also discusses thoroughly the various questions connected with the treatment of quadratic surfaces and less completely, the theory of surfaces in general, of space curves, osculating planes, curvature of surfaces. The elements of the theory of unicursal curves and surfaces and of anallagmatic curves and

surfaces are also taken up. So also, we find broadly arranged programmes mapped out in mechanics and descriptive geometry." When we read the account of this remarkable mathematical training we cannot help feeling that at the Madras University we are being given but the pale ghost of education and not its reality. We also begin to realize why University education has been so barren of results from the point of view of real scholarship.

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THE SOUTH INDIA TEACHERS UNION CONFERENCE.

PRESIDENTIAL ADDRESS

OF THE

REV. ALLAN F. GARDINER, M. A.

I must at the outset on behalf of the whole Union express our sincere thanks for the cordial welcome extended to this Conference on behalf of this town and district by Dewan Bahadur T. Desikachariar. It must be a matter of no small gratification to the members assembled to be welcomed by one who takes so great interest in every work of public utility and who a few days ago, as a representative of the people of Trichinopoly, was delegated to welcome the 20th Madras Provincial Conference.

The past year has been a very notable

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one in several ways in the sphere of education. The Government of India's Resolution, reaffirming all that was prized by us in its earlier resolutions, extending its good-will and benefits wider still, and holding out bright promise for the future, has inspired us with fresh enthusiasm, gratitude, and hope. We welcome especially its declaration on the questions of the provident fund and pensions for teachers, on the extension of secondary and primary education, and above all we welcome the prominence given to the moral function of all education, for the success of any system of education can be measured only by its success in the formation of character in the taught.

On these several points I shall have an opportunity of speaking later when we consider the Resolution in Conference and I must defer what I have to say till then.

During the past year the Union has expanded and developed and it was recently honoured by being received in deputation by H. E. the Governor of Madras who welcomed us warmly and made a most gracious and sympathetic reply to our Address. The keenness, activity, and success of the Union should be sufficient to induce every member of the teaching profession to join it, and every Teachers' Association to become affiliated, and in the ensuing year we look forward to a great accession of strength.

The programme of subjects for this Conference is long, important, and varied, and I do not intend to make any attempt now to consider it in detail or even to review it as a whole.

In the limited time now at my disposal I propose to deal in some detail with a question which has been vigorously (and, may I say heatedly?) debated during the last few months. I refer to the position occupied by languages other than English in the various courses of study at the University of Madras. This question has been simmering in the minds of the educated classes since 1904, when the Indian Universities' Act came into force. A very brief summary of the facts leading up to the present situation will not, I think, be out of place as they are facts that are often ignored though nearly every one of them, in its own place, is peculiarly significant.

In September 1904 the University was called upon to prepare and submit New Regulations under the Act, and after some delay it submitted its recommendation to the Government in March 1906. In the month of December in the same year the Government promulgated the New Regulations which were substantially the same as the recommendations of the Senate with the important exception that composition in a vernacular was introduced into the Intermediate course as a compulsory subject for all. In October 1908, the removal of this subject from the curriculum was proposed in the Senate. The Senate referred the matter to a committee and its report recommending the abolition of vernacular composition altogether was upheld in the Senate in March 1909 by 22 votes to 15. In May the Government refused to sanction this measure, and a strong reaction set in. In October 1909 a proposal was made to

substitute a compulsory course of study in a vernacular, classical or foreign language for compulsory composition in a vernacular. The matter was referred to a committee, the transactions of which are of considerable importance. It recommended that the then existing groups iii & iv should be reconstructed into a single group, thus enabling a student to study a language in the Intermediate course without thereby limiting his choice of a special subject in the B. A. Degree course to group VI. Secondly it recommended the removal of the History of English Literature from the syllabus of the Intermediate course. Thirdly it recommended that translation from a classical or foreign language should be accepted as an alternative to composition in a vernacular, and lastly that in this part of the Intermediate examination the minimum mark for a pass should be reduced from 50% to 40%. These recommendations were carried *en bloc*, and there the matter rested for two years. In March 1912 a proposal was brought forward to substitute a compulsory course of study in a vernacular, classical, or foreign language for compulsory composition or translation in the Intermediate course and to make composition or translation an integral part of the B. A. Degree course. After much discussion the Senate decided by 35 votes to 24 to refer the whole matter to a committee and in March 1913 that committee presented its report upholding the *status quo*, so far as the principle of compulsion was involved. This report was adopted by the Senate, after considerable discussion, by a large majority. I ask you carefully to bear these facts in mind during my following remarks and in all deliberations on this subject.

The terms of reference of the last-

named committee were that they should frame and present to the Senate any proposals that might be considered desirable in order to ensure more attention being paid to languages other than English in the various courses. The committee reported that no alterations in the direction of further compulsion were considered desirable in order to ensure more attention being paid to such languages. Perhaps, at this juncture, I may be permitted a word of personal explanation—not that any opinions of mine can be of the slightest public importance but because I believe that it will help to explain what has apparently puzzled many of those deeply interested in the question, namely the action of sympathisers in voting with the majority. I voted with the majority for the adoption of the Report and for some time subsequently I continued to receive numerous letters asking me to explain how I could reconcile my vote with my views—in fact tacitly suggesting that I was engaged in widening the gulf that separates platform and practice—a branch of moral, or rather immoral, engineering which is deservedly denounced, on platforms. Personally I have never for a moment been conscious of any inconsistency whatever in the matter. I followed with care, as far as possible, the arguments and objections of the minority and the arguments and replies of the majority. This was not always an easy task, for though the debate in the Senate was a striking example of reason touched with emotion it could hardly be described as an exhibition of reason in her most exalted mood. Some actually ventured to assert that the report itself was *ultra vires* because the committee considered no alterations in the direction of further compulsion desirable in order to secure what so many of us wish to see, as if the

terms of reference had postulated the desirability of such alterations to ensure more attention being paid to languages other than English. I remember some years ago scare-mongers at home insisted that a tide of physical deterioration was sweeping over England. A Commission was appointed to consider the question and to recommend prophylactic and remedial measures. It reported after an exhaustive enquiry that there were no signs of physical deterioration in the English people and no one ever ventured to suggest that it had failed in its duty as a Royal Commission.

In this case the committee merely reported that there was no desirability of making any such alterations in the Regulations. The general desirability of more attention being paid to languages other than English is of course another and a much larger question.

In dealing with this subject I must of necessity repeat many facts and opinions with which you are familiar, but the more I study the question the more firmly am I convinced that there is ample room still for some clear thinking and plain speaking in the matter. In the first place, though it would seem hardly credible, there has been confusion between two entirely distinct issues. I refer to the case of the vernaculars on the one hand and of classical languages on the other.

[As a man of Irish descent, I can fully appreciate the truth contained in the brilliant paradox that “in the minds of the advocates of Indian languages the vernaculars include the classical languages.” As an admirer and advocate of pure Indian culture I can as fully appreciate the metaphor that “Sanskrit is the Brahmin's vernacular;” but at the same time it must be borne in mind

that such forms of expressions belong to the realm rather of poetry than of plain prose, and consequently in a practical consideration of the question of the vernacular and classical languages all such figures of speech are best avoided as their very force is liable to be misleading. It must also be remembered that we are not directly concerned with the comparative value of vernaculars and classical languages considered absolutely as languages, but rather with the relative importance of their diverse functions in the general scheme of studies.]

I shall at once proceed to deal with the former.

When the Government first considered the recommendations of the Senate in 1906, it made the following comment upon them: "they totally exclude the vernacular languages of the country as compulsory subjects. The neglect of these languages by the ordinary University graduate of the present day is notorious. It appears to the Government that, if those who have secured a University education are to do the best for the country with the education they have received, it is imperative that they should preserve a sound knowledge of the vernaculars. With this in view and in order that a student may not be led to put aside the study of his mother-tongue a Regulation has been introduced providing as a compulsory subject in the Intermediate examination for the B. A. Degree, composition in a vernacular."

Some enthusiasts have never forgiven the formulators of the original recommendations for ignoring the vernaculars altogether as an essential and compulsory part of their scheme and refuse, with good reason I fear in certain cases, to believe that they have changed their opinions. But some of those who had ap-

proved of the original draft of the Regulations accepted the amended Regulations with satisfaction, if not exactly with enthusiasm, and approved the adoption of the recent report of the committee of the Senate in the belief that those Regulations met all the reasonable demands of the minority. I submit it is unreasonable and unfair to suspect the supporters of that report indiscriminately of attempting to slight or injure the cause of vernaculars by their vote. Nor did it seem fair to me at the time to taunt some of the leaders of the majority with being attached to institutions in which the vernaculars suffer a neglect that amounts practically to a boycott. Every man is entitled to change his views and to have such a change respected. Even one of the stalwarts among the minority was an Indian gentleman who had taken a prominent part in advocating the abolition of the vernaculars as a compulsory subject in any form whatever but had wisely, as I think, reconsidered his opinion and altered his attitude. But among those in the minority itself there were some whose attitude towards the vernaculars, in my opinion, leaves much to be desired, if it does not actually convict them of consistent inconsistency. We who heartily welcomed the Regulation introducing compulsory composition in a vernacular into the Intermediate course have reason for complaint at the way in which that admirable Regulation has been mutilated. Two severe blows have been dealt to the cause which we have at heart, one practically diminishing by 20% the number of candidates obliged to take vernacular composition and the other lowering the standard of knowledge required by 10% thereby diminishing the interest and the work both of teachers and of taught in the subject. In the first

instance translation from a classical or foreign language was admitted as an alternative to vernacular composition and in the second place the minimum pass-mark was reduced from 50% to 40%. We who believe in the supreme importance of the vernaculars in University education have a very deep grievance against the instigators and perpetrators of these retrograde measures, as we consider them, and I think that this grievance deserves to be widely published. Of this I shall have more to say presently.

But compulsory composition in the vernaculars for most students is of course by no means the only provision made for the study of the vernaculars in the Intermediate course. The amalgamation of the old groups iii and iv has given students such an opportunity of making a specialized study of their vernaculars as was hardly possible under the old Regulations and they are taking an increasing advantage of this opportunity. In the two years 1911-1912 and 1912-1913, counting the students of each University year separately, Malayalam was studied as an optional subject by 515 students, Tamil by 304, Telugu by 261, Kanarese by 85, Urdu by 43 and Uriya by 17—numbers which will appear the more satisfactory when we recollect that in 1911-1912 the Senior Intermediate class was unable to benefit by the amended constitution of groups iii and iv and as a consequence Malayalam was studied by only 30 students, Telugu by 15, Kanarese by 8, Tamil by 5, Urdu by 3, and Uriya not at all. In the Senior Intermediate class that year, in other words, only 61 students specialized in the vernaculars, whereas the average number in the three succeeding annual classes, under the present regulations, has been 388, that is, about 22% of group iii and

12% of the total, and the number is clearly on the increase. We in Trichinopoly have little to complain of in the effect of the new Regulations upon the study of the vernaculars. About 16% of our students have specialized in a vernacular, and of group iii alone about 28%. In Madras I admit the situation is very far from satisfactory, but that is clearly not the fault of the Regulations. Only 4% of the total number of students in the four colleges and less than 7% of those in group iii specialized in a vernacular, and the seriousness of this comparison will be the more evident when we reflect that in this town we are dealing with 1266 students in the Intermediate classes during the last three University years and in Madras with over 1700. The reason for this difference seems to me to be that in Trichinopoly we have deliberately set ourselves to foster and encourage the study of vernaculars, being firmly convinced of their great educational and national value, and use to the full the opportunities afforded for doing so under the Regulations; in Madras on the other hand, doubtless with an equally single-minded conviction that it is in the best interests of national education, such study is apparently with equal deliberateness discouraged; how else are we to explain the fact that in neither of the two leading colleges in Madras has there been a single student specializing in a vernacular language except in the case of six students who were studying two languages at one of these colleges? In these cases the revised Regulation reconstructing the old groups iii and iv might never have been passed, so completely inoperative and ineffective has it been rendered. It seems to me, I confess, a mistaken policy to agitate for a recasting of the whole scheme of Uni-

versity education simply because in one centre it is difficult for students to secure the full privileges to which they are entitled under the existing regulations. The remedy surely lies in another direction.

It is impossible to close a consideration of this part of the subject without a word in defence of the system of voluntary selection of subjects for specialization. The only justification of a specialized course of study is that it imparts a more thorough knowledge of a subject than would be possible under any other kind of course. The new Regulations thus ensure a more thorough and lasting knowledge of Mathematics, of Science, of History, of Logic, and of *Languages*, than the old, and, as I have said, I am sanguine enough to believe that the improved quality of the knowledge of vernacular languages will more than compensate for the reduced number of students studying them, and I do not believe that by making a specialized course of study in a vernacular language compulsory in every case would the cause of vernacular languages or of any other branch of study be advanced; on the contrary I believe there would be a serious loss all round.

I must defer considering the question of further specialization in the vernaculars in group VI of the B. A. Degree course till I have discussed the position of classical languages in the course of studies. My contention that composition in a vernacular should again be made compulsory for all, and that a minimum of 50% should again be required for a pass, naturally leads up to the consideration of this subject.

No one I suppose will quarrel with Lowell's dictum that "the chief end of classical studies is to give a young man a love for something apart from and

above the more vulgar associations of life"—such vulgar associations, I suppose, as those of earning a living, of maintaining parents, grand-parents, and their immediate relations, of supporting brothers, sisters and cousins, wife and children, and of securing suitable and expensive sons-in-law. I yield to no one in my unbounded admiration for a classical education, and as my own has now been in progress for about a quarter of a century, and will continue I hope for another half, perhaps my assurance may be accepted. But it must be remembered that this love for something apart from and above the vulgar associations of life is a luxury. Such love is exacting and expensive, like every other kind of love with perhaps the one exception which we are told on the best authority is the root of all evil—the love of money. This I believe at any rate the root of the neglect of the classical studies. In reply to the question 'Are there in your opinion any special causes deterring students from taking a classical language in group iii of the Intermediate course, and from selecting group VI of the B.A. course?' there is almost heavenly harmony in the united response of the Principals of First and Second grade colleges, and the loud refrain of their chant is 'it does not pay,' though a very soft accompaniment is faintly heard now and then—'bad methods of teaching.' Perhaps however the neglect of classical languages is overrated, especially when we bear in mind their limited appeal and the peculiar position they hold in twentieth-century education. Since the new Regulations took effect Sanskrit has been studied by 423 students, Persian by 54, Latin by 42 and Arabic by 5. No other language except Malayalam has attracted so many students as Sanskrit and here again there are pros-

pects of there being an increasing number of candidates in the future. Still we cannot deny that we are disappointed that not more than 5% of the students in the Intermediate department have specialized as yet in a classical language. But this neglect is not due to the existing Regulations: it is due partly to caution, partly to a lack of disinterested enthusiasm for classics, and partly to inability to rise either economically or psychologically above the vulgar associations of life.

Now, in the opinion of most competent educationists, to study a vernacular language up to the standard of a University degree requires the concomitant study of a cognate classical language. A classical language can stand by itself, but not a vernacular. That should be a most important function of such classical languages as Persian, Arabic, and Sanskrit in this land, but so far Malayalam has been studied in this way only by 7, Telugu by 6, Kanarese by 3, Urdu by 2, and Tamil by 1—19 in all—in group VI of the B. A. Degree course.

This is most disappointing and most disquieting. In the colleges in this town every provision is made to impart instruction in seven languages other than English in the University courses, and this I need hardly remind you involves considerable sacrifice and outlay. In the S. P. G. College we have only one student taking Sanskrit and Tamil in group VI of the B.A. Degree course—a class in himself—and it is little satisfaction to us to reflect that he is the only student in South India who has yet specialized in Tamil for his B. A. Degree under the new Regulations. The provision of every facility to study languages is a costly experiment: it is not however a miscalculated speculation on

our part but a calculated sacrifice. 'It does not pay.' What is needed however to stimulate the study of the classics is not compulsion in any form on the part of the University, but sacrifice on the part of the parents and students—sacrifice in the interests of a love apart from and above the vulgar associations of life.

I need only refer you to the columns of the daily Press and to the Home Office of England for proof of how ineffectual is the policy of the forcible feeding of adults. But the opinions of those who advocate such a course in the matter of languages are entitled to consideration. Nothing short of a complete recasting of the whole scheme of University studies will satisfy them. The enormous labour involved in such a proceeding is of course no valid objection to such a proposal. We who deprecate it on the grounds that it is too early yet to contemplate such a drastic measure do so because we believe that the existing Regulations, with some modification in details, provide all the necessary facilities if students choose to avail themselves of them, and because we are sanguine enough to believe that they will ultimately do so in a sufficiently large number. No one I think can deny that the present courses in themselves—apart from the matter in dispute—are quite satisfactory with the exception of a few details in some of them. No lower standard of English could be accepted without deep reluctance and regret on all sides for either the Intermediate or the B.A. Degree course and it would be hardly possible to lighten the optional courses; in fact without some very intelligent anticipation of what the examiners will require, or rather of what they will not require, one at least of them is hardly practicable as it is. If two years are just sufficient for two subjects and if a third

is to be added the courses must be extended for another year. Are parents and students prepared to welcome the necessary sacrifice of time and money? I submit they are not. If a third subject were added without an additional year being granted either the students would have to suffer almost beyond endurance or the purpose of the optional courses would be almost irretrievably frustrated—unless of course the standard of the Intermediate and B.A. Degree examination were considerably lowered, in which case they would lose much of the educational importance and value now attached to them.

It will be remembered however that Government in adopting the draft of the new regulations questioned the wisdom of specialization in the earlier stages of a student's education. It is true the remark was made in connection with specialization in the Intermediate course, but it observed at the same time that that course was "so fitted and adapted to the specialized plan of study as not to admit of easy alteration without reconstituting the whole scheme of studies." The consideration of such an alteration, I have already suggested, is inadvisable and uncalled for at this early stage, but I think that the question of introducing a vernacular language as a compulsory subject in the Government Secondary School Leaving Certificate scheme and of lightening the optional courses in it is one that is open to consideration. If, as the Government observed in sanctioning the amended recommendations of the Senate, "it is a serious question whether a more general plan of study would not be better adapted to the youth of the students, and the circumstances of education in the country at any rate during the first two years of undergraduate study,"

how much better would a less specialized and more general plan be adapted to the youth of students during three years preceding Matriculation, "thus securing for these young men a wider survey of the field of knowledge before settling down to cultivate one restricted portion of it" (to quote again the words of the same Government Order). I confess I have a profound distrust of the educative value of specialization in the case of boys between the ages of 12 and 16, and consequently I am of the opinion that Matriculates would not be worse but better equipped to attack and cope with the specialized courses in the Intermediate department if they were to approach them with a more general and less highly specialized preparation. Could a vernacular language be excluded from a plan of studies claiming to be general in any sense of the word? And if it were included, can it be doubted that the proportion of students selecting a vernacular language as an optional subject in the Intermediate course would be considerably raised? Classical languages, for reasons which I have already stated, are vital enough, I think, to be treated uniformly as optional throughout, while vernacular composition should once more be made compulsory and a higher standard required.

I feel I have trespassed too long upon your time and patience especially as 'The Madras University and Indian Languages' is put down on the agenda paper of this Conference as the subject of a paper and discussion. My only excuse, which I ask you to accept, is that I consider this to be a subject of supreme importance and I felt it my duty to give it a very prominent place in our deliberations.

CHRISTINA GEORGINA ROSSETTI.

The Second Great Victorian Poetess.

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Introduction.

I. VICTORIAN WOMANHOOD.

IF with the name of Queen Elizabeth we couple the life and growth of the English Drama, if with the name of Queen Anne we connect the introduction of fashion and artificiality into English literature, the immortal name of Queen Victoria shall be sacred to after ages for the special genius of women. This special genius of women seems to have always found a congenial soil in prose. Unless we accept the theory of Professor Skeat and attribute that beautifully early poem "The Flower and the Leaf" to Margaret Neville, we have not one good poet to name among women before the accession of Queen Victoria, excepting perhaps Mrs. Hemans, an imaginative but not an inspiring poet, and Letitia Elizabeth Landon, a fine poet who passed away before she could win her laurel. Joanna Baillie and Caroline Oliphant Nairne are not noteworthy as poets, though the former was a good dramatist and song-writer and the latter a fine composer of Scotch songs. Lady Mary Wortley Montague, the distinguished letter-writer of the eighteenth century, Miss Austen, The Brontës, Miss Burney, Miss Edgeworth, Mrs. Oliphant, Mrs. Radcliffe, Mrs. Humphrey Ward, George Eliot and a host of other women have all distinguished themselves as prose writers. A few women like Mrs. Inchbald, Mrs. Siddons, Mrs. Jordan, Miss O'Neill have no doubt made a name in drama as writers or actors. Poetry may be said to have attracted women only in

the memorable reign of the good and great Queen Victoria. Jean Ingelow, Miss Proctor, and Augusta Webster are very good poets. Mrs. Browning and Miss Rossetti may well claim a place in the House of Fame beside Mr. Browning, Dante Rossetti, the late poet-laureate, Matthew Arnold and William Morris. Mr. Swinburne has only shown natural power of appreciation when he has dedicated one of his volumes to Miss Christina Rossetti, who thought "in loftier strains" than he.

"Woman," writes Tennyson, "is not undeveloped man"

"But diverse: could we make her as the man,
Sweet Love were slain: his dearest bond is this,
Not like to like, but like in difference.
Yet in the long years liker must they grow;
The man be more of woman, she of man;
He gain in sweetness and in moral height,
Nor lose the wrestling thews that throw the world;
The mental breadth, nor fail in childward care,
Nor lose the childlike in the larger mind;
Till at last she set herself to man,
Like perfect music unto noble words."†

Christina Rossetti fundamentally agrees with Tennyson. In *An 'Immured' Sister* she says,

"Men work and think, but women feel."

Thus she draws the distinction between man and woman, in her two poems *Exultate Deo* and *A Help-meet for Him*.

"Man's high degree hath will and memory,
Affection and desire,
By loftier ways he mounts of prayer and praise;
Fire unto fire,
Deep unto deep responsive, height to height,
Until he walk in white,"

and "woman was made for man's delight," being his shadow by day, his moon by night; her strength with weakness is overlaid, and

* "A Century of Roundels."

† "The Princess."

"World-wide champion of truth and right,
Hope in gloom and in danger aid,
Tender and faithful, ruddy and white,
Woman was made."

Christina Rossetti does not seem to have been enthusiastic about women's rights as George Eliot or Mrs. Browning, or Augusta Webster. While George Eliot was zealous for the assertion of the rights of women, while Mrs. Browning held

"That every creature, female as the male
Stands single in responsible act and thought
As also in birth and death,"

while Augusta Webster was "a vigorous and eloquent advocate of women's suffrage,"* Christina Rossetti most modestly said,

"Let women fear to teach and bear, to learn,
Remembering the first woman's first mistake."†

With these sentiments of Christina we may compare those of Milton,

"For contemplation he and valour formed,
For softness she and attractive grace
He for God only, she for God in him"‡

"And her gifts

Were such as under government well seemed,
Unseemly to bear rule."§

The glory of Victorian womanhood may be said to lie in that the intensely sympathetic vein of the woman thinker has given great relief to the overthought of man in the Victorian Age of English literature. While Elizabeth Barrett Browning asserted the rights of women, emphasised the responsibility of women and stamped her glorious name in her works during the first half of the Victorian Age, Christina Georgina Rossetti has given eternal name to the latter half of that good queen's reign by being the poetess of the Neo-Romantic Movement and giving a new turn

* Bell—Christina Rossetti, p. 111.

† *Later Life*.

‡ *Par. Lost*. Book IV.

§ *Par. Lost*. Book X.

to English poetry. Where Mrs. Browning left, Miss Rossetti took up the literary life of the Victorian Age; and the very year after the death of the former, the latter's first volume of poetry "Goblin Market and other Poems" saw the light of the world.

II. CHRISTINA ROSSETTI—THE SECOND GREAT REPRESENTATIVE.

When Mr. Patchett Martin stated in an article that of the two (Mrs. Browning and Miss Rossetti) she herself was "the greater literary artist," Christina wrote to him:—"Yet all said, I doubt whether the woman is born, or for many a long day, if ever, will be born, who will balance not to say outweigh Mrs. Browning."*

And yet all said, a consideration of the works of Christina will show beyond doubt that Christina has balanced and perhaps even outweighed Mrs. Browning. It will be seen that the poet who

"with stammering lips and insufficient sound"† strove, and strove nobly, "to deliver right" the music of her nature is equalled, if not surpassed by the poet who

"with love to all the beautiful"

strove "to do well,"‡ the poet who with childly lisps to her dear mother in numbers at the tender age of twelve and with a simple hymn

"To the God who reigns on high,
To the eternal Majesty,
To the Blessed Trinity"

went abroad and taught all men that

"Love reigneth high and reigneth low and reigneth everywhere,"§

* Bell, p. 93.

† "The Soul's Expression."

‡ *Lines to my Grandfather*.

§ *Love and Hope*.

the poet whose two motive-powers were "religion and affection" and the poet of whom Swinburne sang

"From love-lit thought's remurmuring cave
The notes that rippled, wave on wave,
Were clear as love, as faith were strong;
And all souls blessed the soul that gave
Sweet water from the well of song."*

The life and work of this noble lady, who is the second great poetess of the Victorian Age, we shall now proceed to consider.

I.

BIRTH, EDUCATION, EARLY POEMS.

(1830—1847).

Christina Georgina Rossetti was born on the 5th December 1830. She was the fourth and last child of Gabriele Rossetti and Frances Mary Lavinia Polidori. Gabriele Rossetti, "the seer of the Italian re-aring"† was an earnest student of Dante, and in the words of Professor Francesco di Rosso, was "the Tyrtæus of the battles of the Italian liberty, unity and independence, the poet sacred to Italy and Europe, labouring under tyranny, under political and religious reaction."‡ He was a freethinker and a freemason. Frances Mary Lavinia was a deeply religious woman, a cultured lady, a devoted wife and an affectionate mother. Simple by nature, she abhorred gossip and trained her children in her own way. Their first child and daughter Maria Francesca, born in 1827, the most practical of Gabriele's children and a very devotional woman is known to us as the author of the highly-valued manual, "A Shadow of Dante." In the opinion of her gifted sister Christina, "If Maria Francesca had been her younger

instead of her elder sister, she would have become celebrated," and "she was prevented from achieving fame only by "religious scruples and domestic cares."* In *Time Flies* and *The Face of the Deep* Christina speaks of her as "one of the most genuine Christians" and "a dear saint" who pointed out Patience as the lesson taught in the Book of Revelation. Dante Gabriel Rossetti, born in 1828, Maria's younger brother, is well known to us as a distinguished poet and painter, and as the starter of the Pre-Raphaelite Movement in Art and Letters. He was an artist of whom Ruskin said, his "name should be placed first on the list of men...who have raised and changed the spirit of modern art; raised in absolute attainment, changed in direction of temper."† He was a poet of whom Swinburne said, "Among English-speaking poets of his age, I know of none who can reasonably be said to have given higher proof of the highest qualities than Mr. Rossetti—if the qualities we rate highest in poetry be imagination, passion, thought, harmony, and variety of singing power."‡ Quite unlike his sister Christina in many ways, he seems to have been greatly influenced by "the beauty of Christina's life and her religious system."§ William Michael Rossetti, the third child of Gabriele Rossetti, born in 1829, is known to us as "his brother's careful and accomplished biographer,"|| as the equally careful editor of his sister's Poems, as the secretary of the Pre-Raphaelite Brotherhood and as the editor of "The Germ," the short-lived literary organ of the Brother-

* Bell, p. 57.

† "The Easter Art Annual," 1902, p. 1.

‡ Family Letters of Dante Rossetti. Vol. I. p. 432.

§ Watts-Duntton. The Athenæum, Feb. 15, 1896.

|| Eng. Men of Letters. Rossetti, p. 6

* A Ballad of Appeal.

† Family Letters of Rossetti. Vol. I. p. 18.

‡ Ibid, p. 17.

hood. As is natural to expect, the two sisters grew like "fresh violets opened at dawn," "roses nurtured by the earliest breezes," and "lovely turtle-doves in the nest of love,"* and the two brothers grew

"A pair of Brothers brotherly,

Unlike and yet how much the same

In heart and high-toned intellect,

In face and bearing, lope and aim."†

The family in which Christina was born was of a distinctly literary turn of mind. It was besides wholly Italian in character. Gabriele Rossetti was wholly Italian, while Frances Mary Lavinia was half Italian in descent. The friends of the family were also Italian wholly or almost so, the only English family with which the Rossettis were well acquainted being that of Mr. Cipriani Potter, the pianist.

The Rossetti family was transplanted in England in 1824, as a result of the revocation of the constitution of 1820 by Ferdinand I. The connection of the Rossettis with England is only of a recent date. However we are told by Lord Clarendon‡ of a Count of Rozetti who lived in London "in great port" in the days of Charles I. as a public agent from Rome.

The Italian instinct for art asserted itself and Christina turned to the art of Painting for a time as did her brother Dante Gabriel throughout life. The latter always considered, says William, that, "had she chosen to study and take pains" she "might have done something as an artist." § At any rate her artistic taste is seen in the devices she made for some

of her poems. The literary inclination of the family from the beginning made Christina not only take to reading books, though not very widely nor even regularly, unlike her brother Dante, but also to versifying from an early age "scrupulously" rejecting "all assistance in her rhyming efforts, under the impression that in that case they would not be her own" as her mother put it.* The deep religious nature of her mother and the corresponding training of the children is distinctly noticeable in the religious note of Christina's poems, and in her over-present belief in the Lord Jesus. "The Christian idea is essentially feminine," says Mr. Watts-Dunton, "and of this feminine quality Christina Rossetti's poetry is full."† The tie of affection that bound closely the Rossetti family accounts for the vein of affection in her life and work. The writer abovementioned says that "all that is noblest in Christina's poetry, an ever-present sense of the beauty and power of goodness, must surely have come from the mother, from whom also came that other charm of Christina's to which Gabriel was peculiarly sensitive, her youthfulness of temperament."

Christina had no sort of systematic education, but she had all the advantages that the other members of the family had and she was educated. She knew Italian and French very well; and she penned Italian verses as easily as she did English ones. She knew also a little of German and Latin. The Bible formed the text on which she based her message to the world. She was a close student of the Apocalypse. Dante, the one favourite author of the family was also her much-admired poet. Maturin's "Melmoth the Wanderer" which held Dante Rossetti spell-bound, attracted also

* Poetical Works, p. 464.

† The Athenæum, Feb. 15. 1896.

* Bell, p. 7.

† Portraits.

‡ Hist. of the Rebellion, Vol I. p. 263. Clarendon Press Edition, 1826.

§ Poetical Works, p. 464.

the fancy of Christina. Both brother and sister also drank deep of the Arabian Nights' Entertainments. She had a partiality for Metastasio. She knew Tasso and Petrarch. Of the ancients she knew Homer and Plato; of the moderns, she loved Shakespeare and liked Scott. She had a fondness for Keats and Shelley. She read also Tennyson and Browning. Mrs. Browning's poems she read and admired, though she was never acquainted with her person, and she even for a time had an idea of writing the life of "that great poetess and lovable woman."* She was well-acquainted with Swinburne. Thus it will be seen that her literary taste was considerably well-formed. But it had little or no influence on her creative capability. From the beginning she was conscious of her poetic powers; she had not that feminine virtue, if it be a virtue, of diffidence, of which Mr. Leslie Stephen speaks in his admirable volume on George Eliot.†

As Mr. Nash says, "the poetic flow was spontaneous," and was as natural as the notes of the nightingale or the perfume of the violet. But this self-consciousness did not breed in her arrogance or self-conceit. Spontaneity did not make her Muse limp or leap. She would not go about hunting for subject. The subject must present itself to her. When she had a fit subject, the form would come of its own accord. She would dash off in feverish haste what was uppermost in her head and endmost in her pen. One sonnet, we are told, she wrote off "in nine minutes," another "in five."‡ In this she fulfilled the two great conditions of all

* Bell, p. 90.

† English Men of Letters—George Eliot, p. 52.

‡ Sonnets to Bouts-rimes I and 9. Poetical Works, p. 490.

true poetry, a fitting conception and a ready expression. She believed in inspiration being the *sine qua non* of creative poetry, and she was an "inspired author."* In his "Reminiscences of Christina Rossetti" Watts-Dunton says "of all contemporary poets, she had seemed to me the most indubitably inspired. I had made a life-long study of poetic art, yet Christina's art secret had baffled me..... her inspiration was not that of the artist at all and not that of such dramatic passion as in the other poets I had been accustomed to, but the inspiration of the religious devotee."†

The very first verses that Christina wrote were the simple lines addressed in her twelfth year to her mother, on the anniversary of the latter's birth, 27th April 1842. Her second metrical effort was a short patriotic poem, entitled *The Chinaman*. Such a poem, is rare among her works, as such a conception is itself rare in a family settled in a land of liberty and breathing in an atmosphere where

"The war-drums throb'd no longer and the
battle flags were fur'd."

The occasion of this short poem was the Anglo-Chinese Opium War. The simple *Hymn* of her thirteenth year may indeed be said to be the fountain-head of the mellifluous life-long current of Christina's devotional poetry. The four verses called *Mother and Child*, in which the innocent child thinks of heaven where "the flowers never fade" and where "never sets the sun," and would go there even now, are very fine, and Dante Gabriel truly said "Blake might have written"‡ these. The conception of *Mary Magdalene*

* J. Knight—Great Writers "Rossetti," p. 13.

† Nineteenth Century, Feb. 1895.

‡ Sharp. "Atlantic Monthly," June, 1895. "Some Reminiscences of Christina Rossetti."

coming "in deep repentance" to "the King of Heaven," repenting of her sin and being forgiven because of the love she bore to Him, corresponds to her brother's picture* and sonnet, where Mary goes forward to meet the Bridegroom saying

"He needs me, calls me, loves me; let me go."

This mutual bond of love between Earth and Heaven forms the keynote of Christina's whole philosophy. This love emboldens *The Martyr* to go forth with her cheek "glowing with a glorious red" and meet Death,

"Satisfied with hopeful rest, and replete with God."

It is this bond of love also that enables the man "with a steadfast face" to fight boldly with the lion, for

"God looked down upon me from the heaven above
And I did not tremble, happy in His love."†

the love of Him, who is piously and fearfully represented in *Resurrection Eve*. Of the love of Heaven, she thus speaks in *Love and Hope and Charity*:

"Love for ever dwells in Heaven,—
Hope entereth not there."

"After this bleak world's stormy weather,
All, all, save Love alone, shall die;
For Faith and Hope shall merge together in Charity.

Compare with these the lines in *Sing-Song*,

"Hope is like a harebell trembling from its birth.
Love is like a rose the joy of all the earth;
Faith is like a lily lifted high and white,
Love is like a lovely rose the world's delight."

The vanity of earthly love is described in *Love Ephemeral* and *Love Attacked*. Earthly love is but "the essence of restless woe;" still

"Both fools and sages
Have felt its power,
In distant lands and ages."

* Mary Magdalene at the door of Simon the Pharisee.

† *I Have Fought a Good Fight*.

The secret of this possession of love is unknown, and yet one cannot be indifferent to it, for

"Though Love may not be free
Always from a taint of grief,
If its sting is very sharp,
Great is its relief"*

Love, she says, is all happiness, all beauty, the crown of flaxen heads and hoary, the only everlasting duty,

"And Love is chronicled in endless story,
And kindles endless glory."

Christina had a keen eye for enjoying the beauties of Nature, though she was city-born and city-bred. With fancy clear, she took in all beauty with an easy span. Her *Lines to My Grandfather* written in her fifteenth year testifies to this. Her description of Nature's beauties in this piece is as exquisite as it is childlike. She is more than a girl when she makes the whole nature sing "the song of greeting," welcoming sweet Summer in, Summer

"With roses for her crown,
With jessamine and myrtle.
Forming her fragrant kirtle,"‡

and conspiring to bind her as she lies, with a chain of bud and blossom lest she should suddenly fly away. When she finds it not possible to do so, the poet avails herself of an opportunity to enjoy a single summer night§ and calls her companions to wander forth with her and enjoy the calm night and the beauties of Nature at an hour

"When the strains of love have chiefly power;
When the maid looks forth from her latticed bower,

With a gentle yielding smile,
Donning her mantle all the while."

* *Love Defended*.

† Keats. "The Human Seasons."

‡ *Summer*.

§ *Serenade*.

In *Earth and Heaven* she sees how "of beauty earth is full," but soon finds that "In Heaven is Love" which is far above Earth's fleeting joys and beauties. This is the conclusion to which she is inevitably led at an age when she may be expected to like what is of earth in preference to or in ignorance of what is of Heaven lying behind the unsolved and unsolvable mysteries of life. Naturally then does she exclaim in *The Time of Waiting*,

"Life is fleeting, joy is fleeting,
Coldness follows love and greeting,
Parting still succeeds to meeting,"
and conclude

"For Christ's guiding love away,
For the everlasting day,
For meek patience, let us pray."

She now finds solace in solitude, "Happy solitude," "Most blessed solitude."* The critics who interpret this saintly yearning of hers as the expression of a diseased brain, would not feel so if they saw that *The Last Answer* to all queries of the phantom of Life was that "love and hope are fallacies."

The poet who proved the ephemeral nature of all earthly love, the poet who saw clearly how in all things.

"Old Time flies fast upon his way,

And soon will cease the night and soon will dawn the day;† the poet who saw the fleeting nature of joy and the frailty of love, when Death could snatch away the bride

"With her bridal robes around her,"‡

the poet who, trying to find out whether life was lovely because of its goodness, or gladness, saw only

* *The Dead City*.

† *The End of Time*.

‡ *The Dead Bride*.

"'Tis more of sin and sadness;
Nay, of weariness 'tis more;"*

the poet who very realistically described the sorrow involved in *The Time of Waiting*, a time full of seeming joys and lasting sorrows; the poet who in *The Dead City* saw an unreal scene of the seeming realities of life, got afraid and "straightway knelt and prayed;" such a poet could not but long for Rest,

"Be it sleep or be it death,"†
"Weary of life's passing show,
Its pageant and its pain."

With this eye she looks at *The Solitary Rose*; with this realisation she sings *The Song of the Star, Spring Quiet and Wishes*.

In *The Dying Man to his Betrothed*, we hear the dying man saying that love on earth is "sweet poison, sweetest death," "honey between serpent's teeth," and turning to Christ "the gate of Heaven." In *The Dead Bride* she comes to this conclusion:

"Happy bride if single-hearted
Her first love to God was given;"

Heart's Chill Between and *Death's Chill Between* exactly represent the poet's mind and the line

"Death is life, and Death alone"

in *Night and Death* is very striking. Because of this self-isolation, she finds *The World's Harmonies* in that voice sweeter than the voice of the whole world,

"That crieth at the golden door
And gaineth entrance in."

In her early verses "the richness of her vision was already faintly prefigured."‡ Her little piece on *Charity* is more appealing,

* *Present and Future*.

† *The Dream*.

‡ *Enc. Brit. Vol. 32, p. 298*.

though less imaginative, than George Herbert's "Virtue," which she imitated in this poem. Cardinal Newman's "Consolations in Bereavement" is not half as philosophical as Christina's *Burial Anthem* written at fifteen on the occasion of the burial of a young clergyman. The merry description of a summer night in *Serenade* contrasts well with the gloomy undertone of Matthew Arnold's "Summer Night." While Christina's *Elegy on the Death of a Cat* is neither so imaginative as Gray's lines "on the Death of a Favourite Cat, drowned in a tub of gold fishes," nor so "highly serious" as Matthew Arnold's "on the Death of a Favourite Canary," while her elegy for which she invokes the Muses to come obedient to her call and

"Mourn with tuneful breath
Each one for a separate death,"

is not worth the name of an "elegy," at any rate the simple conception of the occasion and the solemnity of the last lines are worthy of the poet, who had great love for animals. Though the simple description of *The Lotus-Eaters* cannot stand beside the beautiful lines of Tennyson, the fine and close description of *The Dead City* and the garment of mystery that lies round the whole conception of the city with the solemn scenes present before the rambling visitor, the banquet that is no more real than Barmecide's feast, and the sights of men, women and children that in a trice turned to stone, can be placed beside the sweet description of "The Deserted Garden" of Mrs. Browning or "The Deserted Village" of Oliver Goldsmith.

One wonders indeed how Miss Rossetti could, with her calmness of mind and serenity of temper, conceive such a horrible picture as

that in her *Will these Hands ne'er be Clean?*
The lines

"The air shall smell of blood,"
"Earth shall be hell and breath vengeance"

may well be transferred to Shakespeare's "Macbeth." Macbeth might well have said, "I am not changed," and turned away for shame and repentance.

We may mention here the fine pieces *Tasso and Leonora*, *Eleanor*, *Isidora*, *Zara* and *Lady Isabella* which abound in fine descriptive touches. The descriptions of Eleanor and Lady Isabel may well be applied to Christina herself. She had

"A forehead high and white
"That spoke a noble mind;"

she had all the qualities which become a woman well; she had "a perfect form, a perfect face" and

"If she sang or if she spoke
"Twas music soft and grand
As though a distant singing sea
Broke on a tuneful strand;
As though a blessed Angel
Were singing a glad song,
Halfway between the Earth and Heaven
Joyfully borne along."

Speaking of Christina's Early Poems, her biographer says, "They have distinct originality of conception and of presentation, a certain indefinable aloofness from the objects described, while, at the same time, they manifest a remarkable clearness in the delineation of these objects, conjointly with sumptuousness of imagery.*

N. K. VENKATESAN.

(To be continued.)

* Mackenzie Bell "Christina Rossetti," p. 193.

SPELLING REFORM.

ITS SPECIAL ASPECTS.

The following is from the Secretary of the Simplified Spelling Society, 44, Gt. Russell Street, London, W. C. :—

PERHAPS the most interesting feature of the propagandum of the Simplified Spelling Society—of which Professor Gilbert Murray, formerly of Glasgow, and now of Oxford University, is President—is its Imperial aspect. Significant light is thrown on the problem of English spelling reform by the situation in South Africa. There in recent years a simplified spelling of Dutch has been universally adopted in the schools. Important information as to the effects of this new departure is given in a pamphlet written by Mr. Joseph Hogarth, Johannesburg, which is published by the Simplified Spelling Society under the title of "Simplified Dutch v. Complicated English in South Africa." The general trend of the pamphlet may be gathered from a short quotation which summarises the views Mr. Lub, teacher of languages at Transvaal University College in Johannesburg. The passage is in the "Nyu Speling" which is being advocated by the Simplified Spelling Society. I am sure that most of your readers will agree that it can be quite easily read, though I expect that there will be a tolerably general consensus of opinion that it is very ugly. That is a matter that I should be very glad to discuss with them some other day, but in the meantime I wish to confine myself to the Imperial aspect of spelling reform and must not wander from that issue. Mr. Lub says :—"Dutch children nou larn tu reed with grait eez and rapiditi; but the fasiliti ov lurning tu reed iz not bi eni meenz the crowning glori ov the nyu method. Thai

now acwier eezili and ewicly an art which, under the oeld stiel, wcz aulwaiz long and teedius ov acwizishon naimli, the art ov compoezing and rieting a leter. A chield no longer trublz hiz hed with desieding whether a particyular wurd iz tu be spelt with wun a or with tu a'z or with wun e or tu e'z; for it is wun ov the nyu ruulz that the furst dubl leter shal be the end ov its oen silabl and the second the begining ov a nyu wun. Indeed, the chield duz not eeven hav tu thinc about leterz at aul; and hiz miend, being entierli releevd from the meer mechanics ov speling, iz free tu consentrait its ful pouer upon the iedeaz which he wishez tu ecspres. Dutch teecherz ar enthuziastic, for their efishensi iz graitli increest. Thai ar enaibld tu impart a much graitier amount ov edyucaishon; for the tiem which wcz hithertu devoted tu the drujeri ov speling iz nou availabl for teeching the byutiz ov thair langwij tu thair pyupliz and for ilyumining thair miendz with the liet ov uther nolej."

While the Dutch schools in South Africa are becoming more efficient, the English schools are degenerating and that degeneration is specially marked in the teaching of English. The School Inspectors are particularly insistent in their complaints about bad spelling. This is a point of which spelling reformers would not be disposed to lay much stress. They might say the worse pupils spell the better we are pleased, as the obvious and easy remedy is the introduction of a national system of spelling by sound. A much more serious matter is the slovenly way in which English is pronounced by the boys and girls in the South African schools. In the opinion of competent educational experts English in South Africa is rapidly degenerating into an unintelligible lingo, and fears are

seriously entertained that within two or three generations English as it is spoken in South Africa will not be understood in England. In the interest of clear English speech many of the British colonists are strongly in favour of spelling reform. Alarm is also naturally felt at the progress which Dutch is making at the expense of English. It is true that while men in South Africa are, as a rule, less or more bilingual, English is taught as a lesson in all Dutch schools though Dutch is the medium of tuition, and in the English schools Dutch is taught as a lesson, English being the medium of tuition. For reasons that seem sufficiently obvious, South Africans of Dutch descent, as a rule speak English better than South Africans of British descent speak Dutch. The struggle between English and Dutch in South Africa is as to which shall be the predominating tongue in the homeland, as obviously both Boer and Briton will at least find it advantageous to use the best standard English that they can command in their communications with the outside world. English is the natural second language of the Boer, and feeling the advantage of simplified spelling in his own language he is strongly in favour of English spelling being reformed on similar lines so that his children may be able to acquire English more easily.

In Australia and in New Zealand there are similar complaints about the weakness of spelling in the schools and, about the sloven articulation of English, and a growing disposition is shown in favour of spelling reform as a step towards clearer English speech. A moderate measure of spelling reform has already secured the approval of some of the educational authorities in Australia, and it is expected that others will follow at no distant date.

Public opinion in all parts of Canada, where there is sufficient leisure to attend to such matters, is strongly in favour of spelling reform. One of the most recent indications of this is the formation of an influential branch of the Simplified Spelling Society in Ontario. Out West where towns are springing up with startling rapidity on the prairies the people all act on Principal Sir James Donaldson's advice to the British Association and spell as they please. Naturally they have no time to trouble with dictionaries or grammars, and they are quite satisfied with any spelling no matter how ugly it looks, if it has the one redeeming feature of being intelligible. I do not suggest that the men in their shirt sleeves, who are making the Wild West arable and fertile, are necessarily the best judges of delicate issues in old-world culture, but I think it perfectly safe to assume that they would almost to a man support the Oxford and Cambridge dons of the Simplified Spelling Society in their demand that English should be spelt by sound and not by sight.

The bearing of English spelling reform on the position of India is by far the greater part of the Imperial aspects of the problem. India is not a nation but a great aggregation of natives with hundreds of diverse languages and religions. The only point that all the races and religions represented in the hundreds of millions of our fellow-subjects in India have in common is that they, like us, are under the benign sway of His Majesty George V. It is obviously desirable that there should be some bond of union among these vast and diverse populations such as might be found in the universal use of English as a second language. Everywhere in India where the intelligence of the native races has been roused there is a keen and growing desire to

learn something of Western ways and Western culture, and the natural medium for conveying such knowledge is the English language. Natives of India are learning English in greatly increased numbers, but they find our system of spelling a serious obstacle. The educated natives of India are often most enthusiastic spelling reformers. One of them writing recently in a Madras paper says:—"Perhaps the reason why the average man loves the absurd English spelling is that it costs him many tears to acquire. No one likes to give up a hard-earned object, so the average man sticks to the absurd English spelling driven into him by raps on his knuckles and other parts of his body." This gentleman, who has lectured on English literature with acceptance in high-class schools and colleges in India, confesses that even now when writing English he has to keep the Concise Oxford Dictionary at his elbow, and has occasion to consult it frequently to make sure of the fashionable spelling. He also mentions that his son, who has quite an exceptional knowledge of English literature, is seriously handicapped by a constitutional inability to master the existing system of spelling English. He has in consequence been unable to pass his graduation examination. All this, however, hardly touches the main issue, which is that thousands of natives of India, who are exceedingly anxious to learn English are deterred from making the attempt by the difficulty of mastering our chaotic system of spelling, which acts as an impassable barrier to our otherwise easy language.

Any of your readers, who desire further information regarding the "Nyu Speling" can obtain a supply of spelling reform literature by writing to the Secretary of the

Simplified Spelling Society, 44, Great Russell Street, London, W. C.

THE MADRAS EDUCATIONAL RULES.

IT is more than four years since these rules were revised and educationists connected with schools and colleges are strongly of opinion that they should undergo further revision to meet the present needs. The modifications approved by Government from time to time and embodied in these Rules are the suggestions of a Committee composed of all the Inspecting officers and two or three of the Managers of Aided Institutions with the Director of Public Instruction as Chairman; and hence these changes are often one-sided. The Government in appointing such a Committee should take into consideration the most important fact that there are more institutions under private management than under Government or Local Boards. It would be well therefore if Managers of schools under private management could be invited to become members. But as this would be unwieldy, impracticable, and expensive, the Government before revising the Educational Rules should call upon these gentlemen to submit their views and suggestions to the Committee for their consideration; on this Committee institutions under private management should be strongly represented; there should be as many of these as there are Government officials. Either before or after such revision, preferably the latter, the Rules should be circulated among the leading Newspapers for criticism.

The rules for the recognition of schools are very stringent, no difference being made between aided and unaided schools. The

general conditions for aid are clearly laid down in the Grant-in-Aid Code and it is reasonable to expect such schools as receive a grant from Government to fulfil all the conditions. But why should Government enforce the same conditions on schools that do not receive or care to receive any pecuniary help from Government? The country needs more elementary schools that can afford to be independent of Government; why should such schools be hedged about by so many laws and regulations that press hard on them and retard their expansion? Elementary schools, teaching a vernacular language only or mainly, have no need to be recognised. But if in such schools English is taught side by side with a vernacular, they are doomed; Rule 7 says: "That students in unrecognised institutions will not, unless it is specially so ordered, be admitted to the privileges accorded to students of recognised institutions."

What these privileges are the rules do not enlighten us. We however gather from elsewhere that a student of an unrecognised school will not be permitted to appear for the Secondary School Leaving Certificate Public Examination and hence he is debarred from entering Government service. Pupils of Elementary Schools are of too low a standard to appear for this examination even if they are recognised, and where then comes "the privilege accorded to students of recognised institutions"? It is chiefly because elementary schools are hampered by restrictions laid down by Government that education has not spread among the masses. Missionary and other societies wish to open an elementary school in every village and teach boys up to the seventh standard; but they dare not do so, because of the unnecessary inter-

ference of the Inspecting officers and the conditions of recognition they are compelled to fulfil, viz.: (1) the teachers should be of proved ability or should hold trained teachers' certificates, and if the school has standards above the fourth, the headmaster should hold a Secondary Trained Teachers' Certificate; (2) there shall be at least one regular teacher for every fifty pupils on the rolls; (3) the building should be suitable; (4) only books approved by Government shall be used or even brought into the school; (5) the schools should maintain five kinds of registers in the prescribed form, which should be countersigned by every Inspecting officer that visits the school; (6) time-tables shall be drawn up in consultation with the Inspecting officer; (7) the school shall follow the scheme of studies issued by the Department from time to time.

What benefits does a school derive by fulfilling these conditions? Besides how difficult it is for a school to be recognised? The power vests in the Inspector who acts on the recommendation of the Sub-Assistant or the Supervisor of Schools. The Inspector has the power of refusing or withdrawing recognition on account of the employment in school of any teacher whom he considers unfit to be a teacher although the Manager may have found him fit and employed him. The Manager has to lay out a lot of money to fulfil the conditions of recognition; with limited means at his disposal he is seldom or never able to meet all this expenditure. A child should have full play for his limbs if he is to develop into manhood; but if he is shut up as Jack-in-the-box he will be stunted in growth. Similarly if elementary education is to be surrounded by so many unnecessary restrictions, it will never spread

among the masses. When the Government aids a school with a grant worthy of the name—and not with the paltry sum of Rs. 36 per year, and eight annas per year for each pupil,—then and then alone should the Government insist on the conditions being fulfilled, but not for mere purposes of recognition.

If, as we pointed out above, the rules for the recognition of Elementary Schools are very stringent, those for the recognition of Secondary Schools are still more so. Chapter III enumerates these conditions and we have nothing to say against the rules laid down in Rule 22, that a school before it is recognised should be conducted on approved methods, that there should be need for its existence and that it has funds to fall back upon when the income from fees falls short of the expenditure although the standard rate of fees may be levied and finally the managing body should consist of respectable and responsible men. Half these rules are evidently aimed at schools started by men known as Teacher-Managers, who like parasites subsist entirely on the fees paid by the scholars and cannot afford to lay out any portion of the fee-income on furniture, apparatus or building—schools that sprout up like so many mushrooms after a shower of rain, and draw away the pupils of well-conducted and long-established schools by the offer of reduced fees. The Department has done well in not countenancing the growth of such ephemeral schools.

While it is but right and proper that badly-equipped schools under Teacher-Managers should receive no encouragement from the Department, obstacles should not be thrown in the way of the expansion of Secondary education. It is not the one difficulty that Secondary Schools have to contend with.

The first and foremost is the rule that requires that "the Headmaster in every Secondary School and at least three other teachers in the case of schools containing all the three Forms IV, V, and VI should ordinarily hold Collegiate Trained Teachers' Certificates. The other teachers should ordinarily hold Trained Teachers' Certificates of not lower grade than Secondary." Although the severity of the rule is somewhat moderated by the use of the word "ordinarily," most managers find it impracticable to comply with the requirement. They may be willing to employ trained teachers at great cost, but from where are they to procure them when the supply is not equal to the demand? Not very long ago there were two colleges for manufacturing trained graduates; but the Rajahmundry College having been abolished, there is only one at present, and the admission into it is limited to a select few. It is true there is another at Trivandrum; but it need not be taken into consideration as it is solely maintained for training students of Travancore. Is it possible for one college to send forth enough of teachers and lecturers for the fourteen first and twenty-nine second-grade colleges and 275 high schools that belong to this Presidency? If on the average at least one trained graduate is required every year for each of these institutions to fill up vacancies, the college should annually produce as many as 300 trained graduates! Before the Department could strictly enforce the rule, it should be in a position to supply the colleges and schools with the required number of trained graduates. To do this more training colleges should be opened at important centres and more scholarships should be offered to induce graduates to join them. If this is found too expensive for

Government, managers of educational institutions should be compelled to pay for the support of the teachers they send for training, for this training is for the benefit of their own schools rather than of the Government.

As there is scarcity not only of trained graduates, but also of trained under-graduates, training schools should be opened in every district without any exception, where Matriculates and Intermediate candidates may be trained as teachers. "The other teachers," says the rule quoted above, "should ordinarily hold trained teachers' certificates of not lower grade than secondary." Besides the VI, V, and IV Forms, there are the III, II and I Forms, and IV, III, II, I, and Infant Classes, divided into three or more sections each. At least twenty-four trained teachers are required for each school. To provide these schools with trained teachers as required by the rule, there are at present only two training schools. We are aware there are in almost every district training schools for elementary teachers. The best plan would be to raise the standard of these schools and admit under-graduates and train them as teachers. As it would be highly expensive for Government to give these men scholarships while they are under training the best course would be for the Department to insist on the managers of the schools that send these men for training paying for their support. The headmasters and teachers of the elementary schools have very little work to do; they have to train only a handful of men. As the headmasters of these schools are mostly trained graduates they are quite capable of undertaking the training of under-graduates.

If the plan we have suggested is found to be too costly for Government to undertake,

the Department would do well to revert to the old custom of holding an examination for teachers in the method of teaching, a different one for each grade, to be conducted by a Board of Examiners appointed by the Department as is being done in the case of European Schools. Only those who have been teachers at least for two years in a recognised school should be permitted to appear for this examination, and those who succeed in passing the written test should undergo a practical test in teaching. In almost all schools there are still to be seen teachers who in days of old passed this test, and are doing well in their profession. They were not trained in "a Normal School," but they have gained a fair knowledge of their duties by a study of the latest books on education and by learning the latest method of teaching from those above them. Why may not the Department revive the old system, that has given the Madras Educational Department well-qualified teachers, who have shone in their profession?

In this connection we must protest strongly against certain privileges conceded to the members of the Society of Jesus and other Roman Catholic bodies, as enumerated in Rule 24 of the Educational Rules. Why these and no other Missionary bodies should be granted these privileges is beyond our comprehension. There are several Missionaries and lay workers of the Protestant persuasion who underwent training in Theological Colleges in England, America or Germany, now working in connection with schools and colleges in India. All European members of the Society of Jesus and even native members who are graduates or under-graduates, if they are certified by the Superior-General of the Mission to have completed their novitiate

and juniorate or to have completed the full course of study, may be ranked as if they held collegiate trained teachers' certificates and native members who are under-graduates and who are similarly certified to have completed only their novitiate and juniorate, may be ranked as if they had held Secondary Trained Teachers' Certificates. Why should the Government make such an invidious distinction between the Roman Catholic and Protestant Missionary bodies? There are a good number of Protestant Mission schools with missionaries as managers, who devote more than two hours a day to teaching secular subjects. But as they do not in all cases possess a University degree, they are not recognised as headmasters and hence they are obliged to employ an Indian graduate in that capacity. This adds greatly to the cost of the staff. As there are several Protestant missionaries, who have undergone training in the Theological Colleges of Canada, America, Australia or England, some of whom also possess University degrees, Government should recognise their certificates as equivalent to college trained certificates. This is what one naturally expects from an impartial Government.

The rules for the admission and withdrawal of pupils, Rules 43—58, require a thorough revision.

Rule 43 requires a verbal alteration. All such letters of application should be all such applications for this rule requires "an application and not a letter."

Rule 47 should be made more accurate in wording. In Rule 5, a distinction is drawn between *form* and *class*, the higher classes being designated *forms* and the lower *classes*. This difference is thoughtlessly ignored in this rule. As a Secondary school contains both forms and classes, the wording should be (C) the *form* or *class* in which he studied at

the time of leaving it, and (D) if he has completed the course in that *form* or *class*, whether he is qualified for promotion to a higher *form* or *class*. As it stands the rule is capable of misinterpretation, and the headmaster of a school has every right to admit pupils into any of the forms without the prescribed transfer certificates, and demand these only from pupils seeking admission into one of the Preparatory classes III & IV, Infant, I & II.

This rule seems to give full liberty to a headmaster to place a new pupil in the form or class for which he is found fit; and the insertion of Rule 47 in the Fifth edition bears out our contention:—"The headmaster of the school into which a pupil is admitted shall place him in the class for which he is found fit, subject to revision by the Inspector." Whereas in the Fourth edition there was Rule 39 to the effect that "the Headmaster of a school into which a pupil is admitted shall not place the pupil in a higher class or form during the term in which he is so admitted than the one he would have been in, if he had remained in the school he has left." The very fact that this rule has been omitted from the Fifth edition shows clearly that the headmaster of a Secondary school has every right to place a pupil seeking admission into his school into the class for which he is found fit irrespective of what may be stated in the transfer certificate *whether he is qualified for promotion to a higher class*. The Director of Public Instruction in one of his recent proceedings questions the right of a headmaster doing what is generally understood by the rule, and many a pupil who had been admitted into a higher form has had to be "degraded" although the headmaster might have found him fit for a higher one. As the deletion of Rule 39 from the Fourth edition and the insertion of Rule 47 in the new edition

have created some unpleasantness and misunderstanding between the Department and the heads of Secondary Schools, the sooner Rule 47 is cancelled the better will it be for all parties.

Rule 59 (a) requires that every pupil shall wear a clean and respectable dress, and, in all cases where good manners require it, a suitable covering for the head. What is a suitable covering for the head? What does the Department understand by good manners? What is considered good manners by some may be just the opposite in the estimation of others. Many a pupil may now be seen in schools with heads uncovered, with a tuft of hair, very often with a bush of hair. In the opinion of several schoolmasters this is considered good manners, on the score of its being an orthodox Hindu custom. But to the foreigner nothing can be more shocking or disgusting. Little boys very often put on a headcloth, obviously too heavy for their small heads. Grown-up Indians discard their national puggrees and don Europe-made felt caps and even hats and sola topees, in a few cases. But why compel an Indian school-boy to wear a covering for the head while at school? The head is as a rule covered to protect it from the heat of the sun when one goes out. Is there any necessity for a covering when one stays indoors? The continual wearing of a head-dress in a hot country like India tends only to heat the brain and gives one a headache. One who is learning or doing mental work should keep his head always cool. Besides it is not the national custom of the Hindu to cover his head; when he goes into a temple or worships his God he takes off his head-cloth as well as his shoes. It was when Mahomedan rule prevailed over India that the Hindu began to cover his head, lest he should be insulted by the sacred tuft being pulled by the Mahomedan. In a few schools at present

several boys who have their hair cropped in the European fashion are allowed to stay in the class-room without any covering for their head. This rule therefore had better be expunged and let every individual school-master do what is best under the varying circumstances.

Rule 67. Courses of instruction may be prescribed from time to time For All Secondary schools, etc. The rule does not say by whom this is to be done, although it is generally presumed that the Department is to do so. Because of this grave omission each individual Inspector of Schools prescribes his own course of studies, with the result there is no uniformity, each circle follows a different syllabus. A pupil transferred from one circle to another labours under great disadvantage in consequence. The subjects and the portions studied in one school are different from those in another. In the Fourth edition of the Educational Rules the courses were laid down, and in the Fifth edition published in 1906, the courses were omitted and a foot-note added that "the courses at present prescribed are those laid down in the Fourth edition of these Rules." Two years later the same rules were "reprinted embodying the modification approved by Government prior to June 1908," and in this, strange to say, neither the course of studies nor the foot-note referring to it appears. There should be a uniform course of studies prescribed for all schools in the Presidency, but the method of teaching the subjects should be left in the hands of headmasters.

D. LAZARUS.

SUPERVISION AND INSPECTION.*

Since the introduction of the new system in schools after Lord Curzon's Education Commission, Supervision and Inspection have become the all-absorbing questions in the educational field especially of this presidency. Headmasters have been relieved almost wholly from their teaching work and have been made to spend most of their time in supervising the work of the assistant-masters. The number of inspectors has been increased and the inspectors are asked to pay as many visits as possible to every school under their jurisdiction, visits, ordinary, surprise and otherwise and thus they are made to keep themselves in close touch with the actual working of every school. All this has been done in the best interest of education nobody can deny.

But when we look at the result of the actual working of this system for the past four or five years during which it has been in vogue, to the disappointment of all concerned, we find that instead of contributing to the soundness of education, as it was originally intended to do, it has done a great and palpable mischief by creating much heart-burning in the minds of assistant-masters which has added not a little to the discontent prevailing amongst school-masters on account of the insufficiency of pay, insecurity of office, anxiety for the future and many other ills from which they are already suffering.

But if we would sit calmly and carefully examine the real cause of this evil we should surely come to the conclusion that the

* A paper read by Mr. K Venkatarama Aiyar, Deputy Inspector of Schools, Pudukkottai, before the South Indian Teachers' Union Educational Conference held at Trichinopoly.

system itself is not at all to blame but only the methods adopted in working it out. The system by itself is good and the spirit of it is highly praise-worthy. But the illiberality with which the system is worked out by those responsible for the success of it and the wrong methods adopted by them owing to excessive zeal to exercise authority in some cases, want of responsibility in others and incompetency in some others are the main causes that contribute to the failure of this system.

Supervision:—

Under the head of supervision we have to consider three points among others: (1) Who should supervise? (2) Whom and what to supervise? and (3) How to supervise?

(1) *Who should supervise?*—The work of supervision is a very responsible task. It is very wrong to suppose that the supervising headmasters have very little work to do and thus can enjoy much leisure in addition to the enormous powers attached to their office. Of course some headmasters by virtue of the long service they have put in in their schools and proprietary right they own in them have made their office a pastime for their retiring age and of necessity such schools suffer from want of efficiency, and co-operation and willing work of the other members of the staff for causes too well-known to be mentioned here. For supervision to be effective and beneficial, the knowledge of the headmaster should be many-sided and up-to-date. He should be a scholar in English, specialist in one science and a little short of a specialist in all other subjects. He should ever be a student acquiring and assimilating all kinds of knowledge and acquainting himself with the new methods of teaching in addition to

his originality of thought. He should himself teach a portion of the most important work in the highest class of the school lest he should lose touch with teaching and thus fail to sympathise with the difficulties of teachers. He should be able to give model lessons for all classes in English and the subject in which he is a specialist and in all other subjects for all the lower classes especially of the primary department. He should be able to draw up syllabuses and set question papers for all subjects and classes in addition to his organising capacity. Above all he should be energetic, enthusiastic, a man of much tact, sturdy character, large heart, good discipline and winning manners. A defect there and a defect here in other respects can be made good easily if he possesses large sympathy and even-mindedness. He should never entrust any portion of his supervision work to any of his assistants however clever and able he might be, at least for sentimental objections if not for other ones. Of course to acquire all these is no easy task and the headmaster can never be called a leisured gentleman.

(2) *Whom and what to supervise?*—As regards organization and discipline the headmaster should supervise the whole school with the co-operation of his assistants. He should attend to the regularity and uniformity of instruction given in each class. Having employed competent and qualified men in the staff it is not desirable that the headmaster should supervise the method of teaching of the masters in the higher forms of the school where the men employed are the products of higher education and know the principles of teaching as much as the headmaster himself. A slight supervision is enough in the lower forms down to the first

where the headmaster has simply to guide the assistants a little as to the methods. But the place where a thorough supervision and guidance is necessary is the primary department and the first form where the pupils are yet children and require a treatment according to high psychological principles which the masters there are not expected to know much of. A sure test of a good headmaster's work is the sound condition of the primary department and the lower forms. But some altogether neglect the primary department owing to some reason or other and leave the supervision of it into the hands of their assistants thus creating more masters than one to the teachers of that department. It is heard that in some schools headmasters ask the monitors to keep a daily record of the portion done by the teachers in various subjects and submit the same to them once in a week or so. Need it be said then these acts would surely lower the assistant-masters in the eyes of boys and thus make their position really awkward? A competent and responsible headmaster would never allow such things to happen.

(3) *How to supervise* is our next question. The first and foremost duty of a headmaster is that of giving model lessons. He should at least give two model lessons in every month, one in the higher forms (of course in English or the subject in which he is a specialist) and another in the lower classes and thus place before the masters for their guidance what he considers to be the best method of teaching. This is perhaps nowhere done. The headmaster should select text-books for each subject for all classes and draw up syllabuses for the same with the assistance of class masters and the several boards

of studies. He should himself be invariably the chairman of each board conducting and directing its meetings. He should be carefully watching whether the resolutions adopted in the meetings are really workable and seeking remedies for defects noted. Drawing up of syllabuses and selection of text-books should not be the work of a day but should continue for the whole year. In some schools headmasters leave these entirely into the hands of the board constituted for each subject with a senior special assistant for that subject as chairman. Thus they do nothing in the matter beyond that of seeing the business done ill or well by these boards. If the scheme drawn by the boards proves a success in its actual working, then these would step in and claim for themselves every inch of the success. But however if any defect is pointed out by the inspecting officers or the scheme itself fails the responsibility of it will be shoved down to the devoted heads of the assistants forming the several boards. Thus that unless the headmasters take very active part, much more than the assistants themselves, in the actual framing of the syllabuses and the selection of text-books they would hopelessly make themselves unfit for supervision work. In some other schools again the headmasters go to the other extreme. In the framing of syllabuses and the selection of text-books they never take into confidence the class masters and the special assistants who are after all the actual persons to carry out the scheme to a successful issue.

The next important function of the headmaster is that of supervising the work of the assistant masters. As has been said already it is highly desirable, nay even necessary, that the headmasters do not interfere much with the actual teaching of the class by the masters in

the higher forms either by being present in the class or offering remarks as such. If however they find it necessary to pass any remarks about the teaching of any assistant master, these remarks should come as suggestions in the teachers' association, which every school should have in a general way without particularising the person concerned. No headmaster should enter remarks in his log book, as he calls it, for the sake of remarks. Of course it must be said that with many headmasters 'remarks about teachers' means only bad remarks and very rarely we hear of good remarks recorded in favour of teachers. So before recording any such bad remarks about any teacher, the headmaster should invariably have a talk over the matter with the teacher concerned and record his reasons along with his remarks if he still finds his opinion unchangeable. At any rate no headmaster should enter any remarks about a teacher behind his back. Such an action will only create bad blood and will have no corrective effect.

It should never be forgotten that children should be made to understand that there is no person greater than their own teacher, i.e., the *persona grata* of the teacher should never be allowed to suffer. So any remark passed by any headmaster about a teacher's work in the presence of boys or in the students' exercise books, as some do, would be highly detrimental to the best interests of organisation, discipline and instruction besides wounding the susceptibilities of the teacher concerned. His remarks should always be constructive and never sweeping or destructive.

Inspection:—

Inspectors often remark, rightly no doubt, that headmasters should have some import-

ant teaching work, some periods in a week; otherwise they would lose touch with teaching and will not be in a fit position to supervise the work of his assistants. It was remarked by one of the inspectors that a certain experienced and successful teacher was unable to adapt himself to the high school standard of teaching because he had all along been a professor in a college lecturing to F.A. and B.A. students. Can it not be said with equal force that inspectors before they take up their office should have had at least some years' teaching experience in a high school? The hall mark of Western University or some years' lecturing experience in a college cannot be a passport to an inspectorial seat. The inspector should be an all round man with a high teaching capacity and experience. If an incompetent headmaster spoils one school, an incompetent inspector ruins many.

Every inspector should give at least two model lessons in a year in every important centre. It is a pity that the inspection code does not make provision to compel inspectors to give model lessons. In the native state of Pudukkottai, though a small one, from the superintendent of schools down to the deputy inspector it is compulsory on every inspecting officer to give model lessons. Similarly it should be made compulsory even here. Then only the suggestions of the inspectors would be more practical than theoretical, more constructive than destructive, and more sympathetic and well thought out than otherwise.

It should also be noted here that there should be more of the inspection of boys than of the teachers.

No inspector can be too careful in writing remarks about teachers. Teachers have often

been sufferers on account of indiscreet remarks made by inspectors. Remarks of two inspectors about one and the same teacher regarding the teaching of the same lesson are conflicting. One calls his lesson dull and uninteresting and another calls his method intelligent and his lesson very interesting. Instances of this kind are many. Again one and the same inspector makes conflicting remarks about one and the same teacher. In the first inspection he remarks that a certain teacher is not up-to-date, his days are done and he must be replaced by a young, up-to-date L.T. and in the very next inspection the same inspector says about the same teacher that he has *vastly improved*. Surely he could not have become younger at any rate! Anyhow such uncharitable and random remarks are extremely harmful.

Above all they should follow to the very letter the spirit of the rules stipulated in the code for their behaviour towards managers, headmasters, assistant-masters, prominent citizens taking interest in education and parents. Failure to observe these rules on the part of inspectors has had the baneful effect of making the teachers become disappointed and hate their profession.

THE WORK IN THE CHEMICAL LABORATORY BY THE INTERMEDIATE STUDENTS.

PRACTICAL work in all sciences require greatest care and caution and power of observation and a sound knowledge of the theory of the experiments to be done in the Laboratory. Practical Chemistry, especially, it need not be reiterated, requires cleanliness. The students who work in the Laboratory should see every time, they begin their work, that all their apparatus are in perfect good order, and that they are very clean. They should be specially examined, lest the impurities adhering to them should give exactly contrary reactions and results to what ought to be obtained by theory. This is best done by cleaning them first with sodium carbonate in the tap water and then washing them in pure distilled water. The articles thus washed are to be dried with a clean towel or by inverting them in the stand for a considerably long time.

The things that are very essential to the student and which he cannot expect the College to supply him, are a neat towel which he will particularly take care to wash once a week, a clean penknife that can freely enter into the test-tubes and a match-box. It is always better if he is not allowed in the class without these things.

The students are to be prepared to begin straight their work as soon as they enter the class rather than look into the book and try to understand what they are to do. This will save a lot of time. This can be easily done by notifying some days before, the list of experiments which a set of students are to perform on a particular day. The students are thus enabled to be quite prepared for the class. Experiments must be recorded as they

are performed. Under no circumstances, recording is done after the experiment or in loose sheets of paper or in note-books other than the one intended for the purpose.

Students should provide themselves with two note-books—one a rough one, in which they record the experiments in the class when they are proceeding with the experiment and get it checked by the Lecturer and the other a fair one in which they copy from the rough note-book those experiments which were approved by the Lecturer.

Each student, after completing his work for that day, must produce the rough note-book in which he has taken notes during the experiment to the Lecturer and get his remarks and if he wants to repeat the same experiment, he must do it without looking into the notes which he has taken during the last time. He must be very careful in not committing the same blunder; this can be easily overcome by beginning the experiment afresh for a second time and by not thinking that he has done it already once.

If once an entry is made in the rough note-book, the proper way to correct it, in case, the student thinks that it is wrong, it is by drawing a horizontal line over it, and making the correct entry by its side and not by writing over the first entry itself. In this way, manipulation by the student, if any, can be detected and the Lecturer will also be in a position to tell him how the wrong result was first obtained.

Whenever any quantitative experiment is performed, utmost care must be taken both by the student and the lecturer. The student must show in the rough note-book how he arrived at a particular result; and all the calculations made with the help of the

mathematical tables in various steps, must find a place in the note-book. It is always advisable to resort to work with the mathematical tables rather than by actual multiplication and division.

On no account the students will be allowed to work as they like in the Laboratory and do experiments of their own unless the Lecturer gives permission to do so.

It is particularly requested that the Lecturer is ahead in his lectures of the Practical work by at least 3 or 4 days; so that students will find their practical work as a revision and also they will be able to perform the succeeding experiments in case the College is not able to supply each of them with the same apparatus required for a particular experiment. In such cases, they may be able to work in batches. For instance, let us suppose there are 30 students in the class and all of them are to prepare and study the properties of hydrogen bromide. Let us also assume that there are only 10 dropping funnels in the Laboratory available for the students. The class may be divided into sets of 10 students each. When one set is preparing hydrobromic acid the other sets may be engaged in proceeding to the next set of experiments.—The Reducing action of H Br and H I and Identification of the Halogen compounds and with the preparation and properties of sulphur and its compounds. This can be done only, if they have done the whole of the halogens and something in sulphur.

The work of each individual student must be checked separately, for which purpose a book with the following form printed in it is to be supplied to each student. The list of experiments in Col. 2 are so arranged that each set requires not more than 2 hours.

6	remarks and signature of the Lecturer.	
5	marks	
4	whether repeated	
3	begun on	
2	Description of a day's experiments with corresponding acts in the Book.	
1	No.	

The following is the scheme:—

No.	Description of the Experiments to be finished in 2 hours.	Corresponding articles in Smith and Hales.
1.	Bunsen Burner, Glass-working and Construction of a wash bottle ...	3, 4, 5
2.	Use of the Simple Balance and the measuring vessels ...	6, 7
3.	Qualitative study of the Chemical phenomena ...	8
4.	The Law of Definite Proportions ...	9
5.	Oxygen, Sources, Catalytic action ...	10, 11
6.	Preparation and Properties of Oxygen ...	12, 13
7.	Hydrogen, Interaction of metals and acids ...	16, 17
8.	Other methods of obtaining Hydrogen and its properties ...	18, 19
9.	Reduction by means of Hydrogen, Parity of water, Union with Oxides, Hydrates ...	20, 21, 22, 23

10.	Solution of gases in water and solution of liquids in liquids ...	24, 25
11.	Solution of solids in liquids, Properties of solutions. Vapour Pressure and Boiling water ...	26, 27
12.	Preparation and Properties of Chlorine ...	29, 30
13.	Preparation and Properties of Hydrogen Chloride ...	31, 32
14.	Composition of Carbon-di-oxide ...	34
15.	Composition of an oxide of a metal. [An extra day may be allowed if found necessary.]	35
16.	Equivalent weight of a metal by displacing Hydrogen ...	36
17.	The Law of Multiple Proportions ...	40
18.	Preparation and Properties of Bromine and Hydrogen Bromide.	42, 43, 44, 45
19.	Preparation and Properties of Iodide and Hydrogen Iodide ...	46, 47, 48
20.	Reducing action of Hydrogen Bromide and Hydrogen Iodide and Identification of the Halogen Compounds ...	52, 53
21.	Radicals and Double Decomposition, Chemical Equilibrium in Double Decomposition, Hypochlorous acid and Hypochlorites ...	54 to 57
22.	Chlorates—Perchlorates, and Peroxides ...	57, 58, 60
23.	Preparation of Nitrogen from air. Proportion by volume of Oxygen in air. Other components and Density of air ...	87, 88, 89
24.	Nitrogen Ammonia and Ammonium Hydroxide... ..	90, 91, 92
25.	Preparation of Nitric Acid, Nitric Oxide and Nitrogen Peroxide ...	93, 94, 95
26.	Principles involved in making Nitric Acid and Properties of Nitric Acid	96, 97
27.	Nitrous Oxide, Nitrates, Nitrites and Nitrous Acid and active (Nascent) state of Hydrogen ...	98, 99, 100, 101
28.	Phosphorus, Phosphine, Meta-phosphoric acid and Ortho-phosphoric acid ...	103, 104, 105
29.	Phosphates and Halides of Phosphorus ...	106, 107
30.	Sulphur, Hydrogen Sulphide, Properties of aqueous Hydrogen Sulphide	71, 72, 73
31.	Ionic Chemical changes. Formation of an inactive acid—Hydrolysis ...	74, 75, 76
32.	Sulphur di-oxide and molecular weight of Sulphur-di-oxide ...	77, 78
33.	Preparation of Sulphuric Acid, Properties of Sulphuric Acid, Sulphuric Acid as a diacidic acid, Sulphates	79, 80, 81, 82
34.	Properties of Sulphurous Acid, Sulphites, Thiosulphates, Reduction of Sulphur Compounds ...	83 to 86
35.	Charcoal, Carbon-di-oxide, Molecular weight of Carbon-di-oxide.	108, 109, 110
36.	Carbon-mon-oxide and Molecular weight of Carbon-mon-oxide ...	111, 112
37.	Boric acid and Borates ...	134, 135
38.	Ionic materials, relations of the molecular substances to its constituent Ionic substances, Precipitation on mixing Ionogens ...	62, 63, 64
39.	Bases and acids, Hydroxide ion and Hydrogen ion, indicators, Union and disunion of ions ...	65, 66
40.	Neutralization of slightly ionised and of insoluble substances, Ionic chemical changes. Displacement	67, 68, 69
41.	Potassium Hydroxide and Potassium Nitrate ...	126, 127
42.	Reactions of Potassium salts, Ammonium salts, Preparation of Sodium Carbonate by Solway process	129, 130, 131
43.	Purification of Sodium Chloride and reactions of sodium salts ...	132, 133
44.	Calcium oxide, Calcium hydroxide, Reactions of Calcium Salts, Reactions of Barium Salts ...	135—139
45.	Reactions of Copper and Silver	
46.	} Reactions of Magnesium, Zinc and Mercury.	
47.		
48.	} Reactions of Aluminium, Tin and Lead.	
49.		
50.	Reactions of Arsenic and Iron.	
51.	} Preparation and Properties of the Organic Compounds.	
52.		

J. R. S. MANYAM.

EDUCATION IN THE MAGAZINES.

(INDIAN)

Mass Education in Baroda.

The 'Library movement' in Baroda is taking some interesting turns, all aiming to bring the light of knowledge within the reach of all classes of people, high and low, young and old, male and female. In the Central Library located in the capital of the State, there is a ladies' section as well as a juvenile section, with hundreds of books likely to appeal to and instruct these particular classes of readers. Mr. Gould, the well-known lecturer and author of children's story books, visited Baroda and found ample evidences of up-to-date appreciation of the importance of literature to young citizenship. In a recent number of the 'Library Miscellany' issued from the Central Library, Mr. Gould gives some interesting hints on the organisation and popularisation of children's libraries by such means as story-telling, supply of illustrated books and periodicals, lantern lectures and publication of books of the type of Mr. Stead's Books for the Bairns, in the vernaculars. The children's library is distinctively an American invention. The importance of juvenile departments in connection with public libraries is being slowly but steadily appreciated in Great Britain too, though not to the same extent as in the new world. It redounds highly to the credit of Baroda that it should have been the first in India to realise the important part children's libraries play in stimulating the national intellect.

Not content with the success it has met with through the agency of books, the library department is thinking of pressing the Cinematograph too into its service. Realising the immense possibilities of the moving picture show as an educational instrument, the department has opened a visual instruction branch in connection with the Central Library Department, with a view to give the benefit of education not only to those who can read, but also, and especially, to those who are innocent of the art of reading. It appears that the Maharaja has sanctioned Rs. 10,000 for one year, by way of experiment, in connection with this novel branch of the literary activities. According to this scheme one superintendent and an operator with the necessary menial staff are to visit different places in the Raj and give free Cinematograph and Magic Lantern exhibitions. A new Edison Home Kinetoscope has also

been ordered. Some high officials of the State, following the example of the Maharaja, have placed their own home Cinematographs at the disposal of the department. Altogether, it would appear that the newly organised Library department is playing a splendid part in popular education in the true sense of the term.

Education among Sikhs.

At the Sikh Educational Conference lately held at Ambala, Diwan Lilaram Singh of Karachi, who was elected President, said:—

I need hardly point out that education does not mean mere literary training, but it is in the true sense of the word an equipment for life. No system of education can be complete which neglects the training of the heart and fails to awaken some of the noblest emotions of the soul:—Obedience and loyalty, spirit of sacrifice and devotion to the ever-living and loving God. What has made Sikhs a distinct race, faithful and valiant, devoted and fearless, but unshaken faith in God and the Gurus? It was this light of faith which our Guru Sabibs kindled in the hearts of men and turned them into heroes. It is this faith which is the essence of the Sikh religion and which is our duty to keep alive for the greatness and glory of our people. The first and foremost aim and object of our system of education should be the education of the heart, in the faith of our father untrammelled by the accretions which have gathered round it. If we bring up our children as true Sikhs, ready to sacrifice and suffer and continue a valorous conflict against all that is ignoble and wrong we shall have done our duty. It was for the propagation of this high ideal that our Great Guru Govind Singh Sahib and his sons suffered martyrdom. He has left in the hands of the Khalsa the salvation of the whole of India and we have met here now, and I hope every year we shall realize more clearly and work more steadfastly to keep the fire of true devotion alive, and implant in the heart of every Sikh child, male and female, the fear of God and love of man, a belief in human nature and the power of truth in conquering all difficulties. This education cannot be given in schools, and it is this education which we require for our children if we are to carry out the trust which our Guru Sahib placed in the Khalsa. This education can only be given by fathers, mothers, and brothers, living holy and devoted lives, as true Sikhs, and kindling the growing minds a blaze of devout aspiration for all that is noble and true.

(FOREIGN.)

Thackeray's "Esmond."

Mr. Austin Dobson writes in *Great Thoughts*:—

In Thackeray's work, the place of "The History of Henry Esmond, Esq., a Colonel in the service of Her Majesty Q. Anne, written by Himself"—lies midway between his four other principal books, "Vanity Fair," "Pendennis," "The Newcomes," and "The Virginians;" and its position serves, in a measure, to explain its origin. In 1848, after much tentative and miscellaneous production, of which the value had been but imperfectly appreciated, the author found his fame with the yellow numbers of "Vanity Fair." Two years later, adopting the same serial form, came "Pendennis." "Vanity Fair" had been the condensation of a life's experience; and excellent as "Pendennis" would have seemed from any inferior hand, its readers could not disguise from themselves that, though showing no falling off in other respects, it drew to some extent upon the old material. No one was readier than Thackeray to listen to a whisper of this kind, or more willing to believe that—as he afterwards told his friend Elwin concerning "The Newcomes"—"he had exhausted all the types of character with which he was familiar." Accordingly he began, for the time, to turn his thoughts in fresh directions; and in the year that followed the publication of "Pendennis," prepared and delivered in England and Scotland a series of "Lectures upon the English Humourists of the Eighteenth Century." With the success of these came the prompting for a new work of fiction—not to be contemporary, and not to be issued in parts. His studies for the "Humourists" had saturated him with the spirit of a time to which—witness his novelette of "Barry Lyndon"—he had always been attracted; and when Mr. George Smith called on him with a proposal that he should write a new story for £1,000, he was already well in hand with "Esmond"—an effort in which, if it were not possible to invent new puppets, it was at least possible to provide fresh costumes and a change of background.

To most readers it will be a matter of surprise, and it is certainly a noteworthy testimony to the author's powers, that this attempt to revive the language and atmosphere of a vanished era was in great part dictated. It has even been said that, in "Pendennis," it was all dictated; but this, it seems, is a mistake, for part of the manuscript was prepared by the author himself. As he warmed to his work, however, he often reverted to the method of oral composition which had always been most congenial to him, and which explains the easy collo-

quialism of his style. Much of the "copy" was taken down by Mr. Crowe in a first-floor bedroom of No. 16, Young Street, Kensington, the still-existent house where "Vanity Fair" had been written; at the Bedford Hotel in Covent Garden; at the round table in the Athenæum library, and elsewhere. "I write better anywhere than at home"—Thackeray told Elwin—"and I write less at home than anywhere." Sometimes author and scribe would betake themselves to the British Museum, to look up points in connection with Marlborough's battles, or to rummage Jacob Tonson's Gazettes for the official accounts of Wynndel and Oudenarde. The British Museum, indeed, was another of "Esmond's" birthplaces. By favour of Sir Antonio Panizzi, Thackeray and his assistant, surrounded by their authorities, were accommodated in one of the secluded galleries.

Professor Dowden.

The world of books has suffered a great loss in the death of Edward Dowden. Even in his undergraduate days, Dowden had made his mark as a critic, for an address which he delivered before the Dublin University Philosophical Society, and won favourable notice from Sainte-Beuve. He was appointed to the Chair of English Literature in Trinity College at the age of twenty-four, and eight years later he published 'Shakespeare: His mind and Art,' a work which many critics regard as the most valuable contribution made to Shakespearean commentary since Coleridge. His 'Life of Shelley,' published in 1836, was the cause of an ironical essay by Matthew Arnold, but the book is still acknowledged to be the standard biography of Shelley. Dowden himself thought more highly of a small volume on 'Southey' which he contributed to the 'English Men of Letters' Series.

Apart from his works on Shakespeare and Shelley, Dowden's contributions to critical literature were wide in range and in sympathy. He wrote notable essays on French, German, and Italian authors and thinkers, and he was almost the first of our critics—anticipating John Addington Symonds—to recognise Walt Whitman. 'The good gray poet' was deeply moved by this admiration from across the Atlantic, and the frequent references in his letters prove the high value which he set on Dowden's appreciation. Few critics showed greater skill than Dowden in presenting the essence of an author's spirits by means of a mosaic of quotations embedded in a running interpretative commentary, or in summing up the salient characteristics of an epoch. His essays on 'The Transcendental Movement and

Literature' and 'The Scientific Movement and Literature,' and his book, 'The French Revolution and English Literature,' are examples of this latter faculty. His chief admiration in English literature after Shakespeare was probably for Wordsworth, and in French literature for Montaigne.

Dowden's personality was an extremely engaging one. His dignified and rather formal bearing, the deep, musical tones of his voice, his humour, and the grave courtesy with which he would defer to the greenest undergraduate were some of the personal traits which won and held the affection of succeeding generations of his students. No man ever made less of a parade of scholarship, and none was more ready to place his time and his books at the disposal of any literary inquirer. Professor Dowden's health had been a cause for concern to his friends for some time—a few years ago he said in conversation with a smile that he 'had no blood-thirsty clinging to life'—but his end on Thursday was quite unexpected. His country and his university will both mourn his loss. Readers of the *Nation* will also have cause to regret that his occasional contributions can no more appear in our pages.—*The Nation*.

European Predominance.

At the third quinquennial International Congress of Historical Studies in London, Mr. Bryce, the President, spoke on the subject of "European Predominance in National Development." He said:—

There was one other aspect of the present age of the world that had a profound and novel meaning for the historian. The world was becoming one in an altogether new sense. More than four centuries ago the discovery of America marked the first step in the process by which the European races had now gained dominion over nearly the whole of the earth. The last great step in that process was the partition of Africa between three European powers a little more than twenty years ago. Now, almost every part of the earth's surface, except the territories of China and Japan, was either owned or controlled by five or six European races. Eight Great Powers swayed the political destinies of the globe, and there were only two other countries that could be thought of as likely to enter after a while into the rank of Great Powers. Similarly a few European tongues had overspread all the continents, except Asia, and even there it seemed probable that those few European tongues would before long be learnt and used by the educated classes in such wise as to bring those classes into touch with European ideas. It was likely

that by A.D. 2000 more than nine-tenths of the human race would be speaking less than twenty languages. Already there were practically only four great religions in the world. Within a century the minor religions might have gone; and possibly only three great faiths would remain, with such accelerated swiftness did change now move. Those things which were already strong were growing stronger; those already weak grew weaker and were ready to vanish away. Thus, as the earth had been narrowed through the new forces science had placed at their disposal, and as the larger human groups absorbed or assimilated the smaller, the movements of politics, of economics, and of thought in each of its regions became more closely interwoven with those of every other. Whatever happened in any part of the globe had now a significance for every other part. Industrial disputes were felt more widely over its surface than those earthquakes in Java which the seismograph recorded at Washington. The money markets were affected simultaneously. Each Great Power, were it European, Asiatic or American, was in close contact with all the others; it was allied or friendly, (or possibly not too friendly) with some one or more of the others. The great wave that swung round the world made its last ripples felt in the world's remotest corner. In regions till lately unexplored, in the sombre depths of African or Brazilian forests, or on the oases that lay scattered along the dreary deserts of Mongolia, the fortunes of the native tribes were affected by what passed in European capitals. Even in the one continent which stood almost wholly outside the web of international relations, South America, Finance reached where politics did not reach. Finance, even more than politics, had now made the world one community, and finance was more closely interwoven with politics than ever before. The historian, who in the days of Thucydides needed to look no further than to Susa on the east and Carthage on the west, had now to extend his vision to take in the whole earth, and would not be able to write the annals of any one country without keeping his eye fixed on the Sovereign and Parliaments of every other. Nor was there a more striking illustration of the influence now exerted by the European races upon all others than was presented in the fact that in every country, except those which were ruled as subject dominions by some people of European stock there now existed some kind of form (even if little more than a form) of representative government. World history was tending to become one history, the history no longer of many different races of mankind occasionally affecting one another's fortunes, but the history of mankind as a whole, the

fortunes of each branch henceforth bound up with those of the others. In these conditions, the historian of the future would need an amplitude of conception and a power of grouping his figures like that of Tintoretto or Michael Angelo, if he were to handle so vast a canvas.

The Evolution of Indian History.

At the meeting of the Oriental Congress of Historical Studies at University College on April 4th, Sir William Lee Warner read a paper on "The Evolution of Indian History," in which he said that the stages or periods through which the Indian peoples had passed in pursuit of a reasonable degree of freedom were marked by the ascendancy of three principles—first the Hindoo priestcraft; second, the sword of Islam; and third, universal British law. The first period, 1500 B.C. to 1206 A.D., spanned the transition from a pastoral Indo-Aryan community enjoying personal liberty to a medley of separate despotisms, in which the priestly caste monopolised temporal and spiritual power. The Brahmins, asserting ascendancy over caste and tribes, moulded the social framework, and used religion as an engine of statecraft. A Buddhist struggle for freedom succeeded 250 B.C. to 350 A.D., declined 750 A.D., and finally failed. Although the traditional basis of four castes was modified, the priests, by conferring a divine status on Rajpoot kings, regained power. India without political unity, defenceless against invasion fell into helpless apathy and disorder, deadening the instinct of freedom. The Mahomedans A.D. 1206-1788, bringing new elements of freedom, broke the sacerdotal ascendancy in the north, and distributed over India principalities opposed to its pretensions. Brahminism, however, won fresh successes at Poona and in the south, again provoking Lingayats and other sections to throw off the fetters of caste. Akbar gave the empire an object-lesson in religious toleration, and showed that the defence of Indian frontiers required control of the Afghan passes and imperial unity. The attempt failed, but rekindled the desire for freedom. The British secured the public peace and defence of India essential for the diffusion of liberty, abolished by legislation, slavery, sati, and caste disabilities, otherwise securing free play for the silent moral forces of Indo-European civilisation. After the Mutiny, an open conflict between the two civilisations, progress towards freedom was resumed; but, under the State's guarantee of religious neutrality, slow headway against the enslaving tendencies of centuries must be expected.

Ben Jonson.

Mr. George Freeman Irwin writes in *Great Thoughts*:—

In their endeavours to mark as clearly as possible every shade of distinction among poets critics have been led to use many images of singular force and propriety. Among these is one, singularly felicitous, which has more than once been employed, to indicate that difference so perceptible yet so difficult of explication between the work of the very greatest artists, and those who fall short of the greatest by the want of some indefinable touch that would have given their work the different air and happier effect, which marks the master hand. The godlike mastery of the former has been expressed by the word Olympian; and the unceasing and mighty efforts of the latter to attain the same height by the word Titanic. Swinburne in approaching the study of Ben Jonson used these words, and with his own peculiar mastery over language adorned the phrases with his own enlargement of them. He classes all poets as either "Gods of harmony and creation" or "giants of energy and invention." Jonson, wanting as he was in the mastery of the Olympian, stands in the front rank among the Titans.

His masques and dramas are marked by consistent effort of the highest kind, rewarded frequently by the production of work which lies upon the borderland of the Olympian. They possess all those qualities of "energy and invention" which are essential to the highest forms of artistic work, but they are wanting in that harmony which belongs alone to the creations of the highest. It is thus that he stands just below Shakespeare, and although many passages of his may be quoted to show that he excelled him in particular points, yet we must never be led so far astray as to place him above the "myriad-minded" master, for with all Jonson's massive power he had neither the range nor the magic touch which speak the divine in Shakespeare.

Jonson's consistency throughout the whole course of his work is so wonderful and so admirable—even beyond that of Shakespeare—that it deserves a high reward; and the words of Swinburne are no idle praise: "There is something heroic and magnificent in his lifelong dedication of all his gifts and all his powers to the service of the art, he had elected as the business of all his life, and the aim of all his aspiration."

The characteristic of the Titans is effort, and effort is one of the keynotes of Jonson's work,

There are no scholars by intuition, and years of hard study are required before such erudition as Jonson's works exhibit could be attained.

Like Milton, he astonishes us with the range of his studies, and his capacity for work. He was the possessor of a remarkable library of classical works as Selden testifies, and was deeply read in the European literature of many periods. This learning he thought it his duty to use in the composition of his dramas so that we have them studded with gems from the classics, so much so indeed that some of his contemporaries accused him of plagiarism and insinuated that Jonson's chief merit was that he was an excellent translator. But we have a remarkable instance of Jonson's capacity for arduous labours. When he was contemplating a drama on the subject of alchemy, he made a diligent study of all the details of the theories and methods of the science, till he was in a position to introduce with perfect ease its technicalities into his play—a feat which to a less able man would have been well-nigh impossible for, as a perusal of the play "The Alchemist" will show, the students of alchemy were not sparing in the manufacture of abstruse terms.

Jonson's study and his introduction of the results of his study into his dramas is a trait of that conscientiousness which marked all his literary undertakings. Whatever he undertook he immediately set about with a conscientious effort to make the best of it, and to leave nothing undone which would make for the success of his work. With such a command of all the realms of classical thought, he found it impossible in setting about the composition of a masque or drama however trivial to omit the introduction of some adornment from these treasures. It is thus that we find everything from his hand *substantial*. His poetry aims at that, and whatever may be wanting of ethereal fragrances and the finer qualities of delicate art, we may be sure of finding a robust substantiality.

The same conscientiousness is observable in the construction of his plots, in which point he presents such a marked contrast to Shakespeare. Shakespeare never constructed a plot for himself; he was quite content to take a well-known story and adopt the salient features of it for his own purpose. Jonson's plots on the other hand are his own, and they display a skill and ingenuity only surpassed by a few of the very greatest comedy writers of ancient or modern times. The plot of "The Alchemist" was selected by Coleridge as one of the three best in any literature.

It may be that Jonson's very greatness as a

scholar was the cause of his failure as the founder of a school of dramatic art. More than one critic has pointed out his attitude towards his characters. We can imagine Shakespeare as lovingly dwelling upon his creations. We can imagine him loving Juliet or Miranda, pitying Cordelia, feeling with Hamlet or Lear in their distresses, and tasting the bitterness and hatred of Timon. There is no aloofness from his characters. He is one with them, as Dickens was with his, rejoicing in their success and saddened at their failure. With Jonson this is all different. His habits as a student had led him to regard his characters as subjects for the exercise of his intellectual faculties, as something a little superior to puppets, who were to go through various actions, and whose emotional nature was to be taken into consideration in the same intellectual way, as forming a part of the motive power of the play. He stood aloof from his creations and contemplated them from afar. The result is, as has been pointed out, a want of "vital impulse" in his characters. And they are mere examples of those enigmatical humours of which he treats in so many of his plays from "Every Man in His Humour" and "Every Man out of His Humour" down to almost his latest play "The Magnetic Lady" or "The Humours Reconciled."

THE UNIVERSITIES.

MADRAS UNIVERSITY.

Nominations for Election.

The following members of the Syndicate have vacated their seats:—Mr. R. L. Jones, M.A., the Rev. G. Pittendrigh, M.A., the Rev. E. M. Macphail, M.A., B.E. An election of three members of the Syndicate will be held forthwith. At least two members to be elected should be Heads of, or Professors in Colleges affiliated to the University of Madras. The Syndicate has nominated the Rev. W. Skinner, M.A., D.D., the Rev. A. Moffat, M.A., B.Sc., F.R.S.E., and the Hon'ble Mr. T. V. Seshagiri Aiyar, B.A., B.L., for election.

M. A. Degree Examination, 1913.

BRANCH VI (ENGLISH).

The following are the names of successful candidates:—

Annaji Rao, Periyapatam S. (Kanarese) II class, Gnanaprakasam, D. (Tamil) III class, Kesava Rao, Vadd (Telugu) II class, Krishna murti, R. (Sanskrit) I class, Madhava Kuruç Koyippillil (Malayalam) II class, Ramachand-

Rao, Gajavelli (Telugu) III class, Sitaraman, P. A. (Sanskrit) II class, Subrahmanyam, K. (Tamil) II class, Venkataraman, Valavanur R. (Telugu) II class, Yegnanarayana Aiyar, Stanukrishna K. (Sanskrit) II class.

Engineering Examinations

The following are the names of successful candidates:—

FIRST EXAMINATION IN ENGINEERING.

Balraj, S. Joseph; Durairajan, N.; Goindarajan, N.; Narasimha Aiyar, M. Kolathi; Ramaiya, Maddgiri; Srinivasa Rao, Udipi; Sriramulu Naidu, Bandi; Subrahmaniyam S. M.; Sundaram P. S.; Venkatasuryanarayana, Taugirala.

B. E. DEGREE (CIVIL BRANCH).

Krishnaswami G. R.; Lakshminarasaiya, Narasipur; Lakshminarayan, Akkanapregada; Madhava Chari R.; Nageswara Aiyar, Arumbakkam; Ratnaswami Samuel W.; Srinivasan T. R.; Thomas Kallarakal C.

B. E. DEGREE (MECHANICAL BRANCH).

Venkatakrishnan L., and Vengata Sabbachari, Kunigal R.

CALCUTTA UNIVERSITY.

Re-institution of L. M. S. Examination.

A meeting of the Senate of the Calcutta University was held at the Senate House, College Square, recently. The Hon. Sir Ashutosh Mookerjee, Vice-Chancellor, presided, and there was a large number of Fellows present.

The Vice-Chancellor, in opening the proceedings, said, that with regard to the re-institution of the L. M. S. Examination there were seventeen recommendations before them from the Syndicate. Those recommendations were based generally upon the recommendation made to them by the Faculty of Medicine, although the Faculty itself was on certain points divided in their opinion. Any alterations in the medical regulations of the University was primarily a matter for experts. If the experts were agreed in their opinion, the chances were the laymen would have had to say nothing. But the doctors were divided in their opinion and the result was that the laymen were called upon to decide the matter. They should have, therefore, principally to discuss the exposition given by the experts themselves. There were two questions really which required consideration, namely—(1)

Whether the regulations for the several examinations for the Degree of Bachelor of Medicine require amendment; and (2) whether it was necessary to institute an examination or examinations of a lower standard.

Col. Deare, Dean of the Faculty of Medicine, moved that the L. M. S. examination be re-instituted and that the draft regulations now before the Senate be adopted for the purpose. Major Rogers seconded, and Rai Babadur Dr. Chuni Lal Bose supported the motion. After a long discussion the motion was put to vote and carried.

ALLAHABAD UNIVERSITY.

Kayastha Pathshala

We learn with pleasure that an application has been made to the University for the affiliation of the Kayastha Pathshala up to the B. A. standard, and it is hoped and believed that the University will accord the necessary sanction and that the opening of B. A. classes in the Pathshala will soon be an accomplished fact. This is very good news and the President and Trustees of the Pathshala as well as the community deserves to be congratulated on the prospect.

LONDON UNIVERSITY.

Reorganisation Scheme.

Far-reaching proposals are embodied in the final report, issued recently, of the Royal Commission on University Education in London. Their recommendations involve a thorough reorganisation of the University of London, and will necessitate an addition to its income of £99,000 a year, says the "Daily Telegraph." The Commissioners have decisively rejected the suggestions that there should be a separate technological University in London, having as its centre the Imperial College. They condemn the establishment of such an institution as unjust and unbusiness-like.

External Students.

The University of London holds a unique position. In addition to exercising the ordinary functions of a University, it grants degrees on the result of examination alone to students over whose instruction it has no control. The Commissioners, in their Report, argue forcibly in favour of limiting the degrees to those students who are known to have come within the influence of a course of University teaching; but the force of opinion was too strong for them. Though they appeared to have the will to recommend the

abolition of the system of external degrees, they have recognized the inexpediency of proposing so drastic a change. It is often a far cry from the Report of a Royal Commission to an Act of Parliament, but there is more chance of legislation now that the rights of the external student are not challenged. It seems to be thought sometimes that an external student is a man who crams up unilluminating text-books apart from the vitalizing force of oral teaching. This need not be so. The external student merely claims to get his teaching where he chooses, not necessarily from the Professors of the University which examines him.—*The Educational Times*.

CAMBRIDGE UNIVERSITY.

A Donation.

The Council of the Senate of Cambridge University have received through Professor Newall from a donor who desires to be anonymous, an offer of £10,000 towards the permanent endowment of a chair of Astro-Physics at Cambridge University provided the University is willing to supplement this sum by an endowment to raise the emoluments of the chair to £800 a year. The Council recommended that the offer can be accepted. The chair of Astro-Physics will take the place of the Plumian Professorship of Astronomy, vacant by the death of Sir George Darwin.

UNIVERSITY OF PARIS.

The number of students in the University of Paris alone, in 1910, was 17,500, out of which 3,170 were foreigners,—for the new University of Paris, in its short existence, has already regained the renown which it enjoyed in Europe in the Middle Ages. Those students were distributed as follows:—

In the Faculty of Law: 7,688, 900 being foreigners.

" Medicine:	4,080, 765	"
" Letters:	3,115, 1,028	"
" Sciences:	1,843, 461	"
School of Pharmacy,	784, 18	"

The University of Paris does not make any distinction between the sexes. Its medal shows a central figure personifying science; on the right side a young man in his laboratory costume; on the left a young woman. There are women doctors, women barristers; there are 'princesses of science,' as they are called: the University of Paris has appointed to one of its chairs Mme. Curie. In 1909 there were 1320 women students, out of which 829 were foreigners. According to the French tradition, all the lectures in the University of Paris are free and open to the

public and there are always some lovers of learning and beautiful discourses who, although they are not students, come to hear lectures on their favourite subjects or by their favourite professors, especially in the Faculty of Letters.

TECHNICAL EDUCATION.

TYPEWRITER TOPICS.

THE L. C. SMITH & BROS. TYPEWRITER.

There is such a variety of typewriting machines that nothing but a careful study of the details of manufacture can help the user to make his selection. A new departure has been inaugurated in applying ball bearings successfully to typewriter construction. In the machine manufactured by Messrs. L. C. Smith & Bros. every typebar has 15 balls (Fig. 1) each one tested by scale to the ten-thousandth of an inch. It must be noted that balls for the typebar should not be less than 622/10000 nor more than 628/10000 of an inch in diameter. This exactness and accuracy justifies the assertion that ball bearings serve the same purpose as jewels in a watch. The above company own a ball-making plant in order to turn out perfect steel balls.

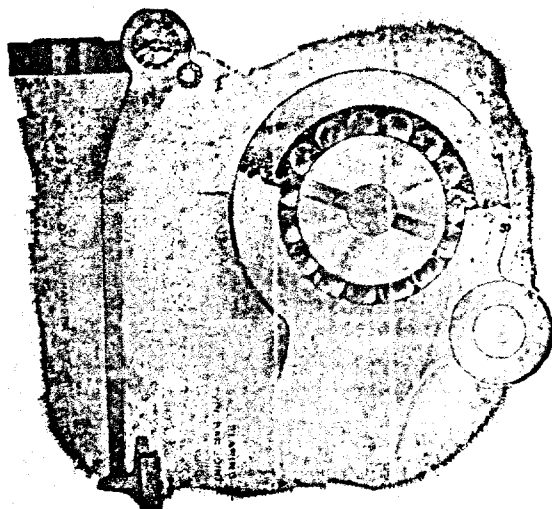


Fig. 1.

In order to transform rough rods of special steel into these polished, hardened, and perfect spheres, ponderous machinery and a series of operations are required. When completed, these balls are worth nearly \$125 00 a pint. The ball bearings do not wear loose and are capable of closer adjustment than the ordinary frictional bearings;

consequently they retain their adjustment for a much longer period. In typewriting machines three mechanical features determine the character of the work: at the printing point, namely, the typebars, the carriage, and the capital shift. All these operate in the L. C. Smith machine on closely adjusted ball bearings and produce perfect workmanship.

Another important improvement in the latest model is the geared ball retainer, while the cylinder or platen, against which the paper rests and receives the type impact, is a part of the carriage. At every finger stroke on the key, the carriage advances and carries the paper along the width of a single letter or character, exposing a blank space to receive the impression. When the type strikes the paper the carriage must be perfectly rigid and still as otherwise, the letter is blurred or wrongly spaced. This firmness is secured by the ball bearings which allow close adjustment. (Fig. 2)

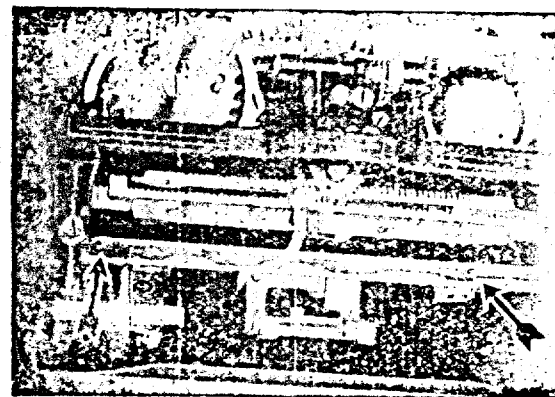


Fig. 2.

shows how the steel balls are held in place by the geared ball retainer.

(To be continued.)

A SCHOLARSHIP.

We are glad to hear that the Government of H. H. the Rajah of Cochin have granted a scholarship to Mr. Peter D'Rozario, a promising young man of Cochin, to proceed to England to prosecute his studies in Mechanical and Electrical Engineering.

THE PROPOSED COLLEGE OF COMMERCE.

The Bombay Government Gazette publishes the scheme for the proposed College of Commerce as approved by the Secretary of State. The teaching

staff consists of one Principal, salary Rs. 1,125, two Professors on Rs. 875 each, and two lecturers on Rs. 300 to 500 each. The first two will be recruited from England and the third will be held by qualified Indians. The College will be under the Government control and affiliated to the Bombay University. Thirteen members constitute the Board of Management representing Government, private donors and commercial bodies. The Secretary of State in approving the proposals observed that this was a practical scheme well calculated to meet the demand which may be expected to make itself felt in India for the services of trained actuaries and auditors, more especially in view of the recent legislation, controlling Life Insurance Companies and Provident Societies.

TECHNICAL EDUCATION IN MYSORE.

The Mysore Government have approved of a scheme for the improvement of industrial and technical education in the State. The main features of the scheme will be of general interest at present when so much attention is being paid to this branch of education. The Government of Mysore appointed a Committee in October 1910 with instructions to formulate a definite policy and plan of work for developing industrial education within the State. The Committee now suggests that a college of technology should be started in Bangalore to give instruction in higher engineering and the industrial arts. For secondary education, it proposes the establishment of a model school of technology in Mysore. The Committee suggests that the existing industrial schools in the State should be improved and developed, as far as circumstances permit, for the improvement of elementary industrial education. The Committee has drawn up model curricula for all classes of institutions which may be started in the future and has given an approximate estimate of the cost of their maintenance. In places, where the cost of starting such model institutions may be prohibitive, it recommends the opening of special morning or evening classes. The two large institutions to be established at Bangalore and Mysore will be entirely Government institutions. The total annual cost of the College at Bangalore is estimated to be Rs. 75,000, while a capital outlay of Rs. 3 lakhs will be required for initial expenses. The technical institute in Mysore will involve a total capital expenditure of Rs. 50,000 and an annual recurring expenditure of about Rs. 73,000. The improvements in the existing industrials are expected to cost a net additional sum of Rs. 25,000 per annum. The Committee recommends the institu-

tion of two scholarships of £300 each to be granted annually from the state funds to students offering to study any one of a specified number of important industries. The selected students will be expected to study principally the practical and commercial details that may be of service to them in starting the industry in which they have qualified themselves on their return to the State. In addition to these two scholarships, the committee recommends that two local officers should be constantly placed on deputation in foreign countries, each for a period of not less than six months at a time. This recommendation is in view of the great importance which the Committee attaches to the necessity of the State being in touch with the latest developments in arts and industries in other parts of the world. This arrangement will cost the State annually about Rs. 30,000 for salaries, passage money and allowances. A special officer will be appointed to control industrial education on a salary of about Rs. 1,000 per month. It is wisely provided that no officer can be in charge of this department for more than three years at a time, unless he has special aptitude for the work, as evidenced by the results achieved. The total cost of this scheme will be Rs. 5 lakhs in capital outlay and Rs. 3 lakhs per annum for recurring expenditure.—*The Times of India*.

A RAPID METHOD OF SHORTHAND WRITING.

Many labour-saving appliances have been introduced during the past few years, and it is but natural that time-saving inventions should apply as forcibly to intellectual as mechanical pursuits. This is particularly the case with regard to shorthand. For many years all simple systems were viewed with suspicion, because the public had conceived a deep-rooted belief that a shorthand system to be good, must of necessity be difficult and require years of patient study to acquire any degree of practical proficiency. Thanks, however, to the marvellously successful "New Rapid" Instruction Courses, invented by Mr. F. Harvey Hatchard, the Principal of Holborn Hall College, Gray's Inn Road, London, W. C., it is now possible to learn shorthand in four weeks. The system adopted at the college is the well-known Sloan-Duployan method, considerably improved by the addition of many valuable principles of abbreviation, guaranteed to increase the speed of the student by at least fifty per cent., and quickly leading to newspaper and parliamentary reporting. The claim "Legible as Print" when applied to shorthand may make some people who remember their own ex-

periences with other systems of phonography smile, and regard the claim with incredulity, but nevertheless truth is stranger than fiction, and it is a fact that the students at Holborn Hall, after only one month's study, are able to take down business letters quickly and accurately and read them without the slightest hesitation or mistake. It is little wonder, then, that the college is crowded from morning till night with enthusiastic pupils eager to create new records in the world of shorthand, or to qualify in book-keeping, typewriting or other subjects necessary for a business career. It is interesting to note that a Situation Bureau has now been opened and everyday requests come to hand from business firms requiring highly qualified assistants to whom good salaries are offered. The full secretarial course is deservedly popular, as it can be completed in two to three months, and is certain to result in the student rapidly attaining an enviable position in the world of commerce. For those students who are unable to attend at the school the instruction is carried out by means of admirably arranged postal lessons, despatched every week to almost every country of the globe. The success of Holborn Hall College has been meteoric, but it is due to merit, and merit alone. It may be said, in conclusion, that students already possessing a knowledge of another system need not hesitate to take up the "New Rapid," as their progress will be accelerated by the experience already gained. One Holborn Hall student is now Secretary to the Duke of Grafton.

Reviews and Notices.

HIGH ROADS OF LITERATURE IN THREE BOOKS.
(THOMAS NELSON & SONS, LONDON.) 10d., 1s., 1s. 3d.

These three books form a series of excellent handbooks for use in the lower classes of our Secondary schools. They consist of stories simply told from all the literatures of the world and illustrated by numerous pictures, several of which are coloured, full-paged ones reproduced from the paintings of the great artists. Here and there the books are interspersed with instructive lessons, very simply and effectively given, on matters like "How a book is made." The get-up of the books is very good indeed and the books would be very much valued in every way in the hands of young school boys, say, of the 1st, 2nd and 3rd Forms.

A BOOK OF HISTORICAL POETRY. (EDWARD ARNOLD, LONDON.) 8d.

Historical incidents have very often inspired the poets and this small book is a collection of the more popular of such English poetical pieces relating to incidents in English history from the time of the Roman invasion to the *Charge of the Light Brigade*. History when told in this manner can certainly impress itself on the young student's mind in a very effective and graphic manner though the poet cannot often be trusted for accuracy of detail. This book ought to be a valuable help in the imparting of history to impressionable minds.

OXFORD INDUSTRIAL READERS: (1) A VISIT TO A COTTON MILL; (2) A DAY IN A SHIPYARD; (3) WITH LEATHER WORKERS; (4) A VISIT TO A WOOLLEN MILL. 8d. each.

The above series edited by Arthur O. Cooke promises to be invaluable for a clean grasp by young boys of English industry. Each book gives a complete idea of the processes and labour involved in finishing to perfection the thing or material which the finished stage is so highly helpful to us. For instance, in 'a visit to a cotton mill' we find an introductory description of the cotton plant itself and a short account of the raw material being made ready into thread. The process of carding, warping, spinning, winding, sizing, and weaving are finely described as well as the crossing and intersection of the threads of the warp by those of woof. 'A day in a shipyard' is very instructive and ought to be still more so for Indian boys especially who are ignorant of everything pertaining to that factor which has contributed in the greatest degree to the building-up of the glory and prosperity of the empire. The growth of a 'Liner' from a mass of steel and timber to a perfected steamer with great impetus must present us a very fascinating picture of study and cannot but infuse into our minds an ardent desire to advance our knowledge of ship-building and navigation. The two other volumes which deal respectively with leather working, and wool weaving, though not so fascinating as the former two, are still useful. The process described in wool weaving is very nearly the same as that in cotton though the preliminary processes are quite different. On the whole, the series amply illustrated with coloured pictures, with illustrative diagrams, and written in simple style, deserves an earnest attention from teachers.

XIX

LESSONS IN THE HISTORY OF INDIA FOR THE HIGHER CLASSES: Re. 1. LESSONS IN THE HISTORY OF INDIA FOR THE LOWER CLASSES: 12s. 12. (MESSRS. MACMILLAN & CO.)

There are two editions of this book, one intended for use by teachers (Model Lessons) in which the chief aim is to serve as a guide in the method of imparting knowledge to boys, and the other for the pupils (the Lessons) in which the hints and suggestions to teachers and the questions have been omitted. In the former, the main object is to so instruct the teachers that they may actively participate in each lesson by answering questions and repeating in their own words what they have read. The frequent insistence on a concurrent study of political Geography and the constant attention given to the study of cause and effect of the chief events are noteworthy features of this book, while what is known as the 'Lives of time' which are eminently useful for preserving in the mind of the boy continuity of the narrative is an entirely new feature. Topical lessons are here and there introduced which show an intimate connection between Indian History and external and general history. This last is especially useful in giving the student a clear idea of the motives and the situations which greatly influenced the development of the British power in India in its early days. The summaries given at the end of each chapter are intended to serve as skeletons on which more detailed facts may be filled out by teachers themselves. The Pupils' Edition eminently serves its purpose of impressing on the mind of the boy what he has been taught orally and fixes on his memory facts which he would otherwise have forgotten. The style is such that the boy may himself take notes from the book and is modified as to develop his growing knowledge of English. The teachers' book for the lower classes is full of instructions and the treatment of the subject is thoroughly scientific and rational. These books have several features which mark them off from the general run of school text-books on Indian History. We commend these books to all teachers interested in the teaching of Indian History on sound and practical lines.

THE ALBION READERS: LONDON: EDWARD ARNOLD. (BOMBAY: LONGMANS GREEN & CO.)

These new readers contain good extracts from modern prose and verse on various subjects including even such subjects as 'The conquest of

the air." In Reader No. V there is the well-known graphic account of "The Wreck of the Titanic" contributed by Mr. Lawrence Beesly. Hackneyed poetical pieces have been avoided as far as possible. In Reader V there is at the end an "Empire Garland" of poetical pieces beginning with Scott's "Love of Country" and ending with "The Call of the Empire" by C. E. Byles. The several readers contain at the end a set of composition exercises which include questions on grammar. The grammatical portion is also treated in a modern spirit and embodies the suggestions made by the committee on grammatical terminology for the simplification of English grammar. Teachers who are tired of old fashioned books are sure to welcome these volumes which are illustrated in colour as well as in black and white. The type and get-up of the readers leave nothing to be desired.

- (1) A HEALTH READER FOR INDIAN HIGH SCHOOLS, BY P. C. WREN: (MESSRS. MACMILLAN & CO., LONDON.) Price Rs. 1/3. (2) THE WAY TO HEALTH: (THE CHRISTIAN LITERATURE SOCIETY: LONDON, MADRAS AND COLOMBO). Price 4s. 2. (3) TALKS ON HEALTH, BY MRS. BRANDOR: (THE C. L. SOCIETY: LONDON, MADRAS AND COLOMBO.)

A knowledge of the elementary principles of hygiene and sanitation is of such importance to the welfare of the community that it is a matter for wonder that it has been practically neglected in a great many of our schools. We remember a time when hygiene as such was a school subject. But those days have gone by. Perhaps the change in methods of teaching and the fawness of suitable books for use in schools might partly account for this state of things.

(1) Mr. Wren's book is an admirable presentation of the subject and quite up-to-date. It is suitably illustrated and clearly printed. The chapter on Infectious Diseases is well-written giving the causes, the methods of prevention and the measures for a cure. There is a whole chapter devoted to the enemies of man. There are useful curves to show the progress of some of the diseases under different conditions. There are also valuable quotations from such eminent authorities as Drs. Hankin and Banks. The book deserves to be very widely read.

(2) This is a cheap and useful publication, but we think that the remarks on p. 23 regarding

"Betel-chewing" might be extended with greater force to the "smoking of tobacco" now a rising fashion. It will be useful to notice that in England measures are being taken to prevent juvenile smoking.

(3) This is a book for Indian house-wives and is written with the sympathy characteristic of the author. It would have been excellent if in deference to Indian sentiment, the use of bone-charcoal had not been specially recommended on p. 69, though in its cleansing power it is really superior to wood-charcoal.

EXERCISES IN GEOMETRY, WITH FULL SOLUTIONS AND FIGURES, BY HIRALAL L. KAJI, M.A., B.Sc. Price Rs. 1.

This is a neat little volume of about 150 pages divided into three parts. The first part consists of easy exercises required in the solution of harder ones. The second part consists of miscellaneous exercises presenting some difficulty and 'providing a higher and advanced course of study' within the Matriculation standard. The third part contains full solutions with figures of the exercises of the Bombay University Matriculation papers in Geometry. There are on the whole more than 400 exercises judiciously selected and methodically arranged. The exercises are purely of a theoretical character but the student may find enough practical work in the solutions of problems which are separately collected together at the end of the first and the second parts.

To a willing student of Geometry the little volume will provide ample scope for an advanced study of the subject. The terms *concurrent*, *collinear*, *ortho-centre*, *median*, &c., are freely used. The merit of the book is enhanced in no figures being given for the solutions of Miscellaneous Exercises. In this part the author might have done better if he had only contented himself with simply giving *hints* for solution. We are of opinion that figures and elaborate solutions in *all cases* do more harm than good. On the whole the book is excellent and will certainly help up the study of theoretical Geometry in High Schools.

PUBLICATIONS RECEIVED.

- Studies in Local Self-Government, Education and Sanitation, by A. P. Patro of Berhampore. Madras: G. A. Natesan. 12 As.
- Dew and Mildew; by Percival C. Wren, M.A. London: Longmans. 6s.
- Life and Work of Pestalozzi, by J. A. Green, M.A. London: Clive. 7s. 6d.
- An Introduction to Zoology, by Rosale Lalham, B. Sc. London: Macmillan. 7s. 6d.
- Junior Geography, by G. C. Fry, M. Sc. London: Clive. 2s. 3d.
- First Books of Science: General Geography, by B. C. Wallis, B. Sc., F.R.G.S. London: Macmillan. 1s. 6d.
- Classified French Unseens, by W. G. Hartog, M.A. London: Clive. 2s.
- Exercises in Logic, by F. C. Bartlett, M.A. London: Clive. 2s. 6d.
- Preliminary Arithmetic (with Answers) by A. Barraclough, M.A. London: Clive. 1s. 9d.
- Classified Passages for Translation into French, by W. G. Hartog, M.A. London: Clive. 2s.
- The Philosophy of Marriage, Vol. I, by P. Krishnamachariar. Srirangam: U. P. K. Publishing House. Rs. 1 4 As.
- High Roads of Literature in 3 vols. Vol. I, 10d. Vol. II, 1s. Vol. III, 1s. 3d. London: Nelson.
- The Seashore I Know, by W. P. Westell, F.C.S., and Henry E. Turner. London: Dent. 8d.
- Regional Geography of the World (in Telugu) Part I, India, by M. Sitarama Rao. Cocanada: Scape & Co. 10 As.
- English Grammar, by Otto Jespersen, Ph. D., translated, by Rao Sahib G. V. Ramamurti, B.A. Bombay: Longmans. 6 As.
- The Pupils' Course of Constructive Work, Set I, combined with Arithmetic, Drawing and Modelling in 3 parts. Book I, 4d. Book II, 5d. Book III, 5d. London: Macmillan.
- The Pupils' Course of Constructive Work, Set II, combined with Geography and History, by J. S. Lay, in 3 books, London: Macmillan. Book I, 4d. Book II, 5d. Book III, 5d.
- The Pupils' Course of Constructive Work, Set III, combined with Arithmetic and Needlework

with applique work and cardboard modelling, by J. S. Lay, in 3 parts. London: Macmillan. Book I, 4d. Book II, 5d. Book III, 5d.

Reform Arithmetic, by P. Wilkinson, B.A., B.Sc., F.R.A.S., and F. W. Cook, A.C.P., Book VI, Girls' Edition. London: Macmillan. 3d.

Reform Arithmetic, Teachers' Book V, Girls' Edition. 9d. Teachers' Book VII, 1s. London: Macmillan.

The Children's Story Books: Four Winds Farm, etc. 1s. Tales from Esop, etc. 6d. Fairy Tales from France, etc. 9d. Little Wanderlin, etc. 9d. London: Macmillan.

Lessons on Character Building, by W. H. Baldwin and W. Robson. London: Nelson. 1s. 6d. net.

Elementary Algebra, Vol. IV, by Godfrey and Siddons. Cambridge University Press. With Answers. 3s. Without Answers. 2s. 6d.

Four Figure Tables, Godfrey and Siddons. Cambridge University Press. 9d. net.

Indian Educational Notes.

MADRAS.

An Association in Guntur—Mr. D. V. Jagannadham, B.A., Senior Hist. Asst., Town High School, Guntur, writes:—The teachers of all the leading institutions—the College, the Town High School and the High School for Girls—combined themselves into an association with membership open to all teachers and such others as take interest in educational matters. A strong executive committee including six office-bearers (a president, 2 vice-presidents, a secretary, a treasurer and a librarian) was formed. The objects are to improve the work and status of the teacher and the special features being working in sections for subjects with one for elementary school work, a library and magazines and special steps to improve the status. The first thing is to recognize what is done for them. In this strain, resolutions expressing the congratulations and thanks were sent to H. E. The Viceroy, the former on his recovery and the latter for his assurances 'unchanged policy' and liberal policy in respect of educational matters; expressing thanks to H. E. The Governor of Fort St. George for the great interest evinced in educational matters and for the nomination of the Hon. Mr. V. S. Sreenivasa Sastry to a seat on the Legislative Council; expressing to the Hon. Mr. T. V. Seshagiri Aiyar thanks for work done and congratulations on his re-election, and to the Hon. Mr. V. S. Sreenivasa Sastry congratulations on his nomination and hopes of great

achievements. In addition to subjects that concern the teacher in his work, various topics of general interest engaged the attention of the association:—The questions of minimum pay and family allowances; the questions of Provident Fund and Mutual Benefit Fund; the questions of a special minimum in English and of specialisation at the 4th form stage; the question of supporting the proposition to form advisory boards; the question of requiring the S.S.L.C. candidates to undergo two years' training, etc., etc. It goes without saying that there is a great need for combined and well-organized action on the part of teachers and the S. I. T. U. calls for the same. There is an annual conference for the first circle. Will teachers of all important places form themselves into associations; will such associations form central associations to impart strength and pointedness; and will they bestir themselves for what they need as in the case of district and other conferences? Are teachers, who, by the right of their profession are expected to be teachers and critics of the activities all over, incapable of such well-organized and well-disciplined combination? "No! They are not incapable. They are yet a living force for all purposes of others and of their own."

Gopalasamudram School.—On Monday, 5th May, the annual distribution of prizes to the students of the Gopalasamudram High School and the anniversary of the High School Association was celebrated with great éclat in the school hall at 6.30 p. m., with M.R.Ry. S. E. Vaikuntam Iyer Ayl. B.A., B.C.E., Senior Executive Engineer, Travancore, in the chair. Among those present were Messrs. I. Srinivasa Iyer, B.A., Principal, Hindu College, Tinnevely; A. Ramakrishna Iyer, B.A., B.L., High Court Vakil, Palamcottah; C. S. Sundara Sastry, B.A., L.T., Science Lecturer, Hindu College; P. S. Subramany Iyer, M.A., L.T., Physics Professor, Medical College, Madras, and P. Subramania Sarma of Quilon. Between 5 and 6 p. m. interesting items of sports, competition for infants amongst which were word-building, mathematical tripos, lime picking and gymnastics engaged the visitors in the school compound. Refreshments were also served. The meeting began with prayer and music. After the Headmaster's report which was a review of not only of the school work during the year but also of the chief educational pronouncements of the year, a brief resume of the same in Tamil was given by Mr. P. A. Sankara Iyer, B.A., with an impressiveness and force of his own. The next item in the programme was the report of the working of the association by its secretary. Next there was an interesting series of conversations in Sanskrit, Tamil and English, the most notable of which was a piece of declamation on "The British Privilege of Grumbling." A scene from P. Sambandam's *Manohara* was also enacted. Special prizes for these items were awarded by Messrs. B. V. Viswanatha Iyer, B.A., B.L., High Court Vakil, Tuticorin and A. Ramakrishna Iyer, B.A.,

B.L., Vakil, Palamcottah. Prizes were as many as 75 including class prizes, special prizes for nature study etc. and for sports and gymnastics. The president gave away the prizes to the prize-winners and brought the interesting proceedings to a close in a very impressive speech. Three cheers were proposed to their Imperial Majesties. After the distribution of *pan supari* the guests were treated to a sumptuous feast.

A School Day Celebration.—The newly-formed Old Boys' Association of the Board High School, Dharapuram, celebrated the first School Day Celebration recently. There was an excellent programme spread over the whole day. The old students were treated to refreshments in the morning. Towards the evening, there was music and a tea-party. A group photo was then taken. The meeting began at 6 p. m., with Mr. K. Ananthasubramania Aiyar, B.A., in the chair. There was a very large attendance of old boys. After the election of the office-bearers for the year 1913-14, the usual toasts were proposed. Mr. Alagiriswami Reddiar, of Dalavoi-patnam, proposed the first toast to the school in an eloquent speech in Tamil, which was responded to by the Headmaster, Mr. L. S. Panchapakasa Aiyar, B.A., L.T. The second toast to the Association proposed by Messrs. Narayana Dass and Ramakrishnan, B.A., was responded to by the Chairman in a neat little speech. After votes of thanks by Mr. K. Sundaram Aiyar, B.A., to the Secretaries, Messrs. S. Narayanaswami Aiyer and D. K. Krishnaswami Aiyer, to the authorities of the school for the kind loan of the hall and to the Chairman, there was some interesting vocal music, after which the old boys dispersed and an eventful day came to a close.

The Presentation Convent College.—The annual distribution of prizes to the pupils connected with the College Department of the Presentation Convent, Georgetown, took place in the College buildings. There was a large gathering of ladies and gentlemen interested in the work. His Grace the Archbishop of Madras, presided. The Rev. Father R. Sullivan then presented the report of the School for the last year. His Grace then distributed handsome and valuable prizes to the girls. Miss Leila Bantleman was the recipient of a gold medal for having gained the highest distinction, becoming an Associate of the Trinity College, London. Miss Alice Halge carried away the conduct prize. The proceedings terminated with the singing of the National Anthem.

Mahant's School, Vellore.—The interesting function of the distribution of prizes to the pupils of the Sri Mahant's Devasthanam Hindu High School, Vellore, took place in the school premises, at Vellore. The elite of the city were present on the occasion and the chair was occupied by the Hon'ble Mr. T. V. Seshagiri Iyer. The proceedings began

with a prayer and was followed by a number of recitations. Mr. P. S. Raghavachari, Headmaster of the School, then read the report for the year 1911-12, and that disclosed that satisfactory progress had been made during the year under report. The Chairman next distributed the prizes to the pupils. With a vote of thanks to the chair the meeting terminated.

Madurantakam Union.—The sixth anniversary of the Madurantakam Progressive Union was celebrated with great éclat on Thursday, the 15th instant, under the presidency of Rao Bahadur S. Ramaswamy Iyengar, B.A., B.L., Judge, Small Cause Court, Madras. The function took place in the Edward Memorial Hall and precisely at 5 p. m. the meeting commenced. The Chairman after a short preliminary speech introduced the lecturer Mr. R. N. Aiyangar, Bar-at-Law to the audience. Mr. Aiyangar addressed the audience on "Life in London" for about an hour. This was followed by a short and interesting speech by the Rev. Mr. J. P. Strianpton, B.A., the local missionary with the aid of a map previously prepared for the purpose. The proceedings terminated after a few remarks from the chair. Again at 9 p. m. the members entertained the public with a dramatic performance of "Manohara" in Tamil by Mr. Sambandam. The drama was a grand success. The members acquitted themselves creditably.

A Young Men's Association.—The fourth anniversary of the Young Men's Association, Rangayakulupet, Nellore, was celebrated in the V. R. High School Hall very recently. The gathering consisted of a large number of gentlemen and students of the place. Rao Bahadur T. Ragbairaiya Garu, B.A., officiating Collector of Nellore, presided. The proceedings began with a prayer in Sanskrit and Telugu. Then the Chairman made a few introductory remarks in which he expressed his pleasure at the opportunity that was afforded to him for making the acquaintance of the students and gentlemen of Nellore so soon after his arrival here. The Secretary then read his reports on the working of the Association for the year 1912-13. After this Mr. C. Malekondaiya, B.A., read a short, interesting and very instructive paper on "The Choice of Books." Next followed a few choice verses from Harischandra (in English) which were recited by the members of the Association. Then the Chairman rose amidst cheers and made a short speech. He congratulated the members on the excellent entertainment they had given and wished the society an active and useful year. The Chairman and the lecturer were garlanded and the customary votes of thanks were proposed by Mr. V. Narasinga Iyer, B.A., B.L., on behalf of the Association and responded to, whereupon the meeting came to a close.

Government Grants.—The Government have sanctioned a grant not exceeding two-thirds of the actual expenditure, or Rs. 3,467, towards the cost of extending and improving the buildings occupied by the St. Joseph's European Middle School, Tellicherry.

The Government of Madras have sanctioned the expenditure of Rs. 2,200 towards the construction of buildings for the elementary schools at Gumma, Ojjainada, Namanagaram and Dothara in the Ganjam Agency.

The amount of the grant sanctioned in July 1911, towards the cost of constructing a building for the High School at Srirangam has been, as a special case, raised from Rs. 10,000 to Rs. 18,000 on the understanding that the entire excess amount is devoted to the extensions to the school buildings now proposed. The additional grant will be subject to the conditions, that in carrying out the extensions the suggestions of the Chief Engineer are adopted and that all the conditions prescribed in the Grant-in-Aid Code have been duly complied with in respect of the extensions. On these conditions being fulfilled the grant will be paid as funds become available.

The Government of Madras have sanctioned a grant not exceeding one-half of the actual expenditure or Rs. 27,153, towards the cost of extending the Tirukattuppalli High School buildings, Tanjore.

The Government of Madras have approved the proposals of the Director of Public Instruction for the distribution of the special grants of four lakhs and Rs. 30,000 for the equipment of Secondary and Elementary schools, respectively. The following are the conditions under which the grant will be allotted:—(i) that the amounts be distributed among the schools without insisting on a proportionate contribution from the management, (ii) that the special grants for Secondary schools be given not only to aided schools under private management but also to Local Board and Municipal schools, (iii) that the special grants to Elementary schools be given to schools having standards above the fourth, (iv) that lump allotments be at first fixed by the Director for each of the Boys' and Girls' Circles; and Inspectors and Inspectresses be requested by him to furnish statements showing how they propose to distribute the amounts among the schools in their Circle, having regard to the special needs of each school, (v) that after a scrutiny of these statements the amount of grant for each school and the objects upon which the money is to be spent be determined by the Director and correspondent authorised to draw the grant immediately on a bill countersigned by the Inspector or Inspectress of the Circle and required to submit vouchers in support of the expenditure to the latter for scrutiny.

The Town High School Association, Kumbakonam.—On the evening of the 30th April, the members of the Town High School Literary Association, held their anniversary in the Upper Hall. Professor Sundra Rama Aiyar presided. The school staff, the students, both past and present, some prominent members of the Committee and parents of students had assembled in large numbers.

The proceedings began at 5 P.M. There was a recitation by one of the students of Shakespeare's 'The Seven Ages of Man.' The Secretary read the report for the year which showed that substantial work had been done.

Professor Sundara Rama Aiyar then rose amidst cheers and introduced Mr. S. V. Subramanyam Aiyar who lectured on "The Usefulness of Debating Societies to Young Men." The lecture occupied full half an hour and though it must have been very trying to the lecturer in the dingy and suffocating atmosphere of the hall, it was not in the least so to the audience.

A Golden Jubilee.—In view to the celebration of the Golden Jubilee of the Town High School, Kumbakonam, which comes off next April, it is proposed to prepare a correct and complete list of the alumni of the School, and they are requested to communicate to T. K. Sivarama Iyer, the Secretary, at their earliest convenience, their present designations and addresses.

Madura Government Girls' School.—The annual prize-giving of the Government Girls' School, Madura, took place in the School Hall, at 4.30 P.M., on Wednesday, the 30th ultimo, with Mr. T. S. Kalayana Rama Iyer, B.A., Sub-Assistant Inspector of Schools, Trichy-Madura Girls' Range, in the chair. There was a large attendance of gentlemen and ladies, besides a good contingent of girls. The Head Mistress read the report on the working of the school for 1912. The Chairman then gave away the prizes. Mr. L. K. Tulasiram gave an interesting speech on "Female Education." With the Chairman's concluding remarks the meeting terminated.

Secondary Teachers' Conference.—The annual Conference of Teachers of Secondary Schools in the three northernmost districts of the Presidency met at Mrs. A.V.N. College, Vizag, under the auspices of Mr. C. Ransford, the Inspector of Schools. About two hundred members of the teaching profession attended the session, and among those present on the occasion were Mr. P. T. Srinivas Iyengar, Babu S. Palit, Mr. K. C. S. Anantarama Iyer and Mr. V. Narasimharayudu. On the motion of Mr. P. T. Srinivas Iyengar, Mr. Sithapathi Row was elected Secretary. Mr. O. V. Jagarow read a paper on "English Instruction in Indian Schools." Mr. R. Sitharama Row of Rajahmundry read a paper on the "Aim and Scope of Elementary Science in Secondary Schools," in the course of which he said that children should be trained to observe

closely and accurately so as to form in them habits of scrutiny which would result in the sharpening of their senses. Mr. K. Parabrahmam of Chicacole read an elaborate paper on "The Teaching of History in Correlation with Geography." In the course of the paper he showed how the subject might be made to have its beginnings in nature-study, or the immediate neighbourhood of pupils—the sky, the earth, the fauna and flora, together with the natural phenomena of every day life. Mr. C. Ransford in bringing the proceedings of the Conference to a termination, said that it was the first Conference in the Circle over which he had presided. He regretted that more speakers on the subjects brought up for consideration were not forthcoming and hoped that the programme from the next year would be modelled on different lines. After the usual vote of thanks to the chair, the Conference dispersed.

H. E. the Governor opens a Secondary School.—At the opening of the Municipal Secondary School at Ootacamund, their Excellencies Lord and Lady Pentland formally declared it open. On their arrival their Excellencies, who were accompanied by Capt. Campbell, were met by the Chairman of the Municipality and the Collector. The Municipal Councillors, present and Mr. Kershaw were introduced to His Excellency. Mr. Handcock, the Chairman, then read a brief history of the School.

His Excellency replied as follows:—

Mr. Chairman, Mr. Young, and Gentlemen.—I can only say that it is a great pleasure to Her Excellency and myself to be here this morning and to be able to join with you in inaugurating this new school. It seems to me a sign of energy and progress that this Municipality and those whom it represents should require these additional educational facilities. We cannot do better. I think, for those who come after us than to give them the fullest opportunity possible of developing their faculties, and making use of facilities, which subsequent careers may offer to them. We educate the children well. We are doing the best we can for them and I rejoice to think that Ootacamund, in opening this school, has afforded a further opportunity of this kind, and hope it will be widely taken advantage of. I am already aware that you have advanced a step further than is represented by this building, and that the Government have decided to add classes to this school which will transform it from what I think is known as an incomplete secondary school. That, I believe, is to be done gradually, year by year until the full measures of a complete secondary school is attained. I congratulate Ootacamund on this evidence of vigour, and desire for advance, and these additional facilities which Ootacamund owe Government, as I said before, I hope will be widely taken advantage of. It will be a great pleasure to Her Excellency and myself to watch with interest the way in which these facilities are utilized, and

welcomed, by those whom they are intended to benefit. I am very glad to be here, and it is my duty now to declare this school building open which I shall now have an opportunity of inspecting." Their Excellencies, in company with Messrs. Handcock, Kershaw and Young, and the Headmaster of the School, went round the various class rooms and inspected them. Mr. Young proposed a hearty vote of thanks to their Excellencies on behalf of the Ootacamund Municipality and proceedings came to a happy termination.

CALCUTTA.

Mahomedan Scholarships.—The following Notice appears in the *Calcutta Gazette* above the signature of Mr. W. C. Wordsworth, officiating Director of Public Instruction, Bengal:—The Mahomedan officers of the Settlement Department under the late Government of Eastern Bengal and Assam have raised a fund, named "The Mahomedan Education Fund," out of which it is proposed to award, on the results of the Matriculation and Intermediate Examinations, respectively, two junior and two senior scholarships, each of the value of Rs. 90 per annum, to selected Mahomedan students who do not hold any other kind of scholarship. These scholarships are tenable only in the Dacca College, and the recipients must live in a hostel attached to that institution. In making the award the pecuniary circumstances of the candidates will be taken into consideration. Intending candidates must state in their applications whether they are *bona fide* natives of the Dacca, Rajshahi and Chittagong Divisions and of Assam, or have read in a school or college in those areas recognized by the Education Department. Applications should be submitted to the Principal, Dacca College, through the heads of the institutions from which the candidates pass the Matriculation and Intermediate Examinations, respectively, as soon as the results of these examinations are published in the *Gazette*.

ALLAHABAD.

Primary Education.—A small Representative Committee will meet in Naini Tal early in June to consider the whole question of Primary Education in the United Provinces, both for boys and girls. Mr. Piggot, Judicial Commissioner, Oudh, will preside and among the members will be Mr. Freemantle, Collector, Allahabad, Mr. Lupton, Collector, Moradabad, two Educational officers, the Hon'ble Dr. Sunder Lal, the Hon'ble Mr. Ganga Prasad Varma and several other non-official members.

Education in United Provinces.—In the Resolution on the general report on public instruction in the United Provinces, the Lieutenant-Governor says that it is a record of substantial progress achieved in almost all directions. The controlling

staff has been largely increased, and salaries of its subordinate officers revised, extensive reforms have been carried out in the system of Secondary education, more High Schools have been established by private effort, pay and prospect of teachers in Government Schools have been improved, and more Training Institutions have been opened. The Hostel system has made notable strides in popularity and efficiency. Technical education has been entirely reorganized and expanded. In Primary and Female education alone the advance has been relatively disappointing. In connection with European education the notable achievement was the reorganization of the Martine College at Lucknow to carry out reforms necessary to save this famous institution from decay. Grants have been made by the Government and the High Court of Calcutta has recently sanctioned the scheme which provides for the substantial increase in the annual payments to College and large building grants. The average enrolment in the European schools was nearly five thousand and the total European and Eurasian population was about forty-two thousand. Arguing from this figure the report suggests that there is possibly a considerable number of children who remain wholly uneducated. The Census figures, however, include soldiers and afford therefore no sure basis for estimating the school-going population. Available evidence indicates that the number of boys not sent to any school is extremely small, and on the other hand an appreciable number of girls receive little or no education owing to the inability of their parents to provide for the education of both boys and girls. The further weakness in the condition of European education is the very early age at which children leave school. For these defects the Government action can at best provide very partial remedies. The Lieutenant-Governor hopes, however, that it may be in his power to institute some scholarships for boys who desire to take University Degrees and to make grants to enable schools for girls to accept pupils on reduced fees.

TRAVANCORE.

At the Eighth Session of the Travancore Popular Assembly, several Members prayed for a few scholarships being instituted in each school, irrespective of the distinction between backward and forward classes. The Dewan admitted in reply that the Government recognised that a certain amount of encouragement might, in some cases, be found necessary to be given to poor and deserving students, and he added that the question of scholarships was under consideration, and that, when the matter was disposed of, the Aided Schools would be allowed the same privileges as the Departmental Schools in this respect. The Director of Public Instruction has since submitted a scheme for the institution of scholarships generally. His Highness' Government have now passed orders on the subject. No fees are now levied in any of the

Lower Grade classes of the Elementary Schools; the fees charged in the higher grade classes are normal; the number of the Higher Grade Elementary Schools is in the view of Government, large, and it is also rapidly increasing, and the parents could give their children education in these schools near their homes and for quite a trifling cost. The Government do not consider it necessary to institute either scholarships or allow any fee concessions in Elementary Schools. In regard to Secondary Education the cost involved in the first four classes is not, say the Government, great; there is at least one Lower Grade Secondary School in almost every taluk; the rate of fees charged in these classes is comparatively small. Further, until a pupil passes through the highest form of a Lower Grade Secondary School, it is probably too early to judge whether he could, with advantage, go higher up. On the whole, the Government feel it needless to provide for scholarships or any other concessions in the Preparatory Classes or in Forms I, II and III of the Secondary Schools. In the Higher Grade Secondary Classes, however, the Government recognise that it may be necessary, in some cases, to give encouragement to pupils of real ability. The Government would in these schools, prefer the institution of scholarships to the revival of the former system of exempting pupils from the payment of fees. The Government sanction one scholarship of the value of Rs. (5) five *per mensem* being granted to the pupil who passes highest from Form III of each Recognised Lower Grade Secondary School (Departmental or Private) in the State and who continues his course in a Recognised Higher Grade Secondary School, Departmental or Private, also in the State. These scholarships will be tenable for three years and will be granted irrespective of the question of the means of the boys. By this arrangement, each Recognised Lower Grade Secondary School would secure one scholarship, to send up annually its best student to study in a Recognised Higher Grade Secondary School for obtaining the School Leaving Certificate. Regarding scholarships for the Colleges, the Government would proceed on the same principles as they have laid down above for the Secondary School. Each Recognised Higher Grade Secondary School in the State will be allowed one scholarship, of the value of Rs. 10 *per mensem*, to be granted to the student who gets the best School Leaving Certificate in it and who continues his education in a Recognised College in the State. These scholarships will be tenable for two years. In the B.A. Classes of His Highness the Maharajah's College, Trivandrum, five scholarships of Rs. 15 each *per mensem*, will be granted, one to each of the students who pass highest from the C. M. S. College, Kottayam, and the Scott Christian College, Nagercoil, respectively, in the Intermediate Examination, and three scholarships to the three highest students passing the same examination from His Highness the Maharajah's College, Trivandrum, and who continue their studies for the B. A. course in the Maharajah's

College. The B.A. scholarships will be tenable for the whole course. All these scholarships will be called His Highness the Maharajah's Scholarships. This scheme will involve a *maximum* expenditure of Rs. 17,640 per annum and will take effect from the 1st Mithunom 1088. The expenditure required for 1088 is Rs. 1,190.

MYSORE.

College Councils.—The Government of Mysore have sanctioned the formation of College Councils for the internal management of the Central College, Bangalore, and the Maharajah's College, Mysore. There is such a Council for certain Government Colleges in British India. The Council will consist of the Principal and the Professors of the College for the time being, the Principal being *ex-officio* President of the Council. The Council will appoint one of its members to be Secretary, and the Professor so appointed will hold office for one year, but shall be eligible for re-election. The Council is empowered to consider and report on any question concerning the College, whether as regards accommodation, course of instruction or discipline. But, except when such authority is temporarily or permanently entrusted to it by the Principal or by the Inspector-General of Education, it should not interfere with the general administration of the College, which is vested in the Principal acting under the direction of the Inspector-General of Education.

BARODA.

Mass Education.—In addition to making mass education free and compulsory, His Highness the Maharaja of Gakwar has introduced attractive innovations such as travelling libraries and moving picture exhibitions to educate the masses. The travelling libraries have already become very popular and there are 84 of them now. Of these 15 are specially given for ladies and 26 for the people of the depressed classes. The total number of books has gone up to nearly 4,500 and private gentlemen are adding to it by gifts in memory of lovers of the scheme. It was suggested that each set should contain Mahabharat, Ramayana and other religious works, and another suggestion made is to increase the number of books in each box to 100. It is gratifying to learn that the books reach all classes and denominations of the people. Mr. Gould, who visited Baroda, has suggested the formation of a children's library with illustrated books and pictures. The Education Department has just introduced moving picture and lantern exhibitions and Rs. 10,000 has been sanctioned for this purpose. A staff of men go about from place to place giving free exhibitions of the pictures with suitable explanations. In this way the taste for knowledge will be created and progress of school education for the masses greatly facilitated. Truly H. H. the Maharaja deserves to be congratulated on the wonderful manner in which he is striving to advance the cause of education in his State.

INDIA (GENERAL)

The Education of Muslims.—The Government of India have issued a circular letter dated the 3rd April 1913, to all Provincial Governments addressing them on the subject of Mahomedan Education:—As observed in Paragraph 57 of the Government of India Resolution No. 301 C. D., dated the 21st February 1913, the increase in the number of Mahomedans at school has been remarkable during recent years and in the matter of Primary Education this community now holds its own. In the matter of Higher Education, their numbers are still far below their proportion to the population. The Government of India are anxious that all reasonable facilities should be provided for the education of this backward community and take this opportunity of indicating the directions in which enquiry and special action will, they think, be useful.

With some general observations they commend the whole question to the careful consideration of Local Governments with the suggestion that a committee should be appointed to make recommendations. The Government of India will be glad to be informed in due course of the general conclusion, which Local Governments have reached. They do not desire to receive particular schemes, but they are deeply interested in the question from the Imperial point of view and they will be glad to know in connection with the allotment of any funds which may be available what financial help is desired from Imperial revenues. Furthermore the Secretary of State has recently suggested that the annual reports of Public Instruction might with advantage deal with the progress of Primary Education among Hindus and Mahomedans respectively. This treatment as regards Mahomedans might well be extended to some special mention of their advancement in different branches and grades of education. Attention is invited to the supplementary tables regarding Mahomedan education in the reports from the Madras Presidency.

Foreign Notes.

GREAT BRITAIN.

Entrance Scholarships at Cambridge.—More than £10,000 were distributed to 216 candidates for entrance scholarships at Cambridge Colleges between the beginning of December and the end of March last. The largest amount was devoted to Classics, which obtained £3,640 divided among 72 candidates; Mathematics and Natural Science each received about £2,500 shared by 50 winners; 34 History scholars cost £1,275; £210 went to 6 proficients in Modern History; and, finally, 3 boys who had learnt Hebrew at school were rewarded with £90.

Open-air Teaching.—An interesting experiment in open-air teaching is being made this summer, from April to October, in the play-grounds of three London County Council Schools in Bethnal Green. The class at each of the three schools will consist of children of approximately like ages and educational attainments, drawn from various contributory schools. The children will be selected chiefly on physical grounds. Assistant teachers are to be placed in charge of the classes, and they are to be specially capable in regard to handicraft, nature-study, and physical science (including hygiene).

Untrained Teachers.—The Annual Report of the Board of Education deals somewhat fully with the training of teachers in secondary schools. The Board do not attempt to minimize the seriousness of the problem. "Only a small portion," they say, "of those who teach in secondary schools have made any attempt to qualify themselves for their work by professional training;" and "a large number of teachers are employed who are seriously deficient in professional skill." The Report goes on to say that "the work of a large number of those engaged in teaching is to a large extent ineffective; and that this ineffectiveness is, at any rate in many cases, partially caused by faults which are capable of remedy by advice and instruction; and that there are often serious defects in the work of even the abler teachers, which are also such as might have been avoided by timely help." These are serious charges, and they are made by competent Inspectors who have not been brought up in the tradition of a narrow professional training.

A School of Geography.—The Yorkshire Summer School of Geography will be held at Whitby from August 4 to 23. The buildings of the Council School have been lent by the Governors for the purpose. The Summer School has been instituted by the Universities of Leeds and Sheffield with the co-operation of Armstrong College, and of the Education Committees of the three Ridings, and of county boroughs in Yorkshire. The object of the school is to provide theoretical and practical instruction in the methods of Geography and to furnish opportunities for the discussion of problems connected with the teaching of the subject. The course will consist of lectures, laboratory work, field work, and demonstrations, and there will be whole day and half-day excursions in connexion with field work. All the apparatus used will be simple and inexpensive, and methods applicable to school work will be adopted. The subjects of the lectures will include: The Geological Structure of Yorkshire, its Historical Geography, Language and Place-names, Sites of Towns, Architecture, Vegetation and Agriculture, General Economic Geography, Yorkshire Mining (past and present), Textile and Iron and Steel Industries of Yorkshire, Meteorology and the Teaching of Geography. Among the Lecturers will be Prof. Kendall, M. Sc., F. G. S.;

Prof. F. W. Moorman, B. A., Ph. D.; Mr. A. Gilligan, B. Sc., F. G. S.; Mr. L. Rodwell Jones, B. Sc.; Dr. W. G. Smith, Ph. D.; Mr. W. P. Welpton, B. Sc.; Mr. P. W. Dodd, B. A. Other lecturers will deal with special branches of the work. The charge for admission to the whole course is £3, and the number of students will be limited to about 200.

LITERARY NOTES.

The Economics of Land Value.—In a volume entitled "The Economics of Land Value," which was given to be published on May 14th by Mr. Unwin, Mr. Harold Storey, Secretary of the Yorkshire Liberal Federation, shows the extraordinary position held by Land in the production and distribution of wealth. He briefly and clearly explains the economic forces that determine the share of wealth that can be claimed by the various classes of the community, and argues that unless some remedy can be found the growth of land rents will increasingly impoverish the people. He advocates legislative action along various lines, and particularly insists upon the rating and taxing of land value. This latter policy is carefully analysed in all its bearings. The author shows what it will do, and what it cannot do, and by fresh line of argument proves the necessity for other supplementary forms of taxation. The book affords a complete and balanced statement of the case that has to be met by any practical Land Policy.

Life of John Bright.—Messrs. Constable announce that they have in advanced preparation the authorised "Life of John Bright," by Mr. G. M. Trevelyan, author of the popular books on Garibaldi and the well-known critical study, "The Poetry and Philosophy of George Meredith." This important book, which will be profusely illustrated, may be expected shortly.

George Bell and Sons.—The firm became a limited company in 1910. Although it has in the Bohn tradition a connected history of a hundred years, and it is just 99 years since George Bell was born, the House is now in its third generation. The directors are Edward and Ernest Bell, sons of the founder; Kenneth N. Bell, their nephew, whose special concern is the educational department; and Mr. Cuthbert A. Williamson. The secretary, Mr. H. Rayment, has been with the House in various positions for a period of fifty years. The present company well maintains the traditions of the House founded by George Bell. Numerous works dealing with art, architecture, poetry, belles-letters, classics, mathematics, history, and science are to be found in its catalogue. The issue of Bohn's Libraries at a popular price will make the names of Bohn and his

successors household words with a wider circle—that great and growing public that welcomes good books at a price comparable with that of the ephemeral and worthless, of which it has more than enough.

Little Books on Art.—The latest addition to Messrs. Methuen's well-known "Little Books on Art" is "Early English Water-colour" by Mr. C. E. Hughes. Broadly speaking, the Early English School of Water-colour includes all artists in that medium who were born between 1720 and 1820. The term Early English is, however, not merely a matter of chronological convenience; the work of many later artists resembles in subject or method that of distant predecessors; and a classification on the lines suggested by such resemblances has been one of the chief aims of the author of this short history. The book contains a frontispiece in colour and thirty-six other illustrations.

Simplified Spelling.—The authorities of the Simplified Spelling Society announce that they are about to publish a "First Reader" for very young children. It will be prepared in accordance with the Report of the "Eyesight" Committee of the British Association.

The Making of Historical Fiction.—A useful summary of "The Making of Historical Fiction" by Mr. Ernest A. Baker, appeared in *T. P.'s Weekly* for April 11th. Many teachers who have charge of school libraries will find therein just those references and titles which will render them great assistance.

Economic Psychology.—Psychology and Industrial Efficiency, by Hugo Munsterberg (Constable, 6s. net.) Students of the older psychology may find it difficult so to re-adjust their conceptions as to accommodate the new science of economic psychology so ably expounded by Dr. Hugo Munsterberg. It is not concerned with human emotions, or ethical conceptions, or with analysis of intellectual processes; and still less does it approach the dubious regions of psychical research into ghosts, apparitions, and telepathy. On one side its province may be said to abut upon that of the older psychology, but it stretches away into remote regions of physiology and even of mechanics. This new science is eminently practical.

The French and the English. by Laurence Jerrold. (Chapman and Hall, 7s. 6d. net.) Mr. Jerrold has not lost his knowledge of England in acquiring his knowledge of France; or, at all events, he has not lost his knowledge of London in acquiring his knowledge of Paris. Consequently he is entitled, as well as inclined, to generalize—a thing which he does, not in the casual manner of the traveller who, having seen a red-haired woman on the Calais pier, noted in his diary that French-

woman have red hair, but in the spirit of a philosophic sportsman who, having started his quarry, is resolved to pursue it relentlessly and beat every bush in which it may conceivably conceal itself. His dominant idea is that the difference between the average Englishman and the average Frenchman is the difference between poetry and prose. It is a difference which the literature of the two countries indubitably reflects. A French Shelley is unthinkable; and an English Molière at all events does not exist. Mr. Jerrold seeks, and finds, a similar line of cleavage between the manners, institutions, habits of thought, and points of view of the two countries. The French, he insists, are more intelligent than the English, and more artistic because they are more intelligent, and, at the same time, more orderly, more practical, more obviously conscious of a definite objective in the conduct of their lives; they march towards attainable goals, and are generally clever enough to attain them. The English, on the contrary, are on an average stupid—equally indifferent to art and to ideas—but are redeemed by a hidden vein of poetry and addiction to dreams and visions, and a latent possibility of romantic extravagance which the French sometimes admire, but seldom understand, and hardly ever imitate.

Messrs. Macmillan & Co. announce the publication of the following books:—

The Works of Gilbert Parker. Imperial Edition, With Frontispieces and Introductions. In 18 vols. Blue cloth, extra gilt, gilt tops. 8vo. 8s. 6d. net each; Vol. I. *Pierre and His People*. Tales of the Far North. Vol. II. *A Roman of the Snows*. Vol. III. *Northern Lights*; *Trans-Himalaya: Discoveries and Adventures in Tibet*, by Sven Hedin. Vol. III. Illustrated. 8vo. 15s. net; The Fringe of the East: A Journey through Past and Present Provinces of Turkey, by Harry Charles Lukach. Illustrated, 8vo. Lollardy and the Reformation in England, by Dr. James Gairdner, C.B. Vol. IV. 8vo. 10s. 6d. net; *Dante, Goethe's Faust*, and other Lectures, by Herbert Baring Garrod, M.A. Edited by Lucy F. Garrod. With an Introductory Memoir by Geoffrey Garrod. Crown 8vo. 3s. 9d. net; The Statesman's Year Book. Statistical and Historical Annual of the States of the World for the Year 1913. Jubilee Issue. Edited by J. Scott Keltie, LL.D. Crown 8vo. 10s. 6d. net; A History of Cavalry from the Earliest Times. With Lessons for the Future. By Colonel George T. Denison. Second Edition. 8vo. 10s. 6d. net; The Children's Story Books. Large crown 8vo. With Illustrations. Four Winds Farm, The House that Grew, by Mrs. Molesworth, and The White Rat and other Stories, by Lady Barker. 1s.; Little Wanderlin, Little Silver Ear, The Magic Valley, by A. and E. Keary, and Poems of Childhood, 9d.; Fairy Tales from France, the Dwarf's Spectacles, by Max Nordau, and Tales for Children, by Frances Browne, 9d. Fables from Æsop and Nursery Rhymes, 6d. The Children's Shakespeare—Scenes from the Plays.

With Introductory Readings. Arranged as Continuous Readers, with Notes and Exercises in Composition. With 4 Illustrations in each book. Crown 8vo. Sewed, 4d. each; cloth, 5d. each.—*Julius Cæsar*; Educational Administration: Quantitative Studies, by G. D. Strayer and E. L. Thorndike. Extra crown 8vo. 8s. 6d. net; Human Behavior: A First Book in Psychology for Teachers, by Prof. S. S. Colvin and Prof. W. C. Bagley. Cr. 8vo. 4s. 6d. net; The Tudor Shakespeare. Edited by W. A. Neilson, Ph.D., and A. H. Thorndike, Ph.D. Pott 8vo. 1s. net per vol. Titus Andronicus. Edited by E. E. Stoll, Ph.D. Pericles. Edited by C. A. Smith, Ph.D.

Letters from Solitude and other Essays, by Filson Young (Chapman and Hall, 5s. net). These charming papers need no praise. They have already largely increased their author's widespread reputation as one of the most thoughtful and delightful writers of the time. There are four-and-thirty of them, and all of them are different, save in the freshness of their view and in their uniform urbanity and grace. Mr. Young is fond of travel, and many of the papers are "travel-pictures" of rare beauty and imaginative force. Whether the solitude from which he writes be in France or in the West of Ireland or in the tropic isle of Trinidad, he is sure to see things that no one else has seen, and say the things he has to say as no one else would say them. His business, he tells us, is "to study human nature in as many places and under as many different conditions as possible," and wherever he goes he is continually engaged in "the curious process of manufacturing literature out of life."

Byron.—Slight variations may take place, but to all intents and purposes Byron is classed once for all. No competent critic will ever deny his somewhat febrile but still overpowering force, his originality after a kind, his close connection with and understanding of certain not specially exalted or even specially interesting, but genuine, widespread, and constantly recurrent, moods of the modern human mind. No one will ever deny the power of his verse as a poetical intoxicant in certain cases. But also no one will, except with the largest restrictions and qualifications endorse that astonishing endorsement of Mathew Arnold's which gives the arrantest poser of modern times credit for "sincerity." No one with an ear and an education will condone his hideous formal lapses and slovenliness, no one will deny the strange vein of vulgarity which alloys his work as well as his life. It may still be the amusement of some to weigh him against other considerable poets like Wordsworth, whose blemishes are different from his; it will never again, with critics who are not crotcheteers, be possible to compare him to much less to put him above, poets like Shelley.—*Saturday Review*.

The Story-book in History grows more and more common. Baldwin's "Fifty famous people" are

real persons, most of them familiar, like Paul Revere and Benjamin West and Alexander the Great. Sherman Williams's "Stories from New York history," are not imaginative, but are real, actual occurrences, well told and admirably illustrated. Blasdel's "English story book" goes back to the Britons, and includes Canute the Dane and Robin Hood, coming down to Queen Victoria. True's "Scouting for Washington" is a story of the days of Sumter and Tarleton, with telling illustrations, a genuine boy's book. Historical stories are even dramatized. Bird and Starling's "Historical plays for children" deal with Columbus, Joliet, Henry Hudson, Franklin, Dolly Madison, Abraham Lincoln, etc., while Comstock's "Dramatic version of Greek myth and hero tales" go back to Arachne and Cupid and Daphne. Smith's "Pupil's notebook and study outline in English history" is similar to Lewis's outline of Oriental and Greek history published in 1909. Both may be made very useful; they give definiteness to work.

The following are some of the forthcoming books of the University Tutorial Press:—

Another addition will shortly be made to the well-known works on education published by the University Tutorial Press. *Child Mind, an Introduction to Psychology for Teachers* is now passing through the press, and will be issued to the public next month. This book is intended for the use of teachers who are beginning the study of the theory of education, and it is intended as an introduction to the author's larger work. It should prove extremely useful to students in training and to all young teachers both in Elementary and Secondary schools.

Mathematical Physics, Volume I.—Electricity and Magnetism, will shortly be published. This book is intended as a supplement to the ordinary text-book on this subject, and deals exclusively with the mathematical theory. So far as is possible, the author has avoided the use of advanced mathematics, but where necessary he has assumed a knowledge of the rudiments of the calculus. The range of the book corresponds to the standard usually required in pass degree examinations, and includes a simple account of the theory of radioactivity.

Mr. Walter Crane: Mr. Walter Crane has been invited by the Uffizi Gallery to paint his own portrait in their Gallery. Less than six British artists have received the honour of being hung in this famous gallery; among them are Lord Leighton and Millais. The portrait of Mr. Crane is remarkable for its colouring. In spite of London fog and gloom, Mr. Crane has evolved a wonderful colour scheme reminiscent of the sunny south.

Bohn's Popular Library.—Bohn's Libraries have been a well-known and useful series of publications for over sixty years. Messrs. G. Bell & Sons have now issued a new series of books at 1s. each, which should attain an equal reputation. Twenty volumes are already issued. They are printed in clear type on good paper. They include Gulliver's Travels, Motley's Dutch Republic (3 vols.), Emerson (2 vols.), Burton's Pilgrimage to Al-Madinah and Mecca (2 vols.), Lamb's Essays, George Hooper's Waterloo, Joseph Andrews, Don Quixote (2 vols.), Calverley's Translations, Evelina, Coleridge's Aids to Reflection, Goethe's Poetry and Truth from my own Life (2 vols.), Ebers's Egyptian Princess, Arthur Young's Travels in France.

The History Teacher's Magazine, (Philadelphia, U. S. A.) 20 cents a copy.—The American *History Teacher's Magazine*, commences the fourth year of its useful existence. The size of the page has been reduced slightly, and the illustration which formerly was so attractive a feature has disappeared, but otherwise the magazine retains its familiar characteristics. An interesting item in the January issue is a list of doctoral dissertations in history now in progress at the chief American universities. One is amazed to find that there are well above 300 of these, and when one looks through the titles one is impressed by the feeling that a prodigious amount of futile and unnecessary "research" is being done under the pressure of the passion for the doing of so-called original work. It is devoutly to be hoped that when the 300 diligent diggers into the refuse heaps of the past have obtained that goal of their ambitions, the doctor's degree, the majority of them will restore the means of their elevation to the proper oblivion whence it came. The February number contains a useful discussion concerning the use of the lantern in the teaching of history, while the leading article in the March issue is one dealing with "Legendary and Myth-making Process in Histories of the American Revolution." Each number contains the usual valuable reports from the historical field and recent bibliographies.

History: a Quarterly Magazine for the Student and the Expert. Edited by H. F. B. Wheeler. (London: 89, Farringdon Street E.C.) 1s. net per number:—In the January 1913 number, for instance, there is an interesting paper on the Wars of the Roses, originally read by Rev. R. D. Budworth, headmaster of Durham School, before the North-Eastern branch of the association. Other articles in this number, all of which are well worth careful study, are "The Cause of Napoleon's Death," by Dr. Hildesheim; "The Reign of Richard III.," by Ruth Gimingham; "Nero in Modern Literature," by Prof. Gerotwohl; and "The Early History of the Compass and the First Scientific Maps," by Prof. Raymond Beazley. The papers are excellent.

The Educational Review.

The South Indian Teachers' Union held an Educational Conference in the middle of May. We at Trichinopoly learn that 150 teachers attended and of them 84 came from outside Trichinopoly district. We are glad that 84 teachers at least have shaken off their supineness and taken the trouble to go to a neighbouring district to take part in an educational conference. We feel constrained to remark that as a representative meeting of the teachers of South India, the Conference was a failure. Of course it was not the fault of the Union, if teachers from the Telugu, Canarese, Malayalam and the remoter Tamil districts did not feel impelled to attend the Conference. The Conference itself was very much aware of this defect and has passed two resolutions, one calling upon Teachers' Associations to affiliate themselves to the S. I. T. U. and another calling upon the executive committee of the S. I. T. U. to appoint circle secretaries for organizing branches of the Union. We hope that the circle secretaries will succeed in their work. We fear, however, that the real cause why teachers do not attend these conferences in larger numbers is their poverty. A man from Mangalore or Berhampore should be more than human to spend one month's salary and travel to Madras or Trichinopoly to listen to a tale of pedagogues' woes, more or less irremediable.

One of the most important questions discussed at the Conference was that of the study of the Vernaculars. We notice that Conference has dropped the name 'vernaculars' and substituted the more vague name of 'languages other than English.' The first resolution of the Conference prays Government to make the study of languages other than English "compulsory for the Secondary School Leaving Certificate course except in the case of those pupils whose vernacular is not an Indian language." Seeing that no subject is compulsory for the Secondary School Leaving Certificate course, the demand for one subject being made compulsory seems to be not very reasonable. What object is intended to be secured by making every Indian pupil, boy or girl compulsorily study one language other than English, such as an Indian vernacular, Sanskrit, Greek, Latin, German, French, etc., and exempting non-Indian pupils from such compulsion is more than we can grasp. Another delightfully ambiguous phrase in the resolution is 'the study of languages.' This phrase was freely used in the recent debate on the subject in the Senate. Both parties claimed to promote the study of Indian languages, whereas as a matter of fact neither party aims at doing any such thing. One party wants that the average pupil should be compulsorily trained to express himself in the vernacular and more especially to be able to compose in the vernacular on modern subjects, so that our University men may be fitted to impart modern knowledge to their countrymen. This is not what one understands by a study of Indian languages. The other party wants the average pupil to learn to interpret in the course of his education a few thousand lines of ancient Indian poetry. This is still less of a study of Indian languages. Yet the phrase 'study of Indian languages' is used as a party cry by both sides. How people cheat themselves and others with phrases whose real connotation is imperfectly realized!

One of the resolutions of the Conference

which will have far-reaching consequences is that which demands the abolition of the rules restricting the number of times a candidate can apply for the University Examinations. We think this resolution does not go far enough. Every University ought to provide for the clever student and the average one; there ought then to be two sets of courses and of regulations, the former stiff and stringent, the latter to suit the less intellectually ambitious. The pass course should be such that failure ought to be exceptional. It is absurd that a University should educate any pupil and send him out into the world as a failure. To avoid this not only should the 'pass' student be allowed to compete for examination *ad libitum* but should be enabled to take his examinations—Intermediate and Final—in easy instalments. By all means, restrict the 'honours' men to one shot and no more, but the mere 'pass' man ought also to be helped to wriggle his way out through the door of the 'pass' degree. Of course such a 'pass' degree would not be worth very much, but a 'pass' B.A. will enter life with more self-respect than a 'failed' B.A. The present B.A. degree is neither a pass one, being much too difficult for it, nor an honours one, but a bad blend of the two.

On the same days as the Trichinopoly sit-
 Yet another Con- tings of the S. I. T. U., was
 ference. held in the Mrs. A. V. N.
 College, Vizagapatam, a
 Conference of about 200 teachers of the
 Ganjam, Vizagapatam and Godavari districts.
 Every Secondary school in the 1st Circle
 was represented. The large attendance was
 due to the enthusiasm of the teachers in
 this circle which was fostered by the grant of
 travelling allowances by managers to the

teachers who attended the Conference. If the S. I. T. U. can induce managers to sanction travelling allowances to its members, there will be a bumper house whenever it meets. The Vizagapatam Conference was presided over by the Inspector of Schools, 1st Circle; it did not, of course, concern itself at all with educational politics—the sole concern of the S. I. T. U., but considered modern methods of teaching school subjects, on which the 1st Circle has 'specialized' for the past six years. Papers on the aim and scope of elementary science, number and space work in Elementary Mathematics, geographical control in History, and Drawing as an auxiliary to teaching were read and demonstration classes were held in which the methods advocated were illustrated in practice. While acknowledging the great good such Conferences are sure to do, we are of opinion that teachers of such subjects as English, Mathematics, etc., throughout the Presidency should form societies and discuss their methods of work. In such a case, there will be no chance of men taking part in debates on the best methods of teaching subjects which they know nothing about.

The successive stages of man's civilization have been associated with
 The age of steel. the material used by him
 for his tools. The stone age, the brief copper
 age, the bronze age, the iron age have succeeded each other and we are now in the age of
 steel, the country which make most steel and
 most of steel, being now the leader of the
 world's progress. It will hence interest school
 teachers to know of the various kinds of steel
 now manufactured. Instead of carbon, so
 widely used to harden iron into steel, other
 elements are now used. Thus there is nickel

steel. Nickel steel is twice or three times as hard as welded iron. Nickel alloys are used largely for ship-building, electric appliances and valves. Chromium steel, Jungsten steel, and molybdenum steel resist the action of acids five times more strongly than unalloyed iron plates. These steels tempered by a special process are now used for all kinds of tools. The most recently discovered tool steel is vanadium steel, but it has not come into common use, on account of the cost of vanadium. Krupp has very recently patented an alloy that is so hard and infusible that in future "the scientific safe-burglar will exercise his noble art in vain." Manganese steel is used for grinding operations because of its hardness, but it is not malleable, though it can be bent in the cold state and is thus very safe against breaking. Lastly there is the silicon steel which stands high strain and is used for dynamos, alternate current motors, and transformers.

Now that the S. S. L. C. scheme has popularized "practical
 Laboratory work in schools. work" by pupils, it is
 worth while to consider the
 aim and method of school work in science.
 An American schoolmaster, writing in the
School Science and Mathematics, says:—
 Laboratory work should be made the centre
 and heart of all high school science teaching.
 There the pupil makes his study of things,
 exercises himself in intelligent observation,
 and seeks to understand what is noted and
 interpret his observations. All lesson pre-
 preparation of whatever nature should be done
 under supervision, and at a time when and in
 the room where, apparatus and reference books
 as well as the help of the instructor are at
 hand. The experimental work should be

supplemented by class-work. The teaching
 procedure should consist of three parts: (1) a
 series of laboratory experiments and exercises
 preparatory to the teaching of the succeeding
 class period. The laboratory papers of all
 pupils are to be handed in at the close of this
 work for review so far as shall be possible; (2) in
 connection with a class review and
 discussion next day of these laboratory papers,
 now again in the hands of the pupils, such
 teaching, illustration and applications as the
 teacher can give, guided and assisted by a
 carefully prepared outline. Here it is that
 the subject should be developed to meet the
 several abilities of those under instruction,
 but as class-work rather than individual in-
 struction. Text assignments for the following
 day are to be made; (3) a thorough quiz
 upon text matter and outline topics not
 previously covered in the teaching period,
 thus making complete the discussion of every
 topic in turn. As each larger division is com-
 pleted, problems, quantitative experiments
 and exercises as applications of the teaching
 done. These are to be followed by an exam-
 ination upon the division of the work covered.

The Royal Commission appointed to con-
 sider the question of the
 reform of the London
 University has published
 an elaborate report. One
 important point raised by the Royal Com-
 mission is of special interest to us. It deals
 with the constitution of the University. The
 Commissioners propose that the supreme
 legislative body should be a court of about
 200 persons representing all interests con-
 nected with the University. This court will
 correspond to our (Madras) Senate. The

executive powers will be exercised by a small Senate (our Syndicate) consisting of 15 members. So far everything is like our own organization in Madras. Now comes the novelty. The educational work of the University will be in the hands of the Faculties which will consist wholly or mainly of teachers. These bodies will determine the condition for the award of degrees and diplomas, the courses of study and the conduct of the examinations; but they will not issue syllabuses, for this is a matter for the professor, in consultation with his colleagues in the same branch of learning. The proposals of the Royal Commission in this respect are utterly different from what obtains in Madras. Here, too, faculties exist, but their only function is to elect a Chairman once a year and the Chairman exercises but one function—that of consenting to be elected. We will not call the Faculties a farce, for farces serve some purpose in life they keep you amused and a Madras University Faculty serves no purpose. In Madras the Senate and Syndicate have robbed the Faculties of their legitimate functions. The Senate being a composite body has no business to deal with the course of studies to be included in the Arts or Laws or Medicine or Engineering; this is specially the work of each separate Faculties. If this were realized, the recent exhibition would have been impossible—that of fifteen Fellows—one educationist and the rest Vakils and others—attempting to ruin the organization of our colleges professing thereby to stop the killing of the vernaculars and stumping the country and asking the Government to cancel the decision supported by a body, three times their number. Will any Fellow propose that the Faculties should be invested with definite

control of University studies? Or if we are so destined as to be old-fashioned in our arrangements as to leave all questions to be decided by the haphazard decision of such a mixed body as the Senate, why not abolish the Faculties?

The Headmaster of Eton writes on this most difficult and important subject in the *Educational Times* for April, and we refer to the article in view of

The sexual instruction of school children.

the fact that opinions dangerous to society held on this subject by prominent Theosophists recently became the subject of discussions in Madras Civil and Criminal Courts. Luckily very few schoolmasters in South India are Theosophists; hence what the Hon. and Rev. Edward Lyttleton, D.D., Headmaster of Eton College, wants schoolmasters to do will be practicable here; and that is that the school teacher, of course, where possible in conjunction with the parent to explain to children the function of reproduction, and on the one hand to associate it with the reverence that is naturally due to parents and on the other hand to treat it in the severely scientific spirit with which sexual reproduction in plants is treated. The main facts of sexual hygiene have to be taught to children and they must be trained "to turn with loathing from any caricature of the facts and it must be remembered that all impure task is of the nature of a caricature. There is something often naturally attractive about a caricature; and so the personal affections and the sense of mystery with which a child thinks about his own life must be enlisted, if the truth is to be received with awe and the travesty of

it rejected with disgust." It is quite possible for a tactless teacher to meddle with boys in this matter by setting about it in a bungling way and be the unconscious cause of life-long misery.

Professor Findlay and Miss K. Steel conducted experiments in the system of education invented by the Italian Doctor, Madame Montessori. The experiments were conducted in the Fielden School, a school designed, among other purposes for the investigation of teaching problems. An account of the results was read at a meeting of the College of Preceptors and is reprinted in the May number of the *Educational Times*. As a result of the experiments, Prof. Findlay says, "I have no hesitation in affirming that the organization by teachers of individual child-study, such as we are compelled by this method of schooling to undertake, will lead the way to far-reaching reforms, both in the training of teachers and in child psychology. For one of the most difficult problems in training colleges has been to organize a systematic procedure for our students analogous to that undertaken by students in other professions. Mme. Montessori, like all her predecessors from the days of Pestalozzi, has laid the foundations of her method on the detailed observation of individual cases; and where the masters have led, the disciples must follow.

Mr. H. J. Mackinder, Chairman of the Council of the Geographical Association, recently opened a discussion on the teaching of Geography and History as a combined subject. It is now recognized by up-to-date schoolmasters that to send out pupils into the

The correlation of History and Geography in the class-room.

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world "with the rudiments of History as such and the rudiments of Geography as such in their minds" is a less worthy ideal than "to send them out with some sort of orderly conception of the world around them." Mr. Mackinder ended his paper with these memorable words:—"Now you have your equipment, throw pedantry on one side; what you have to teach is not History and not Geography, but to give an outlook on this great, richly vital, concrete world into which your students are going out to live their busy lives. Let no examiner sunder your teaching into separate subjects, which exist only in books, and not in the real world." Now that Indian History and Geography have been, in the S. S. L. C., saved from the hands of the examiner whom Mr. Balfour has rightly called the "soul-killer," why cannot our teachers draw up their own syllabuses correlating Indian History and Indian Geography. The history of the Great Telugu monarchies of Vengi, Rajahmundry, Warangal and Vijayanagaram, of the Chola Rajahs of Worioore and Kaveripattanam and later on of Tanjore and Jayangondacholapatnam, and of the Pandya Rajas whose line lasted from the IV Century B.C. to the XVII Century A.D. the ancient and modern history of Kerala and of Mysore, and the trade of India through the ages, all treated with reference to the geographical control of human affairs will make class-room work in this subject throw all the rest into the shade. And how much can an earnest teacher do to develop real knowledge and real patriotism by this means.

The presidential address of the Rev. A. F. Gardiner of Trichinopoly at the S. I. T. U. Conference dealt exclusively with this question. Mr. Gardiner

The Rev. A. F. Gardiner on the 'Vernacular' question.

exorted his hearers, vainly as we find from the resolutions of the Conference to remove the question from the plane of emotion to that of reason. He rightly complained that in the minority of fifteen who valiantly fought for the compulsory "vernaculars," "there were some whose attitude towards the vernaculars.....leaves much to be desired, if it does not actually convict them of *consistent inconsistency*." He regards it "a mistaken policy to agitate for a recasting of the whole scheme of University education, simply because in one centre it is difficult for students to secure the full privileges to which they are entitled under existing regulations," and that the debate of this question in the Senate "could hardly be described as an exhibition

of reason in her most exalted mood." The supporters of the proposal suffer, in our opinion, from an utter inability to appreciate the real question at issue. The new Regulations have given a great stimulus to the production of books in modern vernacular prose by men who have received University education—a thing which half a century of the old Regulations failed to produce. The minority of fifteen Fellows want to upset all this and put back the hands of the clock! They call this the encouragement of the vernaculars to boot! Mr. Gardiner has taken great pains and marshalled many facts and arguments to prove his case and if people still continue to misunderstand the question, it will be because they do not want to understand it.

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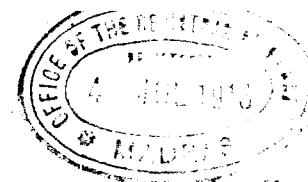
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SUPERVISORS OF ELEMENTARY SCHOOLS.

TO make a body of workers think much about their work is always a consummation devoutly to be wished, for thought breeds concern, and the right kind of concern develops into culture. Here in India the influence brought to bear on the members of the Subordinate Educational Department is in some respects of the wrong kind: the methods of work appear to be essentially deductive and not inductive—subordinates have too many schemes to carry out and too few to help in initiating. Perhaps this accounts for that lack of "specialists" which one notices in the Department, and gives colour to the accusation that the Department's methods are amateurish.

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Improvement must, of course, come from within; it cannot be thrust down with official force through the official channel. Men of light and leading, travelled and cultured men, may meet at the official board, consult the practice of other nations, and draw up a scheme of studies which breathes modernity; but they can scarcely guarantee more than that it will command respect. Of a truth the low-paid official will receive it with due deference and use it with blind faith, but will he necessarily understand it? Experience would seem to say, "No." And why? Is it not because he feels he dare not criticise? Commenting on the work of his Supervisors, a certain Assistant Inspector of Schools writes: "The Supervisor more often than not assumes the carping attitude to leave himself a way of escape from his enemies, for constructive criticism is his weak point; he deals very largely in generalities, and bandies educational clap-trap; intellectual inertia is with him an obsession; if thought is proffered, it is the undigested thought of others; practical schemes he rarely thinks of."

If this be so, I am sure it is because the whole influence brought to bear on the Supervisor is stupefying in its effect. He is not asked to think, to be original; he is asked to preach the doctrine of others, whether it appeals to him or not.

How important a role is the Supervisor's? To put it briefly, his duty it is, as I take it, to see that education does not tend to *domineer*, but *dominates* the people, to use the valuable distinction of an American writer. For who is it who knows the sentiment of the people best—who is it who is most in touch with the spirit of the age, or has the best chance of sounding it? Is it not the Supervisor, who spends the major portion of his time with the people? To thrust doctrine down from above instead of leaving a way open for it to evolve from below is to adopt a course of action which may make educational activity a force insidiously apart from the people; the genius of the people, that ethereal spirit so hard to get in communication with, may hang its bruised head, and things may be done over it. Why is not the experience of Supervisors indented on more?—why should their function be only that of carrying out the instructions given by superior officers, and not also that of suggesting new lines of action and changes in policy? Of course their suggestions need be nothing more than suggestions, given as such; but what I think is necessary is that those suggestions should receive the attention they deserve from officers higher up in the service. At present the Supervisor is far too timid a being to think out problems for himself, and needs to feel that thought and criticism are expected of him, and that official schemes of work are not to be taken as immutable documents, or that the detection of flaws in them implies disrespect for the authorities. He should feel that he is entitled to hold the opinions he does.

To popularise Primary education is to make it dominate the people, and to achieve this end we need a band of workers who are convinced of what they preach, and to whom

each word they utter has a very definite meaning. To say that our Supervisors are all incompetent men, or to insinuate it, is to make a statement which is hard of belief; and to deny that there is a plane on which they might do their reasoning is to fly in the face of psychology. The fact is that their work needs to be better defined for them, and the kind of reasoning expected of them indicated. It is surely a pity to let their experience lose itself in the wiles and wastes of their perfunctorily-written diary, which is lodged in the Sub-Assistant Inspector's Office week by week, instead of its being served up in such a form that it may be available for purposes of illustration to higher officers. 'Theses in the process of manufacture' might perhaps describe these written opinions of Supervisors, the work of co-ordinating and editing the material resting with the Assistant Inspector. So might we hope to find spring up a body of literature as able in its own line as that issued by the English Board of Education, dealing directly with problems alive with interest in a practical, business-like manner, and so might the reproach of amateurishness vanish from the Department. So also might the people join hands with the Department, and work for the advancement—not of "modern" education, but of Indian education run on intelligent indigenous lines, and meeting the actual needs of the people. Courage is needed—courage to face facts and to admit that the present methods of work of the Department are rather too rigid, and in a way tend to stifle thought rather than encourage it—courage to banish that sullen pessimism which tacitly seems to assume that there can no good come out of whatever is indigenous.

EDWARD HENRY ANDERSON,

THE MADRAS UNIVERSITY AND THE INDIAN LANGUAGES.

IN the March number of the *Educational Review* "A Retired and Esteemed Educationist" concludes the series of articles upon this important topic, and gives for the benefit of his readers a summary of his observations, as below:—

(i) The neglect of vernaculars in this Presidency is due not to their exclusion from the compulsory courses of the University, but to their exclusion from the School Final Course.

(ii) The agitation for the reinstatement of the vernaculars is due "to the instinct of self-preservation of the Pundit, the selfishness of the Vernacular Examiners and the pseudo-patriotism of the grievance-monger. It is a phase of the reactionary spirit ostensibly in the interest of Hindu religion and traditions engineered by men who have never themselves cared to get a first-hand knowledge of the vernacular literature."

(iii) The reintroduction of the vernaculars "is calculated to outrage the feelings of the Muhammadans and Indian Christians" as their young boys will be compelled to imbibe a religion and traditions so opposed to their own.

(iv) The ancient vernacular literature has no culture-value and will foster caste exclusiveness and superstition thereby preventing a real union of the Indian people.

(v) Its study hampers the growth of a healthy modern literature in the vernaculars, and the spread of modern ideas from the educated to the masses.

The first of this formidable array of reasons admits the neglect of these Indian

languages but ascribes the neglect to the School Final Course. This position assumes that the amount of the vernacular that a student can learn in his school course is quite enough as an equipment for life. The validity of this assumption is open to grave doubt.

As regards the second argument it may be said at once that the Pundit might as well be left alone now that those more competent than our 'esteemed' but anonymous retired educationist have begun to think better of him. Besides he is not on the Senate and has nowhere shewn himself in evidence in this connection. Greater recognition and more adequate teaching of these languages do not necessarily mean that the Pundit should teach these; it is open to the genuine patriotism of our esteemed educationist to do the work if he can, as perhaps we are warranted in assuming. All else that the esteemed educationist thought it worth his while to put in writing in this connection discounts a great deal the esteem one would fain give him for the time and trouble he bestowed upon this subject. It would be safer to assume other people as honest as himself, however misguided their notions may be.

Argument three deserves as little credit. On the same lines of reasoning Greek and Latin should be forthwith abolished from European education altogether. It is, however satisfactory to have the feeling that such an absurd notion is not likely to be entertained for a moment, at any rate not on the grounds adduced.

In regard to the next reason against the introduction of these languages it will take a good deal of demonstration to prove the absence of culture-value. If what the esteemed

animus against these latter as even the Rev. Mr. Gardiner would seem to imply; it would be reasonable to note, however, that these gentlemen did make a mistake in regard to this particular subject, and that the shortcomings of the Pandit or the inadequacy of the old regulations is no justification for the error. As it is, vernacular composition is a compulsory course (taking in it the translation from a classical language) in the Intermediate. The compulsory principle is not therefore sought to be newly introduced. Two questions naturally arise out of this position—

(i) Is this compulsory composition adequate for the purpose for which it was introduced? If not, can it be mended without altering the regulations too much?

(ii) Would it be desirable to carry this into the B. A. Pass Course as well?

In regard to question (i) two facts stand out clear. First the number of hours allotted to the vernaculars has been reduced to two, and the teaching, such as it is, is confined to composition as far as can be made out. Secondly, in spite of all that has been said about the Pandit and his woeful want of capacity it is the Pandit that is entrusted with the work in several Colleges. It was abundantly clear from the information collected by the Committee and the discussions in the Senate itself that there has, so far, been no attempt either on the part of the University itself or on the part of the colleges to improve the quality of the instruction imparted. What is wanted, therefore, is a certain amount of regular teaching of the language itself on the lines of the teaching of the mother-tongue in France with the supplement of special classes in composition. This need not be interpreted

ed as anything very revolutionary, and such a course can easily be arranged for without meddling with any vital part of the regulations and without the least detriment to the principles underlying the regulations as they are. To put it more clearly if the University prescribe a course as in the Non-detailed study section of the English course and let the Colleges be asked to make proper provision for the teaching of the subject on more approved lines, better results will follow and no violence would have been done to the regulations so far as the Intermediate Course is concerned. There will be some difficulty in arranging the time-table and in apportioning the time among the several subjects of the course, but this is not in the least likely to be insurmountable. There is of course the consideration that those that go to the Colleges enter their course there with a certain equipment in these languages, and this is matter for the School Final authorities. Education in this particular as in other particulars has suffered for want of a co-ordinating authority and the need for such is far greater in this country than elsewhere.

Coming to the next point, namely the desirability of carrying this compulsory course into the B. A. Pass Course, it would seem very desirable to do so for the following reasons. The Pass B. A. is not meant to be a specialist. This latter has been studiously released from the burden alike of these second languages as of English. If the nineteenth century English is enough for him perhaps the Intermediate vernacular will equally suffice. The Pass B. A. stands entirely on a different footing. If he is really to be all that he is meant to be, it is reasonable to expect him to possess a knowledge of the vernaculars at least as good as that he has in English. To make provision in the course for this study with the other subjects left as they are would be a matter of considerable difficulty though a way out of it would seem quite possible with a little trouble to the Boards concerned. For a Pass man, not a specialist, the course laid down in English seems much too elaborate. It is hardly necessary to go into the full details of it here; but it would readily suggest itself to the English Board if they could only be persuaded to feel that some three to four hours a week will be required for the vernaculars. The actual details of the course can be arranged for easily keeping clear of all reasonable criticism as to archaisms, Panditry and all else of that ilk. The position of the vernaculars will not be improved by raising the percentage for a Pass or by the abolition of the classical languages as an alternative. The vernaculars fared badly under the old regulations by bad courses, bad teaching to a certain extent, and by an arrangement of examinations which invited neglect on the part of the student. The correct principle has been recognized in the new regulations but has not been carried far enough to ensure the results which are expected. The colleges have primarily to do this but surely the University ought to give them the lead.

research and made more satisfactory recommendations on the whole question.

S. KRISHNASWAMI AIYANGAR.

SCHOOL MARKS OF THE S. S. L. C. HOLDER.

AT the recent Educational Conference held under the presidency of the Inspector of Schools, First Circle, at Vizagapatam, on the 13th, 14th and 15th of May, the problem of the school marks of the S. S. L. C. holder was one of the subjects brought up for discussion in a very incidental manner. Mr. Iyengar, P. T., the Principal of Mrs. A. V. N. College, rose with the permission of the Inspector of Schools to propose a resolution on this question. The educational world of this Presidency are aware of the circular letter issued by the Syndicate of the Madras University to all the Principals of the Colleges, on the principles to be adopted in selecting and admitting S. S. L. C. holders into the collegiate course of studies. In that famous circular the Madras University Syndicate enunciated the principle of ignoring the school record of the certificate and of basing the selection on the marks awarded at the public examination. The Principals of the affiliated Colleges were even threatened that any leniency shown in the selection might be considered to be a sufficient cause to consider why the affiliation of the college should not be cancelled. Indeed the suggestions of the Syndicate fixed 40% for English and a mark above the Presidency average for the optional subjects. In a word a very enthusiastic attempt was made to reducing the S. S. L. C. to the Matriculation Certificate, for the University would grant such a Matriculation Certificate to all candidates thus admitted! It should be mentioned

This is the position of those that are dissatisfied with the position of the Indian languages in the Madras University which by the way occupies a unique position in regard to these languages chiefly owing to the character of these languages themselves. It was open to the Committee specially appointed for the purpose to have made the requisite

that the school marks were recommended for consideration more to disqualify the student! Once more the evils of the rigid external examination were re-introduced with all the vigour they had enjoyed in the hands of the University for a long time.

These suggestions of the Syndicate that came with the authority of rules were ignored and laughed at in some bold quarters. In some cases the Principals resented that their discretionary powers should be so harassed and questioned by the fossil Syndicate. But there were some Principals who, having been feeling the absence of such stereotyped ways of management for their guidance, welcomed them heartily and adopted them scrupulously. Last year in many colleges were witnessed the horrors of these suggestions. Students that were rejected by the Principal of their college could get admittance in the colleges of the neighbourhood. High school teachers began to put to themselves seriously the question why they should be conscientious in their marking. The spirit of the S. S. L. C. scheme was lost in two ways therefore. When these evils and horrors were discussed last year at the Teachers' Conference a resolution was passed. Mr. Iyengar brought up the same resolution this year also for acceptance by the Conference.

While last year the resolution was passed unanimously, this year the resolution was objected to by Mr. C. Govinda Rao, B.A., L.T., Headmaster, Kota-Ramachandrapur High School, Godaveri, who had last year supported it. He said that he had subsequently changed his position and that he would strongly commend the action of the Syndicate. On principle he would denounce the action of the Syndicate but as a practical measure the

action of the Syndicate should be maintained. He meant that in the absence of such measures adopted by the Syndicate the unattached high schools (i.e., high schools unattached to any college) had to sustain a great risk. The Principals of colleges would place different standards of marks in admitting students reading in their own high schools and those of other high schools especially those in the neighbourhood. Such procedure on the part of the Principals led to the impoverishment of the unattached high schools. That such different treatment might be made impossible, the Syndicate was led to lay down those arbitrary rules; and he would welcome them therefore as showers of blessings for such high schools.

As Mr. C. Govinda Rao hesitated to say so much and so plainly when he objected to the proposition, he could not have one who seconded his objection. The resolution passed with one voice of dissent ran as follows:—That this Conference requests the S. S. L. C. Board to take such steps as to ensure the recognition of the school marks obtained by a S. S. L. C. holder who seeks admission either to the collegiate course or to the Government service.

The resolution is indeed very happy. The S. S. L. C. is in its infant stage and augurs a bright future, should it be worked on proper lines. The rules of the University in reducing the certificates to a mechanical standard is really deplorable. But yet the voice of the objector should be heard. As a headmaster of an unattached high school situated in the neighbourhood of a number of attached and unattached high schools competing with one another for finances, he has felt the wrongs done to his classes and

he has therefore objected. But yet the harassing rules of the Syndicate to ignore school marks cannot be accepted.

I therefore try to propose another scheme for acceptance. A Board of six members—three Inspectors of Schools and three Principals of private colleges—may be constituted to matriculate every year the S. S. L. C. holders of all schools on the strength of the school marks valued in relation to the school average and the Presidency average and of the public examination marks and of any specific recommendations made by the headmaster of the school to which a candidate belongs. As this Board cannot have any personal interests, their judgment should be final. If a single Board for the whole Presidency be felt to be unwieldy, a small Board for each circle might be formed for this purpose. The Board may consist of the Inspector of Schools who knows about the efficiency and honesty of the marks of each school in his circle and all the Principals of the colleges in his circle. The Inspector will receive the S. S. L. C. books direct from the Board and he, in consultation with the Principals, may be empowered to pronounce who are eligible for being matriculated. Such an arrangement, I hope, will suit the position under consideration.

P. JAGANNADHASWAMI.

GROWTH OF VERNACULAR LITERATURE IN THE MADRAS PRESIDENCY.

IN the issue of the *Educational Review* for August 1912, there appeared an article from the pen of an eminent educationist on the subject of the neglect of vernaculars in the schools and colleges of the Madras Presi-

dency. In the course of the article the writer attempted a diagnosis of the probable causes that had contributed to this neglect and to arrive at these he had recourse to a comparison of the conditions prevailing in Bombay, Bengal and Mysore in this respect. He stated that in the Bombay University the vernaculars found no place at all in the University courses. This is not a correct statement of fact for the vernaculars can be taken up for the M. A. degree and some of the eminent public men of this Presidency are Marathi or Gujarati M.A.'s. But let this be. The writer continued that notwithstanding this the vernacular literature was in a flourishing condition in this Presidency. Turning to Mysore, where, so far as the University examinations were concerned, the conditions were identical with those in Madras, the Kanarese literature was observed to be progressing by leaps and bounds. It was further remarked that if the Bengali literature had been very widely cultivated, it was not due to the fact that it had been a compulsory subject in the University examinations; for—it was argued—if it were so the vernacular literature should have been in an equally, if not more, flourishing condition in the Madras Presidency also, where vernaculars were being studied compulsorily till very recently. From these circumstances the writer concluded, and in our opinion rightly, that the prescription of vernaculars as compulsory subjects to be taught in schools and colleges had done nothing in the past and would do nothing in the future to stimulate the production of works in these languages and that the causes for this want of responsiveness on the part of the Madrasis must be sought for elsewhere than in the attitude of the Madras University towards the local

vernaculars. Finally the writer gave his opinion—and here we must remark that it is not a well-considered opinion as we shall show presently—that *the causes of this neglect are to be found in the character of the people of Madras themselves.*

‘A peculiar diagnosis’ one is tempted to exclaim, a diagnosis that summarily damns a whole people numbering from twenty to twenty-five millions at least. However in the further exposition of this new theory that is so startlingly put forward the writer confined himself to a comparison of the supposed character of the people of Madras with the supposed character of the people of Bombay and completely ignored the examples of the other two provinces, viz. Mysore and Bengal, which had been brought in a little before along with Bombay for the purposes of this comparison. Is the omission due to the fact that the instances of Mysore and Bengal do not lend themselves so conveniently for the building up of the writer’s newly-discovered theory? For apparently the character of the Mysorean cannot be so very different from that of his Madrasi neighbour, and as for Bengal, it need only be mentioned that the Bengalis were known to be the most subservient of all Indians in servile imitation of everything English including the use of the English language, till only the other day when the partition set them by the ears and drove them into the other extreme of bitter hatred.

With the greatest respect to the eminent writer of the article, it must be remarked that the theory propounded is untenable without further and more convincing arguments. From our experience it appears to us that the people of Madras are neither the subservient horde they are represented to be

nor are the people of Bombay the patriotic and self-respecting paragons idealized in the mental regions of the fanciful writer. So far as the matter is capable of generalization at all the main causes of the neglect of vernaculars in Madras are more probably somewhat as follow.

(1) The modern Western civilization that has been brought into India by the British rulers introduced the Indians in the past and is introducing them at present to a large number of abstract ideas, modes of expression and even concrete articles of daily use for which there were and are no exact equivalents in the vernaculars. People were thus led to coin words and expressions for translating these ideas into their daily language. In the Bombay Presidency the new requirements were coined from the Sanskrit language as the classical mother of all the modern Northern languages. In Madras, on the other hand, Tamil, the modern representative of the original Dravidian tongue now lost, claimed a pride in its absolute purity from contact with the Aryan Sanskrit and the consequent contamination, and Tamil authors even anterior to the advent of the British culture had already religiously forborne from seeking the help of the Sanskrit language in composing their works. The effect of this spirit of exclusion was that the knowledge of the Sanskrit language was confined to an extremely limited class of theologians only and the ordinary Madrasi never acquired the habit of expressing higher ideas and sentiments in a dignified classical garb. Thus, when as stated above the English culture was disseminated through the length and breadth of the Madras Presidency through the medium of the English language taught in the high schools and colleges, and the ques-

tion of assimilating this culture naturally arose, the Madrasi found that he had neither the habit nor the necessary material ready at hand for forging the new vehicles of expression for the inter-communication of this culture. As is the case everywhere in the world the daily spoken vernacular of the people was of no avail in this respect; for the ideas and sentiments which were to be given expression to were all strange to that vernacular. In circumstances such as these every modern spoken language has to fall back upon the root-words of a dead language to coin the necessary expressions. In Europe these languages are of course Latin and Greek. In India they are Sanskrit and Persian and to a very slight extent Arabic. But none of these languages were in the good graces of the Tamil scholar; nor were they studied by any large number of Madrasis. Notwithstanding these drawbacks the spirit of the kinship of religion would have made the Tamilian turn for help to Sanskrit after all, as it was the language in which all the sacred Hindu literature had been written. But here came in a difficulty arising from the proud spirit of exclusion of his forbears. For this very spirit had been already taken advantage of by the Britishers, of course with the concurrence of the people themselves, to allow the substitution of vernaculars as second languages in place of the classical Sanskrit in the high schools, and the Madras University had followed suit. The Senate of that body argued that as Sanskrit was a foreigner in Southern India and considered as such by the people, the college students could not be encouraged to take it up by a rule similar to that obtaining in the other Indian Universities. The local vernaculars were accordingly freely permitted to be taken up

as second languages. This attitude of the University further curtailed the number of students who had a knowledge of Sanskrit. The results were disastrous to a surprising degree. For when the new ideas were to be conveyed to the vulgar multitude, the English educated Madrasi could not procreate a new Tamil word based on a Sanskrit root on account of his ignorance of that language. On the other hand the English word itself could not be so naturalised for after all it was far more foreign to the vernacular than the Aryan Sanskrit word would have been. A *via media* was found out of the difficulty. The English word without any process of transformation was bodily accepted and freely used in the vernacular. This process was attended with the least possible difficulty for English was the compulsorily daily taught subject to the students and the daily medium used by the official classes in the office hours, and was moreover the very language which had acquainted the educated classes with the new idea. Is it surprising then that this wholesale use of English words in vernacular speech became a regular habit with the educated classes and through them with the masses? One may be permitted to say that it would be surprising if it did not. By this process however the vernacular of the English educated classes deviated further and further from its old pristine purity till it has now become a mere *Anglo-Vernacular mixture* betraying at every step the exigencies under which it began to gain wider and wider currency. It thus appears to us that the slow growth of the vernaculars in the Madras Presidency is due largely to the neglect of the study of the Sanskrit language in schools and colleges.

That this is the proximate cause will be

borne out by an examination of the kind and quality of the modern Marathi and Gujarati literatures that have grown in this Presidency. Firstly these literatures are confined to prose works, the amount of poetry put forth being altogether insignificant. Secondly, they are extremely 'modern' in their ideas. Neither of these characteristics is surprising for the writers are mostly either men trained in the vernacular schools of the Presidency mentioned below or graduates of the Bombay University who had taken up the English and Sanskrit languages as their optional subjects for the B. A. degree. Thirdly a large number of the works consists of either translations or adaptations of the various standard English and a few French works, the major portion consisting of adaptations of works of romantic fiction. For instance Scott's *Talisman* has been adapted for the Marathi stage under the name of 'Prema-dhwaja' or 'the banner of love.' Mrs. Henry Wood's popular novel 'East Lynne' has been adapted into an excellent Marathi *Kādambari* (novel) entitled 'Mauik Bag.' Shakespeare has appeared in Marathi prose, and some of his plays, especially 'Hamlet' and 'Othello' have been adapted for the stage as well. We must at the same time add that in respect of romance, there are some very good *original* works also, as for example, 'Ajim Tārā urf or Ajinkya Tārā,' a thrilling story of the capture of the fort of Satara by the Mahrattas, a masterpiece of its kind by the most famous living Marathi author Mr. Hari Narayan Apte, who is invariably an examiner in Marathi for the M.A. degree examination of the Bombay University.

Lastly the most important characteristic of this literature with which we are concerned here is that the style in which all these works

are written is an extremely dignified classical 'backboned' form of Marathi teeming with Sanskrit words and compounds. As examples of some of the very ordinary terms met with it may be noted that 'literature' is translated into 'Vāṅmaya,' 'stage' into 'Rangabhūmi' 'high ideals' into 'Udāṭṭa kalpanā,' 'modern' into 'ādhunika,' 'western' into 'pāshchimātya,' 'editor' into 'sampādaka,' and lastly 'self-government' into 'swarājya.'

Turning now to Bengal we confess that we have no first-hand knowledge of the Bengali literature but we are assured from several quarters that whatever has been said above regarding the Marathi and Gujarati literatures applies even more forcibly in the case of the Bengali literature. This is not surprising; for it seems that many of the modern writers in Bengali are the *alumni* of the Sanskrit College of Calcutta, which the Hon'ble Sir Asutosh Mukerjee, the learned Vice-Chancellor of the Calcutta University suggested only the other day as the brilliant nucleus of an Oriental University.

Marathi, Gujarati and Bengali are Aryan languages and some of our readers may argue that this wholesale borrowing of Sanskrit words and compounds though quite compatible with these Prakrit languages is probably out of place in a Dravidian tongue. This is essentially a question of fact and to some extent of habit. We have a complete knowledge of one Dravidian language, viz. Kanarese and so far as that language is concerned we can assure our readers that such borrowing is not at all incompatible with the language. Neither does it mar its beauty. On the other hand it has added in the past very considerably to splendour of language and the poet Lakshmisha (Circa 1590 A.D.

the author of 'Jaimini Bhārata' and the first and foremost of modern Kanarese authors has freely used a large number of easy Sanskrit words and compounds. The two processes by which Sanskrit words are borrowed in the Kanarese language are (1) the 'tatsama' process, i.e. borrowing the word bodily, and (2) the 'tadbhava' process in which the word is changed according to definite rules corresponding somewhat to Grimm's and Verner's laws for deriving Anglo-Saxon words from Low German. So far as we are aware we do not see why similar processes cannot be adopted on an extensive scale in the case of Tamil, when they are used in Kanarese, as both Tamil and Kanarese are derived from the same original Dravidian tongue. In fact the 'tadbhava' process is apparently already in use in Tamil as for example the Sanskrit 'Shri' transformed into the Tamil 'Tiru.' In fine we cannot do anything better than exhort the Madras to shake off the proud spirit of exclusion which possessed some of their forefathers and still continues to haunt them and to clasp with fervour the ready helping hand held out by the Sanskrit language with its vast store-house of root words and derivative processes.

(2) The second cause of the neglect in question was the failure of the Madras Government to provide proper facilities for the higher study of the vernaculars. We do not say that this attitude was intentional or deliberate on the other hand we are almost quite sure that it arose from ignorance of the true method of encouragement of the vernaculars. For years together the highest vernacular teaching provided in the public schools of the Presidency was only up to the upper primary stage, i.e. the fourth vernacular standard. After that stage the verna-

cular was relegated to a subordinate position the English language taking its place as a medium of instruction. It is only in the last few years that provision has been made in some places for the use of vernaculars as media of instruction to a higher stage by the establishment of vernacular middle schools. In the Bombay Presidency on the other hand, the resources of the Local Boards supplemented by larger and larger annual grants from Government have been for several years last past employed in imparting vernacular education to a fairly advanced stage. The vernacular school course in this Presidency extends over a minimum period of 8 years including the infant class and at its completion comes the Vernacular Final Examination corresponding to the School Final Examination of the English Secondary School though some subjects at the latter are omitted from the former. The stage reached at this examination in the command of the vernacular is fairly high and a candidate is generally able with a little experience to contribute a good article to a vernacular paper on any modern literary topic of general interest to the public. We doubt whether the same could be said of any pupil turned out from any institution in the Madras Presidency. In the case of school-masters, this command of the vernaculars is further improved by the three years' vernacular training college course in which they are also taught the Sanskrit language in order to accustom themselves to the cultivation of a fairly dignified classical style in the vernacular when the nature of the subject dealt with so demands. In fact some of the school-masters who were so trained but have been subsequently dissatisfied with the conditions of service in the Educational Department, are

now editors, sub-editors and assistant editors of vernacular newspapers or monthly magazines having a fairly wide circulation or in some cases have become their regularly paid correspondents. We doubt whether there is anything parallel to these activities in the Madras Presidency. We know that a few years ago there was nothing. We doubt whether matters have improved since.

(3) The third probable cause is the want of Government encouragement and support to those who have taken up the advanced study of vernaculars and written good works in those languages. In this connection it may be remarked that in this Presidency the cadre of vernacular masters is divided into grades carrying salaries from Rs. 12 to Rs. 60 per month and regulated by a time scale of promotion. These masters are also eligible for appointment as Assistant Deputy Educational Inspectors corresponding to the class of Sub-Assistant Inspectors in the Madras Presidency. As regards graduates it may be stated that the majority of the staff of the four training colleges at Dharwar, Poona, Ahmedabad and Hyderabad and of the training school at Dhulia consists of graduates whose optional subject for the B.A. degree was 'languages' (i.e. English and Sanskrit in this case) and who have cultivated the art of writing and speaking in the vernacular. They are further encouraged to sustained effort in the advancement of the vernaculars by certain of their official duties. For instance the Vice-Principals, who are of course members of the divisional vernacular text book committees, are the departmental reporters on all vernacular publications sanctioned by Government for use as text-books or as prize or library books in schools and colleges as also on all vernacular publications

submitted to Government for patronage. They are thus required to be up to date in the knowledge of the development of the vernacular literatures. They generally draw a salary of Rs. 200 per mensem. The Principals of these colleges are in the Provincial Educational Service and draw Rs. 400 per mensem. Again in each of the four divisions the Educational Department publishes a vernacular 'Shālā Patra' or journal of education for schools and the editor of this magazine who is paid a special remuneration for the work is selected invariably from the staff of the divisional training college. The encouragement thus given to the cultivation of the vernaculars is invaluable.

In this connection we may mention another circumstance of some importance. It is this that in all the public offices of this Presidency, there are what are called vernacular departments, the clerks in which are vernacular schoolmen having no knowledge of English. These clerks, it is known, make up a respectable body of vernacular newspaper and magazine readers. They are thus a fairly potent factor in the development of vernacular literature. Further there is an annual Government grant for giving rewards to approved writers in the vernaculars, a committee, viz. the Dakshina Prize Fund Committee, being constituted to judge the award. This is a relic from the times of the Peshwas as the word 'Dakshina' indicates. Government also encourage such works from the ordinary budget grant for the encouragement of literature. Of the special importance given by the Bombay Government to the study of the vernaculars by the Civilians of this Presidency anybody who watched the proceedings of the Decentralization Commission must be well aware, as also of the neglect of the

same in Madras. We need not add anything here.

(4) A fourth reason for the neglect of vernaculars, which is closely allied to the first reason we have given above, was the non-provision of facilities by the Madras University for the advanced study of Sanskrit. The study of Sanskrit as a compulsory second language is useful so far as it goes, as for instance in creating a *clientele* of cultured readers for superior vernacular magazines. But it can never produce the same effect as would be produced by the study of the language as a special subject, which can only be done when it forms part of an optional group. Compulsion in the sphere of the intellect can never, it must be remembered, be attended with any conspicuous degree of success. It is the love of a subject for its own sake that is capable of working wonders and such love can invariably be best indicated only by the choice of the subject when it is one of several optionals. Moreover the study of a subject voluntarily (and hence specially) is always attended with greater and more rapid advance than if it were studied compulsorily. Turning to the Madras University, under the old regulations, there was no optional group of languages as in the case of Bombay. This defect has however been removed in the new regulations under which one may take up a combination of say Sanskrit and Tamil or Sanskrit and Kanarese and so on. This is an improvement in the right direction. But the facilities thus provided will be of no avail unless the Madras Government gives at least equal opportunities in the public services, especially the educational services, to graduates in these subjects. We think that each secondary school should be required to have

at least one such graduate on its staff just as it is required to have a mathematics, history or science graduate. In the case of the inspecting staff and the staff of vernacular training colleges a large majority of future recruits must belong to this class, and this class only. It is because these principles are followed in this Presidency that the vernacular literatures are in a flourishing condition.

In concluding the article we may be permitted to hope that the causes set forth in it will be more acceptable to educationists in the Madras Presidency inasmuch as we expect that they will be borne out by the actual conditions prevailing in that Presidency, which can be observed in detail only by those who are actually on the spot and are in close touch with the system of vernacular education in force there.

"DABBLER."

THE NELLORE RANGE VACATION CLASSES.

(BY AN EDUCATIONIST.)

THE Nellore Range Vacation Classes were held on the 29th, 30th and 31st May, 1913, in the Government Training School, Nellore, and they were a great success. About 65 teachers attended the classes. Model lessons on different subjects were given on all the important subjects. An exhibition was also arranged on a small scale and the teachers were shown the different charts, pictures and apparatus brought together for the occasion. The significance and the educational usefulness of each article was explained. Every attempt was made to make the exhibition instructive. Every teacher was compelled to take notes for his future guidance. The exhibits were arranged

in three different rooms. The geographical pictures lent for the occasion by the V. R. High School authorities were beautiful and instructive. 'Volcanic eruption,' 'A Chinese town,' 'A Japanese town' and 'New York' were very attractive. The historical pictures were coloured and were in glass frames. The coloured Bacon's charts were much admired. 'The landseer' series of natural history plates were also on view. Some drawings of the pupils of the Olcott Free Schools and some exhibits from American Schools obtained for the Nellore Exhibition were also to be seen there. The museum articles of the Municipal Muhammadan School, Nellore, were much admired by all the visitors. The A. L. Physiology charts, Philip's Typical object lesson pictures and picture map of the world were clearly explained to the assembled teachers. The anatomical models of the Government Training School were also there. Many of the teachers copied down the information contained in the physical geographical charts prepared by Mr. K. Rangaiya of Kovur. The fibre work from the Board Schools at Kristnapatam and Brahmadevam deserves special mention. Different kinds of wood, pressed leaves of different kinds and some good clay models and stone work belonging to Mr. M. Subrahmanyam, B.A., L.T., were also exhibited. The life-histories of the frog, the bee and the silk-worm belonging to the Municipal Panchama School were eagerly sought for by the teacher-visitors. Besides the stuffed specimens of snakes and birds, there were living specimens of pigeons, parrots, land and water-tortoises—pet animals from the Municipal Muhammadan School. Moral maxims in coloured type on card boards and a chart of good manners prepared for the occasion showed that the subject of moral instruction

was not neglected. Many stones were there though they required classification. There were also different kinds of shells. The coloured drawings of pupils of the A. B. M. High School, Nellore, were excellent and the nail drawings of one of the Elementary school teachers were equally good. Cox and Co.'s practical object lesson cards were also on view as well as Bacon's free arm and ambidextrous drawing charts and Nature drawing charts by Blackie & Sons.

In the evenings M. R. Ry. M. Subrahmanyam Garu, B.A., L.T., Sub-Assistant Inspector of Schools, Nellore Range, explained in a practical manner the modern methods of teaching the subjects of the Elementary school curriculum. To facilitate work he printed at his own cost a synopsis of his suggestions and distributed them *gratis* among the assembled teachers. On one evening M. R. Ry. M. Rangaswami Iyengar, the Assistant Inspector of Schools, Nellore District, brought home to the teachers' minds the method of teaching the lesson on 'The Cow' in the first reader. A public meeting was held on the 31st May at 5 p.m. with Rao Bahadur T. Raghaviah Garu, B.A., Collector of Nellore, in the chair. M. R. Ry. R. Subbarayudu Garu, B.A., B.L., delivered an interesting lecture on "Moral Training and Elementary School Teachers," and M. R. Ry. G. Yenadi Reddi Garu read an instructive paper on 'Andhra Mahabharatam.' Both of them remarked that the readers in use in Elementary schools were not quite good. A few verses composed by one of the teachers were then read in honour of the Chairman. A few remarks from the chair, the usual votes of thanks and the singing of the National Anthem in Telugu and in English brought the vacation classes to a close.

from the latter is strictly limited by the many other claims on the Local Government. From the aggregate of these resources will come the means for a definite advance along the whole line of elementary teaching. That such an advance is now an urgent necessity is universally admitted and fully recognized by Government. Though the ground lost in 1909-10 has been more than retrieved in subsequent years, yet the position of this province still compares most unfavourably with that of other parts of India. In the matter of primary education for girls, it is the most backward of all the major provinces. In the education of boys, it is little better, as is shown by the following statistics published by the Government of India for the year 1911-12:—

		Male population in millions.	No. of primary schools for boys.	Scholars (male) in millions.	Ratio to male population of school going age.
Madras	...	20.4	24,044	.83	27 %
Bombay	...	14.0	11,609	.63	30 %
Bengal	...	27.0	36,342	1.05	25½ %
Eastern Bengal and Assam	...	17.7	17,723	.67	25½ %
United Provinces...	...	24.6	9,258	.47	12½ %
Punjab	...	11.0	3,417	.18	11 %
Burma	...	6.2	4,764	.13	14 %
Central Provinces..	...	7.8	3,195	.23	19½ %

To improve the relative position of the province will mean years of effort but a forward move can at once be made in view of the liberal subventions that are now available. What increase of expenditure may ultimately be attainable cannot of course be foretold; but the Local Government trusts that it may be possible five years hence, unless the provincial revenues are dislocated by famine or other calamity, to devote at least 35 lakhs a year more to primary education than was spent on it in 1911-12, and thereby to add some

3,00,000 or 3,50,000 to the number of scholars attending primary schools.

3. Large as this increase may be in comparison with former expenditure, it is relatively small in face of a population of school-going age which is estimated at 3½ millions of boys and over 3 millions of girls. In view therefore not only of the actual magnitude of the campaign, but also of the urgent necessity of getting the best possible value out of every rupee expended, a thorough and careful preliminary investigation is imperatively called for. The scope of this investigation should include not only measures tending to improve the efficiency of teaching, but also all such means as are calculated to enlist the sympathy and co-operation of parents. While waste of public funds on experiments of doubtful value must be avoided, progress to be genuine must carry the people with it.

4. Much has already been done towards collecting information on which a general plan of campaign can be based. The enquiry into the causes of the recent set back of primary education, and the researches of the Rural Education Committee have brought together a valuable body of evidence, and opinion both expert and lay. The educational survey of the province at present being carried out by the Director of Public Instruction should be the means of furnishing comprehensive evidence on the location of new schools and their cost. In these and other ways several aspects of the general question have recently come under scrutiny. But the time has come to collect and sift the mass of opinion and evidence which is already on record, and to consider the broad educational and financial principles on which the scheme of future expansion should be based. What has now to be done is to pass the present methods of instruction under review, to determine the most advantageous employment of funds, to define the responsibility, financial and administrative of the Local Government and local bodies respectively, and generally

to formulate a complete policy of improvement and extension which can be promulgated for the guidance of all who devote or are interested in development of primary education in this province.

5. The Government of India in paragraph 11 of their resolution of the 21st February 1913, laid down a number of general principles in regard to primary education. These may be taken as the basis of the constructive work which is now in contemplation; but, as the Government of India anticipated, they may have to be modified in some respects to suit the local conditions of the province, and they will further require to be supplemented in numerous points of detail. To this end, as also to obtain competent advice in framing the comprehensive policy above referred to, the Local Government is desirous of securing the assistance of a strong representative committee which shall include administrative officers, educational experts, and non-officials who are specially interested in education. Such a committee will accordingly meet at Naini Tal early in June, under the presidency of Mr. T. C. Piggot, I. C. S., Judicial Commissioner of Oudh. In addition to this general committee it is hoped to have sub-committees or small separate committees at work upon certain special sections of the question. The result of their labours will be communicated to the main committee which will incorporate them with suitable recommendations in its general report. There is no desire on the part of the local Government to restrict the committee's enquiry to specified topics or by definite limitations. At the same time there are certain main branches of the subject on which recommendations are specially invited. These are:—

- I.—Improvement of teachers.
- II.—Suitability of the curriculum.
- III.—Education for special classes.
- IV.—Nature of the school buildings.
- V.—Encouragement of aided and indigenous schools.

VI.—Encouragement of girls' schools.

VII.—Machinery of inspection and control.

After due examination of these subjects the committee will be in a position to advise Government as to the most profitable employment of the available resources in the different parts of the province.

6. The following general observations on each of these seven topics may assist the committee in developing their enquiry:

I. *Teachers.*—The rules on pages 67 and 68 (chapter III) and 261 to 270 (chapter VI) of the District Board's Manual and pages 119 to 124, volume I of the Municipal Manual deal among other matters with the qualifications, pay and training of teachers in secondary and upper and lower primary schools. These rules read with rule 253 of the Educational Code show that primary schools depend largely on middle vernacular schools and normal schools for their better qualified teachers. This connection between the two branches draws into the scope of enquiry, the general scheme of vernacular middle education including normal schools. One of the main problems before Government is the extension of the supply, and the improvement of the quality of primary teachers. Various suggestions have been made. Of these the most obvious is the offer of better pay and inducements, a matter on which the views of the committee are invited, due regard being had to the limited sources likely to be available. Further points for consideration are whether the grant of superior pay and inducements will justify an insistence on higher qualifications; and if so, how facilities are to be provided for attaining such qualifications. The following suggestions which have been put forward are commended to the committee's consideration:—

- (i) to augment the pay of teachers in middle vernacular schools, and so to secure a higher class;
- (ii) to raise the standard for the vernacular

final examination and possibly to extend the course of study for it;

(iii) to encourage selected candidates to study for an extra year by the promise of admission to a normal school, and of scholarships if necessary.

A further suggestion which more particularly affects lower primary schools is to increase the stipends in training classes.

7. II. *Curriculum.*—(i) In considering the scheme of instruction the dominant issue is the durability and value of its influence on the mind of the pupil. There is a volume of evidence before Government that the child who finishes his schooling at the lower primary stage has acquired little that is useful to him, and is very unlikely to remember what he has been taught. It is for the serious consideration of the committee whether this is correct representation of the facts. If it is, then it is an inevitable deduction that the time, money, and endeavour expended on the education of children who do not pursue their studies to the upper primary stage are wasted, and they are harassed without receiving any compensating benefits, while, the fruitlessness of the results tends to raise a hostility to our educational system in the minds of the parents. It will be for the committee, if it accepts this view, to seek for effective remedies. The mere grouping of lower primary schools round upper primary schools may not suffice, and more direct action may appear advisable in the way of gradually raising the former to the status of the latter, and of linking the two sections more closely together. It may even be found desirable that the particular plans for the encouragement of education which take the form of the reduction or remission of fees can be more appropriately directed at the upper rather than the lower sections of primary schools. The whole question is one of the deepest importance requiring the earnest consideration of the committee.

(ii) The question of the text-books and courses

of study involve two main questions. The first is whether they should be identical in rural and urban schools; the second refers to their scope. The opinion of the Government of India, which is supported by a strong body of authority, is in favour of answering the first question in the affirmative. There may however be room for minor variations, either generally or in particular parts of the province. Instruction in the rent and revenue law should at once be rejected, and the value of quasi-practical lessons in agriculture is negligible; but there is a considerable feeling in rural tracts in favour of making children familiar with the village map and papers. As regards the scope of the curriculum there are two schools of authority. One would confine primary education to the teaching of reading, writing, and arithmetic sufficiently to enable pupils to read and write letters, keep simple accounts, follow a newspaper, and understand the patwari's records. The other would extend the course and train the children in habits of observation and analysis in the hope of strengthening their general intelligence and improving their chances of success in their ordinary avocations. With this object such subjects as drawing, manual instruction, object lessons and nature studies are treated as important ingredients in the curriculum. In considering the comparative advantages of the two systems of education, the committee will no doubt have due regard to the wishes of parents, the short time available for the whole course of primary instruction, and the capabilities of the teachers available now, or likely to be available for some years, for imparting in an intelligent and interesting manner anything beyond the range of the three R's.

(iii) Another issue of grave moment is the possibility of special moral or religious teaching in primary schools. Here again the attitude of parents is a factor of high consequence.

(iv) Finally the propriety of physical training on European or indigenous lines might be consi-

dered in connection with this branch of the subject, together with the necessity for introducing a simple course of lessons in hygiene.

8. III. *Education for Special Classes.*—The problems connected with this branch of the question are akin to some of those alluded to under head II (ii). It has to be recognized that our elementary schools cater for two classes of pupils. For one class their teaching is the basis on which higher education will subsequently be built up. As a mental equipment its gaps can be subsequently repaired; and its main foundation is to prepare the child's mind for the easier assimilation of more advanced knowledge. With the second class of pupils, the requirements are different. The primary school course is the sum total of his systematic education; he leaves it to follow his trade or calling. The teaching therefore which he should receive ought to be self-contained, complete in its degree and as durable as possible; for no subsequent opportunity will occur of correcting or supplementing it. It is thus a serious question whether an attempt should be made to differentiate the course for those two classes of scholars. Is it proper and practicable to have separate classes or schools for the sons of agriculturists and artisans, or for boys generally whose castes and occupations do not indicate the probability of their going on to secondary schools? If so, what type of special curriculum should be prescribed? Another phase of the same question is the provision of teaching for the lower castes, generically known as Sudras. From certain recent statistics it appears that out of nearly six million Chamars in the province only 1,063 go to school; out of 370,000 Kisans only 576; out of 990,000 Koris only 861; and out of 350,000 Bhangis only 5. The problem of altering this deplorable state of affairs is full of difficulties; but in solving them the Government is confident of special assistance from the growing feeling among the educated Hindu community in favour of elevating the condition of the 'untouchable.'

9. IV. *Buildings.*—(i) It is frequently suggested that the expansion of primary education is being retarded by a too rigid insistence on school houses of a comparatively expensive character. The Committee should therefore examine the standard plans prepared under the auspices of the Department of Education with a view to any practical simplification or cheapening which will not involve heavy recurring outlay on repairs. It should also be considered whether the plans are equally suitable for all parts of the province, or whether different styles would be appropriate in different divisions. And the Committee may find itself able to advise on the feasibility, during the earlier years of a school's existence, of hiring or securing on nominal terms, a building for it from the zamindar or co-sharers of the village.

(ii) In connection with the question of building, the Committee's attention is directed to the possibility of devising some means of testing the stability of new primary schools. Experience has shown that schools often come into existence owing to fortuitous circumstances and not in response to any genuine demand for education. The zeal of a district officer, or the need of a local person of influence, sometimes supply a temporary stimulus for creation of a school, which ceases to exist as soon as the stimulus is withdrawn. In such cases the money, if any, spent on the buildings is lost. It is therefore a matter for consideration whether in the case of schools which cannot stand a responsible test of stability, a guarantee should not be demanded for the provision of suitable school accommodation for a defined period, as a condition precedent to the opening of a new school.

(iii) Play-grounds and their equipment are a closely allied subject. Suggestions are invited from the committee as to what they consider advisable regard being had to other claims on the funds available. The embellishment of school buildings with neat and attractive garden plots is also a suggestion of interest,

10. V. *Aided and Indigenous Schools.*—The utility and scope of aided and indigenous schools are matters on which the Local Government will value the matured opinion of the Committee. Doubts have been expressed as to the value of the education they impart, and the role assigned to them in the Government of India's recent resolution is a strictly limited one. On the other hand, the Local Government while fully agreeing that no countenance should be given to 'venture' schools, is impressed with the belief that there may be private schools which meet a genuine local demand, and that special sectarian schools such as maktabas and pathshalas frequently convey, or could by a Grant-in-Aid be induced to convey, a moderately good education comparable with the instruction in the upper primary sections of District Board schools. If this view commends itself to the committee, it would be well to undertake an examination of the Grant-in-Aid rules in the District Board Manual and to review them as regards the adequacy of grants, the general conditions imposed, and the degree of control insisted on.

11. VI. *Girls' Schools.*—This is a subject in which the problems, while parallel to those already referred to in connection with boys' schools present special difficulties of their own. The need for improvement and expansion is particularly pressing. The statistics published by the Government of India, to which allusion has been already made, show that in this province the percentage of girls in primary schools to the total female population of school-going age is only 1·2 per cent., while in the Punjab, and the Central Provinces, in which the proportion is next lowest, the percentages are 2·2 per cent. and 2·5 per cent. respectively. Signs are not wanting that public interest has been aroused, but so far little practical work has been done except by the sustained effort of individual enthusiasts. In these circumstances it is advisable that Government while not shrinking from its responsibilities in promoting female education, and not hesitating

to take the initiative in areas where development would be otherwise indefinitely postponed, should follow and aid private enterprise, rather than embark on delicate experiments with the risk of running counter to prejudices, the extent and strength of which it is difficult to gauge. The advancement of female education, cannot be on a purely statistical basis, and the Committee's recommendations are invited as to the best means of securing it by encouraging and assisting the opening and maintenance of private schools under reliable management. In regard to Board's schools it should be considered to what extent small girls can without objection be taught in the same school as boys. The Committee should also advise what, if any, modifications of the primary curriculum are necessary for girls' schools and whether special text books, and reduced hours of study should be prescribed for them.

Finally there remains the thorny problem of the supply of teachers. This is a source of growing anxiety and difficulty, and any suggestion for solving it will receive sympathetic consideration. It is hoped that the committee will be assisted in this part of its labours by the conclusions of a separate conference of ladies and gentlemen who have practical experience in the matter of female education.

12. VII. *Inspection and Control.*—With the official inspecting staff, the policy of Government has been to associate non-official school committees whose functions are laid down in the District Board Manual. The manner in which these functions are expressed, and the means by which the interest and co-operation of the people may be enlisted on behalf of primary schools are matters on which the Committee's opinion and proposals will be welcome. The officials brought into immediate contact with primary schools are as a rule the Sub-Deputy Inspectors. The advice of the Committee is requested on a proposal to increase their number, so that there may be on the average one per Tahsil, as well as on a proposal to appoint a separate Sub-Deputy Inspector for the schools in each of the larger municipalities. As regards Inspectors the Local Government will be glad of the Committee's views as to the

advisability and necessity of appointing a certain number of additional Inspectors, possibly one for each of larger divisions, due regard being paid to the anticipated growth of primary schools, the assistance with the Boards will expect from the Education Department, and the prime importance of the most economical use of public funds in a campaign of this magnitude. The question of improving the pay of the inspectorate in all its grades is before Government at present, but any suggestion which the Committee may wish to offer will receive the most careful attention.

13. Finally the Committee is invited to review and report on the necessity of the revision of the regulations for primary education as promulgated in the extant orders in the District Board and Municipal Manual and the Educational Code.

14. Having reviewed the whole field of primary education, the Committee may find itself in a position to formulate some general principles for the distribution among the various divisions, or even districts of the province, of the funds, which it is expected will be available for the development of primary education within the next quinquennium. The selection of the areas in which new schools will be opened, or of the private schools to which aid will be given, is essentially a matter which each District Board must determine for itself. But, if consistent and general progress is to be made the grants of public money must not follow the idiosyncracies of individual Boards or district officers: they must be used as a lever for securing moderate uniformity in the advance. It may consequently be possible to make a tentative allocation of our resources by areas, and thereby to indicate the ideal at which each area should aim. The factors for this calculation, empirical though it must largely be, are the existing standards of literacy in the area, the school-going population of the cases which welcome education, the present supply of schools, and the share which the area may reasonably be expected to take in supplying the 300,000 children whom it is hoped to secure as a minimum addition to the number of the primary scholars in the province.

EDUCATION IN THE MAGAZINES.

(INDIAN).

Education in Japan.

The Shoguns who had held sway in Japan for a period of about six hundred years were opposed to popular education under the mistaken notion that the spread of education might weaken their hold on the country and deprive them of the ruling powers. But with the accession of Mutsuhito, father of the present Mikado, national education became a question of paramount importance on which both Government and people bestowed the greatest attention and care. While the former began by starting model schools in every town and making education compulsory by legislation, the people followed the lead and founded schools in villages and hamlets to meet local requirements. In this way within a comparatively short space of time every village of Japan had arrangements made for education on national lines. But the Japanese were not contented with this: They set themselves to find out the best methods of imparting instruction to their boys and after years of discussion and experiment, kindergarten was accepted as the best system, and introduced in all the schools of Japan. Good care was also taken in the selection of text-books, and those that are now in use in elementary schools are written in easy and elegant language and contain beautiful and instructive stories, most of which are anecdotes taken from the lives of distinguished patriots and national heroes. Guardians and parents render the boys every assistance in going through and understanding these stories and stimulate their interest and curiosity by the manner of their telling them. Games and entertainments form a special feature of Japanese schools. In every one of them music holds an important place, and it is a charming sight to see boys in uniforms coming out of the schools in files at the close of school hours singing songs in sonorous strains. Whenever two or three boys meet they fall to a tune and are joined by other boys in the streets. There are again excursion parties in which both teachers and boys go out for long walks. On such occasions the boys are to inure themselves to all sorts of bodily hardship and suffering. One day a large field filled with mud and mire is to be crossed in the midst of rain and storm, another day it is a high peak of a mountain which is to be ascended after miles of tiresome journey in scorching sunny weather. It is a common sight to see Japanese children being thrown into the sea or the river with a

view to teach them the art of swimming. Sometimes also they are divided into parties and fight in tournament in the course of which they are given practical lessons in all the tactics of actual warfare. A boy guilty of an offence is not given any corporal punishment, nor even spoken to harshly or with words of rebuke, a few words of advice followed by detention after closing being deemed sufficient punishment and adequate corrective for all paltry offences. If a boy be beaten by a school-fellow, he has no redress to seek, only reprimand to meet, for an unavenging silence in this matter denotes not only cowardice but also loss of family prestige and honour. The Japanese language consists of more than 3000 characters. Japanese children have no pens: They use brushes instead. The facility with which they handle the latter well prepares them for the arts of drawing and painting in which every Japanese boy is more or less proficient.—*The Leader*.

Growth of Education.

A lecture on the "Growth of Society and Education" was delivered by Mr. D. P. Thakore, in the Pachaiyappa's Hall when the Hon. Mr. Justice P. R. Sundara Aiyar presided. The following is an abstract taken from the lecture:—

"Education is as the etymology of the word denotes, a process of drawing out what is inherent in man. A system of education which provides the largest scope for the fullest possible development, growth and progress has a claim to our best attention. Most of the modern systems of education fail to find the necessary scope for the development of native talents and so are not commendable. Instead of fostering natural gifts they tend to suppress them. The object of education is to prepare the student to successfully fight the battles of life and to increase experience. Since the artificial civilized environment is created, education has become all the more a matter of necessity. The only way of securing large and efficient results by means of education is to give it in a liberal and practical manner, on lines recommended by our past experiences of good and evil. So education must be made compulsory and obligatory and also free of all costs in the case of children and young men whose parents cannot afford the means of bringing them up. In this connection, it should be observed that the claims and interests of the other sex should not be overlooked. If the work of progress is to run smooth and unhampered, education must be extended to women folk also. To deny them education is an act calculated to encourage

ignorance and superstition. Again, every educational policy which aims at perfection should adopt such means and methods as would lead to a perfect development of the health and strength of the body. The body requires to be taken care of as much as the mind.

The general concern of all educational schemes should be to get good practical results, and this can be done only when example, experiment and practice are given in the place of unsubstantial theories. When this has been effected, the human talking machine will be transformed into an actively productive organism and will be regarded with respect, as a fellow labourer worthy of his hire. If education is a means to progress and freedom, the child needs not only the three R's, book-learning, and general knowledge of sciences but it imperatively demands practice in using his hands, command of tools, opportunity to test practically the value of theoretical knowledge and living examples to prove the truth of professed precepts.

Improvement of Schools.

The Second Anniversary of the Tiruvalur Board High School Day was celebrated with *eclat* on the 31st ultimo. The Hon'ble Mr. V. S. Srinivasa Sastri delivered an interesting lecture from the chair, in the course of which he said:—

Old boys meeting together cannot spend their time more profitably than to think of improving the school under whose roof they are met. It always struck me as an imperfection in the arrangements that no machinery is provided for interesting the old students in the welfare of the school, I have myself been an old boy of several schools. I have felt greatly interested in their growth. I have often thought that I may be useful to the authorities. There is no means of my comparing notes with those who might take an interest in the institution. A meeting of old boys like this might be made an occasion for discussing the future of their school. That is one thing that might be done to improve it and be made the means of affording suitable education to the children of the locality. I have known really some useful ideas come from those actually unconnected with the management of the institution. Some of you are educationists engaged in the shaping of other institutions so that you should be consulted in the management of the school. This seems to me to be only natural. However, I know there are a great many difficulties connected with it. If in your meeting of teachers, the Headmaster who alone

is responsible for the internal working of the school, consulted with you, placed his difficulties before you, took you completely into his confidence and acquainting himself with what is taking place in other places that would be the means of adding fresh life and vigour to the work of the school. Such a thing is nowhere done. I know of school and college days; they are mostly composed of students of the year whose advice on such matters may not be a very great assistance: but old boys like you who are mature men, a great many of whom are directly connected with education may serve a useful purpose by discussing the wants of a school. Gentlemen, I am aware of the real condition of many of our indigenous schools of this Presidency. I know every school has its crying wants. There are defects of one sort or another, most of them well grounded and what stands in the way of improvement being effected, is usually what we call "vested interests." An old teacher who ought to be retired continues still on the staff. Nobody has the courage to tell him "will you please make room?" A manager who is a meddlesome person rules the school as if he were himself the Headmaster with crude notions, borrowed perhaps from the neighbouring fields and treats the masters as personal serfs; or it might be through long years of lax discipline boys have got out of hand, and enthroned and dethroned masters at their pleasure. It is the strong hand alone that can put down these evils and effect reform. Some family will have to suffer, some one person put to disgrace, or some inefficient person removed from the place which he has usurped. In such cases poor Indian Society is under a very serious disadvantage. We have always had an enormous love for individual comfort and very little regard for institutional efficiency. A person who is unwilling to sacrifice the interests of the school simply because an old man is likely to suffer is apt to be looked down upon as exceedingly severe. If the remedy is not applied at the right time power is weakened, action paralysed, dissatisfaction grows worse and worse, and the man who comes to sweep inefficiency away, has to inflict greater damage. It is always ill-considered charity which is exercised in favour of individuals against large institutions. Nearly every school has its evils impairing its efficiency. What we want is a strong public opinion backing up the hands of the reformer, and strengthening his hands. If new forces are to be brought into existence in our society it is the educational institutions that we have to regard first and foremost. In schools inefficiency ought not be

tolerated, nor leniency shown. Old boys of some educational experience who have learnt the exact condition of things first-hand and listened to all sorts of complaints and who devise remedies and suggest them to the proper authorities cannot be easily put away. I know it requires a great deal of courage and self-sacrifice to sit down and frame workable resolutions. Nobody can accuse these old pupils of selfish designs.

Efficient Education.

The Poona Municipality presented an address of welcome to His Excellency Lord Willingdon on the 17th instant. The following extract from His Excellency's reply is very interesting:—

"Efficient education for the youth of every country is a matter of the deepest concern to all Governments and you can be assured of our sympathetic consideration in carrying out the excellent scheme contained in your address. But, important as education of the brains, I am one of those who have always felt that education of the body is an equally urgent necessity. I am therefore much interested to find that your proposals seek to secure as well healthy homes and open spaces for your people which will ensure their children being brought up vigorous in brain, strong and self-reliant in body fitting themselves by work and healthy exercise to become useful and honourable citizens of your town."

FOREIGN.

Mr. Pease on Education.

Mr. J. A. Pease, M.P., President of the Board of Education, addressed the meeting of the Association of Teachers in Technical Institutions which had been in Conference during the day on May 13. Alderman Warbarton, Chairman of the Bradford Education Committee, presided, and was supported by the Vice-Chancellor of the University of Leeds, Mr. Michael Sadler, C. B.

Mr. Pease said he would like to strike a note of warning in regard to what he was about to say. He was not going to outline the new Education Bill; that must be deferred until he had an opportunity of addressing his fellow-members of the House of Commons. It was, of course, open to them to draw their own conclusions from his expressions of thought, and it was also open, he supposed, to the Press to make such shots as they liked with regard to the future proposals of the Government with regard to education. He invited them to study the present position. We had about six millions of children attending Ele-

mentary Schools, and of those only one in 16, or 6 per cent., went forward into the Secondary Schools of the country which were recognized by the Board of Education. Each year the proportion of children entering the Secondary Schools from the Elementary Schools was increasing, but there was still a great gap, because in actual practice they realized that a large number of people desired to send their children to Secondary Schools who, owing to poverty, were unable to make the necessary sacrifice, even though their children obtained free places.

One of the problems was to know what could be done to enable children, irrespective of their social position, to go through the Secondary Schools and on to the Universities. The problem had not been solved, though much had been done in that direction. There were, of course, higher Elementary Schools—he thought about 50—in the country. They had to face what he regarded as a very unfortunate decision in the Cockerton Judgment which prevented anything like higher education being given in the Elementary Schools. In rural districts there were a large number of schools which could not get into touch with Secondary Schools at all. Therefore it seemed desirable to him that they should abolish the Cockerton Judgment so that in the last year a certain amount of training might be given in rural areas. They had also got continuation schools, which occupied a unique position, and so far as they went they served a very good purpose but there was some lack of persistence in boys and girls leaving schools, and they had to consider whether they should use compulsion in relation to attendance at continuation classes. He was of opinion that compulsion should only be resorted to when they found that all voluntary means had failed. It would be better if the young folks readily went to continuation schools rather than being compelled by statute. No matter how good evening work might be, it was but a poor substitute for day work.

They had, however, to face the appalling fact that a large majority of the children who attended the Elementary Schools and the foundation of whose education had been well laid, did not go forward and continue their education at all. They saw boys and girls hopelessly drifting into blind alley occupations, and it was for those who believed in education and for the government of the day to make proposals which would gradually draw into the educational net nearly the whole of the population which left school at 14. They had to provide the preliminary training necessary for those who desired to proceed

into occupations which required highly-trained knowledge, such as the public services, public life, the learned professions, the control of large commercial undertakings, and so on. But it was to technical education they must look to take the great reserves of the country, and with the decay of apprenticeship it was absolutely important, if they were to face international competition, that they should be up and doing. He had been amazed at the appreciation of employers of trade schools, day trade schools especially, and something more was to be done to increase the day trade schools. He was glad to say that Mr. Lloyd George had looked at the matter from the same point of view as himself, and it had been decided to increase the grant from £2 17s. a head to £5 for day students, and for those who were in residential institutions, such as training ships, and for the mercantile marine and the Navy, the grant would be £10 instead of £5 in the past.

Browning's Earnings.

An extremely interesting letter, written by Browning in 1850, and hitherto unpublished appears in the "Daily Chronicle." The contributor, Mr. J. J. Rossiter, explains that it was written to the Income Tax authorities. It is dated 19, Watwick-Crescent, W., the 23rd March, 1850. We give the following extracts:—

"My poems are unpopular and unsaleable, being only written for myself and a certain small number of critics whose approbation is satisfaction enough. I publish them—never more than one in a year, at various intervals—sometimes of several years. My publishers give me a 'royalty,' whatever they please, and I derive no more profit from the transaction: I should do so if the works reached a second edition, but they never do reach it; only one piece, many years ago, had that distinction.

"The sum I thus receive I supposed to be capital; if I invested it, the interest would, of course, be part of my income. But I have furnished you with an account of the little independence which enables me to write merely for my own pleasure, and not that of the general public.

"You will see by the letter from my publisher, which I enclose, that for the only book I published last year I got £125, and that rather from his considerate kindness than hope of profit (the 'last ten books' to which he alludes have been printed in the course of some eighteen or twenty years).

"It certainly seems to me if I were to sell as many books from my book-case as would produce £125—that would not contribute any income. The one instance of my contributing to a magazine was ten years ago, I think—when wanting to help a charity, I gave a poem the produce of which (£100) I handed over at once.

"But I sometimes get a sum from another source, under conditions quite different. My books consist of poems published from 1833 to 1863, or thereabouts—all at my own expense, which was never repaid. When eventually collected they were stereotyped, and sold singly in volumes; and whenever any fresh copies are struck off, this is called an edition and I receive a small 'royalty.'

"Last November, by this process 'Volume 5,' brought me £37-10s.

"I believe I have not yet received what laid out in the original and more expensive printing—to say nothing of profits in the case. I get in like manner a similar sum for the poems of my late wife; but this is virtually a gift due to the publishers' good feeling—as the copyright is expired, and he or anybody may print them at his pleasure—as was done last year.

"I was presented in November with £62-10s., on this account.

"I have got a good deal of reputation—University honours, and so forth—but that is just because I never wrote for money. My works circulate very largely in America, but do not bring me a farthing. I am well aware many of my literary friends obtain more for a single poem, novel, or play than I ever did from all my works put together. But I take my way.

Examinations.

There are few men in English public life whose speeches are always worth reading, and fewer still whose every utterance deserves attentive study. Mr. Balfour belongs certainly to the former and probably to the latter class. His remarks in the recent debate upon the Education Department furnish a case in point; and we make no apology for reproducing at length that portion of them which concerns India, more than ordinarily now while the Public Services Commission is slowly proceeding with its labours. The competitive examination is the engine which has officered India in the higher branch of Government service since the Mutiny, and has therefore come to be the criterion by

which indigenous education is tested. Mr. Balfour does not share the enthusiasm of those who think that the best all round man can be found by the machinery of the examination room. 'Superstitions,' he truly observed, 'are very apt to grow around parts of the policies which we adopt, but I should like to hear a really good commentary on our system of competitive examinations. The hon'ble gentleman who has just sat down described the inscriptions of honour put up in elementary schools recording the names of those who have successfully passed examinations. Ask any parent—I do not care from whatever class he may be drawn—who has a son at a Secondary school or a University, what he most desires, and the answer will be, "Success in examinations," and so it goes on. I do not deny that in certain respects examinations, and even competitive examinations, are an absolute necessity; but I think we have got into the habit of talking of that which is an unhappy necessity as if it were an admirable institution. Examinations are really most soul-killing institutions. I believe they put the human mind absolutely in a wrong position with regard to knowledge. I believe they are very bad for the teacher and very bad for the taught. You hear it said "So-and-so is a most admirable school and has the best teacher ever known." The question is asked, "On what ground?" and the reply is that a certain proportion of his scholars get such a number of exhibitions or whatever it may be. That and that alone is the test by which we measure the merits of the system and the results upon the child or young man and the benefit to the country. I believe it to be wholly and utterly wrong from beginning to end. I am quite aware that some of the praisers of the old system, who say that we got better men in public service and elsewhere in the old times when there were not these violent competitions, exaggerate greatly; but do not let the Committee believe there is no truth in what they say. There is some truth in it. We all know, and if we took the trouble we should all know more, of the manner in which you sap the vitality of the young and make them so admirably adapted to pass examinations successfully that, when the necessity to pass them is over, they are adapted to do nothing else whatever. I think those who criticized our ordinary method of education in the old days saw the dangers of it. In those days there was great jealousy; the question was asked, "Is general education necessary?" and the suggestion was made that it did not matter. All that has gone.

State Sovereignty.

Dr. C. F. Adams (Harvard University), Lecturer on the History and Institutions of the United States of America at Oxford University, delivered the fourth and concluding lecture of the series at Oxford. He referred to the subject of which he treated in his first lecture—the American form of local self-government known by them as State sovereignty. Great Britain had for years, he might even say for generations, been wrestling with the Irish question. Ireland, as they in America had sufficient cause to realize, had for centuries been a restless, discontented, and at times unruly portion of the United Kingdom; it was so still, and they were now considering, and proposed apparently soon to enact, a measure designated Home Rule. Following upon the War of Secession in America there was a section of the country seething with discontent, there was a spirit of restlessness, with acts of violence and outrages on individuals. This was only 40 years ago; to-day peace, concord, and good-fellowship reigned throughout the country. Paradoxical as it sounded, the remedy for the ills consequent on the war was found in a recourse to the system which had caused it. The principle of State sovereignty applied in its extreme form in practice led to the trouble, but 15 years later that same principle in its proper form, now known as Local Self-Government, or, in other words, Home Rule, brought to a close the unrest and disturbance which naturally ensued from strife. In this result, historically worked in their case, was there a lesson beneficially to be studied by Great Britain in disposing of the issues still confronting it in Ireland? There was the evidence, among others, of Dr. Russell, *The Times* Crimean Correspondent, that the hate of Celt to Saxon, and the contempt of Saxon for Celt, simply faded and grew expressionless when compared with the contempt and hate felt by the Southron towards the Yankee anterior to the Civil War and while it was in progress. But it was all over now—ancient and forgotten history. Not one man, he made bold to assert, could in all America be found gravely and dispassionately to advocate a recurrence to the policy of force and repression to which a mistaken recourse was had during the brief and discredited period between 1866 and 1876.

Technical Education.

The Seventh Annual Conference of the Association of Teachers in Technical Institutions was opened at Bradford on May 12, Mr. P. Coleman,

of the Northern Polytechnic Institute, London, presiding.

In his address the President said that at present teaching was on average ill-paid. A few years ago it was disgracefully paid, and the improvement was only a relative one. A technical institute could not be said to give adequate remuneration if a Principal's salary for full time was less than £500 or a full-time qualified teacher's salary was less than £160 in the case of a man or £120 in the case of a woman. It was quite erroneous to suppose that the salary acceptable to the young teacher with little or no experience was a proper recognition of the services of a man of ability who had worked for 20 years. The report and recommendations of the Royal Commission on University Education in London showed a bias that could only be due to a complete misconception of the work and standing of the London polytechnics. In any national system of education technical education required the most help, if it was to be placed on a proper basis and was to be able to fill its proper functions in the national economy. Perhaps the greatest need in the English manufacturing world to-day was the realization of the necessity for a course of training in a technical college as a preliminary to successful work in the direction of industry. The need was being realized more and more, and he hoped the time would soon come when employers generally would realize that it was good business to send their apprentices to technical institutions during the day for a limited number of periods in the week. If the nation was to be an educated nation a post-elementary education must be the rule and not the exception. A large extension of the system of junior technical schools was absolutely necessary if, under modern conditions, English industry was to continue to be carried on by skilled and intelligent labour.

Colonies in International Law.

The first of a course of lectures on Colonial problems organized by the University of London, King's College, was delivered at King's College, the subject of the opening lecture being "The Colonies in International Law," and the lecturer, the Rev. Dr. T. J. Lawrence, formerly Deputy Professor of International Law in the University of Cambridge. Dr. Lawrence, in the course of his lecture said the position of the Colonies in International Law was full of difficulties and even of danger in the future, and was likely to impose a heavy tax on the wisdom and good-

will of both rulers and people. In connexion with the question of neutrality he laid it down that the great self-governing Colonies could not invoke the principle of limited liability. In war all parts of the Empire must sink or swim together. He expressed much sympathy with the school of political thought which has arisen more prominently in Canada, which objected to being obliged to spend their blood and treasure in any wars which do not affect their rights and interests, and which they might hold to be morally indefensible. Hence arose the disposition to claim that their armed forces should be entirely under their own control, and he did not think Great Britain disputed that. But neutrality and belligerency were functions of sovereign States. A Power could no more be neutral in part and belligerent in part than a man could be married in part and single in part. No foreign country would recognize any such in-and-out arrangement. If ever an attempt was seriously made to create a curious race of international entities we should be British at one moment and non-British at the next. They might be certain that it would break down badly. If some small central body could be created on which served together the British Prime Minister and the Foreign Secretary for the time being, along with representatives of the Ministry of the day in each of the great self-governing Dominions, it seemed to him possible that the great democracies concerned might be induced to place in its hands the momentous issues of war, peace, and neutrality. If this development of a new organ to perform this most important function ever took place, every war would be an Imperial war in reality as well as in name, and therefore no idea of an attempt to keep outside it would ever arise in any of the political entities whose representatives had agreed to make it.

Literary Remuneration.

At the annual dinner of the Royal Literary Fund, held at the Savoy Hotel, London, Lord Curzon spoke on Literary Remuneration, from which we take the following extract:—

He was not going to argue that literature was a grossly underpaid profession, although when he compared it with the emoluments of some others he felt a passing qualm. The remuneration of lawyers and doctors was stable and secure. Not so with literature. Literature gave its great and splendid rewards, but they fell to a few. Literature also had its great, disastrous, and pitiable failures. The fund did not exist for supporting unrecognized genius. But outside

the magic and irresponsible circle of genius there were a number of men and women who sometimes in the accident of life stumbled and fell by the way. Some of them had chosen a wrong vocation, and others of them were broken by ill-fortune. Some were only temporarily submerged and required only a helping hand to lift them on to dry land. Those were the cases that were taken in hand by the fund.

Some eminent persons had held the view that poverty was the propelling force of literary genius and had started the amazing thesis that narrow means were essential to great literary productions. He declined to admit that there was any stimulus in poverty or any inspiration in secular. Voltaire lived happily for himself in days before Marconi shares, but Voltaire made a very good thing out of several Government lotteries. He speculated largely and successfully in the corn trade, and he made a good deal of money out of army contracts. He had no doubt that had Voltaire lived nowadays there would have been a House of Commons Committee sitting on him. But, nevertheless Voltaire wrote with the tongue of men and of angels. According to Lord Rosebery they ought to find a Lazarus in every niche of the temple of fame. It seemed to him, as regarded literary productions, that the rich man and the poor man were in much the same condition.

The Future of Poetry.

Mr. Edmund Gosse delivered a lecture on "The Future of English Poetry" before the English Association, London, on May 30. Mr. John Bailey was in the chair.

Mr. Gosse said that the principal danger to the future of poetry seemed to him to rest in the necessity of freshness of expression. With the superabundant circulation of language year after year, week after week, the possibilities of freshness grew rarer and rarer. The obvious, simple, poignant things seemed all to have been said. Each generation was likely to be more preoccupied than the last with the desire for novelty of expression. Accordingly the sense of originality, which was so fervently demanded from every new school of writers, would force the poets of the future to sweep away all recognized impressions. He thought that in consequence the natural uses of English and the obvious forms of our speech must be driven from our national poetry. In new generations there was likely to occur less description of plain material objects, because the aspect of these had already received every obvious tribute. So also there

could hardly fail to be less precise enumeration of the primitive natural emotions, because that also had been done already and repeated to satiety. Poetry as an art, in one shape or another, would escape from the bankruptcy of language, but it would only be at the cost of much that they at present admired and liked that the continuity of the art of verse would be preserved.

He expected to find the modern poet accepting more or less consciously an ever-increasing symbolic subtlety of expression. In his anxiety not to repeat what had been said before, and in his horror of the trite and the superficial, he would achieve effect by wrapping the truth in darkness. The domain of verse had been persistently narrowed by the incursions of a more and more powerful and wide-embracing prose. No ode orthrenody could equal in vibrating passion Captain Scott's last testament. The poetry of the future was likely to be very much occupied with subjects, and with those alone, which could not be expressed in the prose of the best-edited newspaper, and he believed that the closing up of the poetic field would isolate the poet from his fellows. That was likely to lead them to band themselves more closely together for mutual protection. He also thought it very likely that sexual love might cease to be the predominant theme in lyrical poetry. The poetry of the future might not improbably become more and more dramatic although perhaps by a series of acts of definite creation rather than as the result of observation which would be left to the even increasing adroitness of the brilliant master of prose.

THE UNIVERSITIES.

MADRAS UNIVERSITY.

We are asked to publish the following:—

No. 2133.

SENATE HOUSE,

5th May, 1913.

pm

JOHN J. HENSMAN, ESQ., B.A.,

Manager-in-charge,

Office of the Registrar, University of Madras.

THE PRINCIPALS OF ALL AFFILIATED COLLEGES

I have the honour, by the direction of the Syndicate, to inform you that the Regulations of the General Medical Council of Great Britain, regarding the examinations recognized as a suffi-

XIX

cient test of preliminary education in the case of students entering upon medical courses of study, require that each such student shall have passed the qualifying examination in a classical language. The Council has under consideration the revision of its Regulations and is in correspondence on the subject with the Syndicate. The Council has expressed its intention of accepting the Intermediate Examination in Arts of this University as a qualifying examination in the case of students entering upon medical studies, provided that such students have taken a classical or classical oriental language either in Part II or Part III (Optional Group iii) and have satisfied the Examiners therein.

In view of this proposal of the General Medical Council, Principals of Arts Colleges are advised to warn their students that those who wish to enter upon the medical career must take up the study of a classical or classical oriental language for the Intermediate Examination. It is improbable that the Council will grant any concessions on this point in the case of students commencing their Intermediate course of studies during and after the academic year 1913-14.

I have the honour to be,

Sir,

Your most obedient servant.

JOHN J. HENSMAN,

Manager-in-charge.

No. 2792.

SENATE HOUSE,

24th June, 1913.

From

JOHN J. HENSMAN, ESQ., B.A.,

Manager-in-charge,

Office of the Registrar, University of Madras.

To

THE HEAD MASTERS OF ALL RECOGNIZED HIGH SCHOOLS.

Sir,

I have the honour, by the direction of the Syndicate, to inform you that the Regulations of the General Medical Council of Great Britain, regarding the examinations recognized as a sufficient test of preliminary education in the case of students entering upon medical courses of study, require that each such student shall have passed the qualifying examination in a classical language. The Council has under consideration the revision of its Regulations and is in correspondence on the subject with the Syndicate. The Council has expressed its intention of accepting the Intermediate Examination in Arts of this University as a

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As it will be apparently impracticable for a Secondary School-leaving Certificate Holder or a Matriculate to take up the study of a classical or classical oriental language either in Part II or Part III of the Intermediate course unless he has studied the language during his school course also, I am directed to invite your attention to this matter and to request you to be so good as to give the necessary warning to the pupils in your school who may intend eventually to enter upon medical courses of study.

I have the honour to be,
Sir,
Your most obedient servant,
JOHN J. HENSMAN,
Manager-in-charge.

M. L. Degree Examination, 1913.

BRANCH IV.

Purushottam, Kaza No. 12. Passed III class.

The rest failed.

BRANCHES I AND III.

Nil.

Diploma for Astronomy.

The Madras Government have communicated to the University of Madras the offer of a medal and diploma by the Mexican Astronomical Society to any astronomer who discovers a comet.

M. A. Degree Examination, 1913.

BRANCH I:—Amrita Rau, Karnad, III class. Krishnaswami, T. K. III class. Muttukrishnan, S. III class. Narasimbaraghavachar, Andapuram, II class. Ramaswami, T. M., III class. Srinivasa Rau, Chickbalapur V, III class. Vaidyanathan, L. S., II class.

BRANCH IV (PHILOSOPHY):—Adishesaiya, Varanasi P., III class. Kamesvara Rau, Sripadi, III class. Rangaswami, G., III class. Sankunni, Puttanpurayil, III class. Satyanarayanamurti, Jayanti, II class. Sayanna Sastri, Valiveti, III class. Sivaraman, P. S., III class. Subrahmanyam, P. V., III class. Soryanarayanan, Satalur S., I class.

BRANCH VI. (LATIN) Balasigam, Samuel, III class. Kannappa Uchil, III class.

B. A. Degree Examination, 1913.

(Old Regulations).

SECOND LANGUAGE DIVISION:—1st class—9; 2nd class—126; 3rd class—95.

BRANCH I: 1st class—2; 2nd class—22; 3rd class—38.

BRANCH II A: 1st class—1; 2nd class—17; 3rd class—33.

BRANCH II B: 2nd class—1.

BRANCH III A: 2nd class—2.

BRANCH III B: 2nd class—1.

BRANCH III C: 2nd class—2; 3rd class—4.

BRANCH III D: 2nd class—1; 3rd class—3.

BRANCH IV: 1st class—1; 2nd class—24; 3rd class—33.

BRANCH V: 1st class—1; 2nd class—21; 3rd class—101.

BRANCH VI: 1st class—3; 2nd class—9.

PRELIMINARY ENGLISH LANGUAGE: All except 10 have passed.

B. A. Degree Examination, 1913.

(New Regulations).

PART I: 1st class—9; 2nd class—270.

PART II: 1st class—1; 2nd class—25.

GROUP II A: 1st class—4; 2nd class—35.

GROUP II B: 1st class—2; 2nd class—6.

GROUP III: 1st class—2; 2nd class—2.

GROUP IV: 1st class—3; 2nd class—all except 10.

GROUP V: 2nd class—144.

L. T. Degree Examination, 1913.

All passed except 14.

Intermediate Examination in Arts, 1913.

GROUP I: 1st class—105; 2nd class—179.

GROUP II: 1st class—10; 2nd class—43.

GROUP III: 1st class—83; 2nd class—349.

Matriculation Examination, 1913.

I CLASS—5; II CLASS—16; III CLASS—27.

CALCUTTA UNIVERSITY.

Senate Meeting.

A meeting of the Senate of the Calcutta University was held at the Senate House, College Square. The Hon. Sir Asutosh Mookerjee, Vice-Chancellor, presided and there was a fair attendance of Fellows.

The Senate accepting the recommendations of the Syndicate appointed the following gentlemen as University Readers in the subjects noted against their names:—

Dr. Paul Vinogradoff, Corpus Professor of Jurisprudence in the University of Oxford on "Kinship in Early Law."

Professor Hermann Jacobie, of the University of Bonn, on "The Theory of Indian Alankar."

Mr. S. R. Bhandarkar, M.A., on "Introduction to the Study of Indian Epigraphy."

The Senate re-appointed the following gentlemen as University Lecturers at Bankipore for two years:—

Prof. Jadu Nath Sirkar in History.

Messrs. C. Russell and A. E. Horne in Economics.

The Senate resolved that in addition to the affiliation already granted to the Cotton College, Gauhati, it is further affiliated to the following standards and subjects:—B.A. Standard—Honours in English, Sanskrit, Philosophy, Mathematics, History, and Chemistry. B. Sc. Standard:—Honours in Mathematics and Chemistry. They also granted affiliation to the Wesleyan Mission College, Bankura, in Physics to the I. A. and I. Sc. Standards and to the Murarichand College, Sylhet, in History and Physics to the I. A. Standard as well as in English, Vernacular Composition, Mathematics, Chemistry and Physics to the I. Sc. Standard.

The New School Final.

It is rumoured in the Press that the new Director of Public Instruction proposes to do away with the Matriculation Examination under the jurisdiction of the University, School Final Examination being substituted as in England under the control of the Educational Department.

Matriculation Results.

The Calcutta University Matriculation Examination results have been published and it is gratifying to note that no fewer than 80 per cent. of the candidates have come out successful, the total number being 6,937, of whom no fewer than 4,493 were placed in the first division.

BOMBAY UNIVERSITY.

SENATE MEETING.

A Meeting of the Senate will be held in the Sir Cowasji Jehangir Hall of the University on Friday, the 4th July 1913, at 5-45 p.m., when the following subjects will be discussed:—

(i) Assignment of Fellows to Faculties; (ii) Alteration of the dates of commencement of the First and Second LL.B. Examinations; (iii) Amendment of General Regulation No. 46 consequent on the institution of the Degrees of Bachelor of Commerce, Master of Science and Doctor of Hygiene; (iv) Academic Costume to be worn by candidates seeking admission to the Degrees of Bachelor of Commerce, Master of Science and Doctor of Hygiene; (v) Amendment of the Regulation regarding the transfer of students from one College to another; (vi) A proposal to so modify the standard for passing the Matriculation Examination as to permit a candidate who may fail in one subject only and who may obtain an aggregate of at least 45 per cent. of the total marks obtainable to pass the Examination on the recommendation of a majority of two-thirds of the examiners.

ALLAHABAD UNIVERSITY.

The Registrar of the University of Allahabad has notified that, provided the Holi Festival does not fall on any of these dates—

(i) the Intermediate and the Matriculation Examinations of 1914 will be held on Monday, the 16th March and following days, beginning at 10 A.M. each day; one paper as far as possible being given daily in the Intermediate Examination, and two papers daily in the Matriculation Examination; (ii) the Degrees (Arts and Science) Examinations of 1914 will be held on Monday, the 30th March and following days, beginning at 7 A.M. each day, one paper as far as possible being given daily; (iii) the Previous and Final LL.B. and the LL.M. Examinations of 1914 will be held on Monday, the 27th April 1914 and following days, beginning at 7 A.M. each day, one paper as far as possible being given daily; (iv) the L.T. Examination of 1914 will be held on Monday, the 6th April 1914 and following days, beginning at 7 A.M. each day, one paper being given daily.

The dates for the Degree Practical Examinations will be notified hereafter.

EXAMINATION RESULTS.

The results of the recent examinations of the Allahabad University have been published. In

the M.A. Final, out of 52 students one was disallowed and of the remainder four have passed in the first division, 11 in the second division, and 21 in the third; while in the Previous 53 out of 126 have been successful—two in the first, 14 in the second and 37 in the third division. In the M. Sc. Final 16 have passed and only one has been plucked; of those who have passed, 5 are placed in the first division, 4 in the second, and 7 in the third. Ten out of 12 students who sat for the M. Sc. Previous are declared to have passed, three in the first, one in the second and six in the third division. Out of 890 candidates for the B.A. Examination, 9 could not appear; of the remainder two have passed in the first division, 81 in the second and 258 in the third. Of the two first division students one is a lady, Miss Mand Annie Keogh of Mussooree. At the B. Sc., out of 170 students one was disallowed, and of the remainder 8 have been placed in the first division, 37 in the second and 28 in the third.

LONDON UNIVERSITY.

A Chair of Chemistry.

At a meeting of the Senate of the University of London on May 21, the Vice-Chancellor (Dr. W. P. Harrington) presiding, Dr. George Barger was appointed, as from October 1st next, to the University Chair of Chemistry, tenable at the Royal Holloway College, with the status of appointed teacher. Dr. Barger has held posts in the University of Brussels and in the Wellcome Research Laboratories at Herne Hill, and has been since 1909 head of the Chemical Department at Goldsmith's College.

Dr. McClure, addressing the University College (London) Guild of Graduates, said that "the educational awakening of modern England had owed not a little to the Matriculation Examination of the University of London."

Sir Philip Magnus, spoke on the Report of the Royal Commissioners on the University of London from which the following is an extract:—Our University is and must remain unique, for the conditions of the higher education in London are different from those in any other city; and we cannot hope to attain to the perfect ideal suggested in the Commissioners' Report by the endeavour to reconstruct it according to a German or any other model. Personally, there is nothing to which I take greater exception than the endeavour so frequently made to Germanize our educational system.

But when I see the vast number of eager students who come here annually to receive the reward of their diligence and progress in the search after knowledge; when I review the long list of eminent teachers under whom so many of them have studied; when, too, I recall the contributions to the advancement of science and learning which proceed from our research departments, and the names of the distinguished men and women, now living, who look with pride and satisfaction to this University as their Alma Mater, I must own I fail to recognize our University in the fundamentally defective institution described in the pages of the Report. Still, it is due to those who have devoted so much time and patience to the preparation of that Report that we should consider it free from prejudice or bias, with an earnest and real desire to profit by it, and to accept such of its proposals as make for the wider and more efficient training of our citizens and are at the same time compatible with the best traditions of our University.

A PATNA UNIVERSITY.

The Government of Bihar and Orissa have issued the following Resolution, dated Ranchi, May 19th:—

The Government of India have, on several occasions, explained the necessity which has arisen for circumscribing the limits of Universities in India and the desirability of forming more numerous centres in which the full advantage of the teaching and residential system of University life may be enjoyed. In November last the Local Government informed the Government of India that a strong and growing demand had arisen for a separate University for the Province of Bihar and Orissa and that they proposed to constitute a Representative Committee with a view to formulating a definite scheme. The Government of India having assented to the adoption of this course, His Honour the Lieutenant-Governor announced, at the meeting of the Legislative Council held on February 12th, 1913, that the question of establishing a University at Patna with the fullest possible provision for teaching and residence was under consideration, and that a Committee would be appointed to enquire into and report on the whole subject. This announcement was received most favourably, and a cordial desire to co-operate in the execution of the project has been freely expressed on all sides.

The Lieutenant-Governor in Council is now pleased to appoint the following gentlemen to frame a scheme for the establishment of a University for the Province of Bihar and Orissa:—

sity for the Province of Bihar and Orissa:—

Mr. R. Nathan, President; the Hon. Mr. Madhu Sudan Das; the Hon. Khan Bahadur Saiyid Muhammad Fakhr-ud-din; the Hon. Rai Sheo Shankar Sahay, Bahadur; the Hon. Babu Dwarka Nath; Mr. Saiyid Nurul Huda; Mr. A. G. Wright, who will officiate as Director of Public Instruction during the absence on leave of the Hon. Mr. N. L. Hallward; Mr. W. A. J. Archbold, Principal, Dacca College; Mr. C. Russell, officiating Principal, Patna College; Mr. V. H. Jackson, Professor of Physics, Patna College; Mr. K. S. Caldwell, Professor of Chemistry, Patna College; Mr. Sachidananda Sinha; the Rev. S. L. Thomson, Principal, St. Columbas' College, Hazaribagh; Mr. D. N. Sen, Principal, Bihar National College, Bankipore. Mr. P. C. Tallents will act as Secretary to the Committee.

The Lieutenant-Governor in Council hopes that the Hon. Mr. N. L. Hallward, M.A., Director of Public Instruction, will, until his departure on leave, give the Committee the benefit of his advice.

The Lieutenant-Governor in Council desires as far as possible to leave the Committee unfettered in the execution of the important task entrusted to them, and will make only a few observations for their general guidance. The University is intended for the benefit of the whole province, and the needs of all parts of the country and of all sections of the people should, therefore, receive the most careful attention. Provision should be made for a University at Patna, or at some convenient place in its neighbourhood, of the teaching and residential type, and for the affiliation to this central institution of colleges situated in other places. The schemes, both for the central University and for the external colleges, should be worked out in full, and should be accompanied by a financial estimate sufficiently detailed to enable it to be placed before the Government of India. The recommendations should not involve any such additional cost to the students as would discourage them from taking full advantage of the facilities which will be offered.

The Committee are authorised to consult any authorities whose assistance they may need, and the Lieutenant-Governor in Council trusts that all persons whose help may be thus invoked will be ready to afford it.

The report of the Committee will be published and circulated for comment and advice before any definite action is taken.

TECHNICAL EDUCATION.

TYPEWRITER TOPICS.

[The Editor invites contributions on Topics regarding Typewriters.]

THE L. C. SMITH AND BROS.' TYPEWRITER.

(Continued from last issue.)

At the end of the line the carriage is returned and the spacing device is operated with one movement of the right hand; it is not necessary to raise the left hand from the keyboard nor to cross the right over it to make the return. As the carriage moves back and forth, without sticking or binding, it is important that the steel balls on which it runs be kept in the same relative position, not creeping at any stage of the journey. The geared ball retainer above referred to keeps the balls at an equal distance from each other, making the carriage easy moving, yet firm to the extent that even at its extreme limit of travel, it is rigid and unshakable, an important feature, as the carriage regulates the type impression on the paper. Here too the system of ball bearings perfects all the movements and ensures each letter in its place.

Another feature of the machine under notice is a device for preventing the battering of the type. Often an operator will strike two or more keys at the same time, forcing into the printing centre one typebar against another. A projecting heel on the back of the typebar prevents this effectually. The heel on the back of the typebar which has reached the centre first is struck by the typebar following it at one spot only, viz., between the upper and lower faces of the type. By this method, marring the type is effectually prevented and a clean cut impression insured. Illustration fig. 3 shows how two typebars come together at the centre without injury to the type.

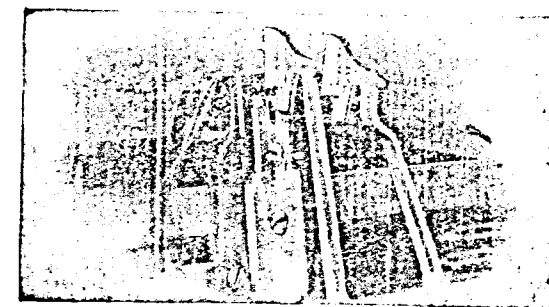


Fig. 3.

Two printing positions of the bi-chrome ribbon,

as well as the stencil throw-out, are controlled by a key placed in the key-board at the left of the tabulator spacebar. By the simple manipulation of a key, either colour of the ribbon may be used, or the ribbon may be placed where the type cannot touch it, so that a duplicating stencil may be cut. The ribbon can be put on without tools of any kind, and without soiling the hands. It reverses automatically, without increased tension or strain. Like the tabulator, back-spacer and other devices on the machine this part too is inbuilt and it forms a part of the machine itself.

With regard to the typebar guide, its object is to prevent evils due to vibration when two or more typebars are forced to the centre together and collide. An extension on the typebar enters the guide, just before the type impresses the paper, making blurring or irregular spacing impossible. The typebar guide is also a safeguard against accidental strokes on two keys, and other defects that result by collision or jamming of typebars. This is one of the devices on the L. C. Smith typewriter that help, not only the expert operator, but the average operator and beginner, to do good work.

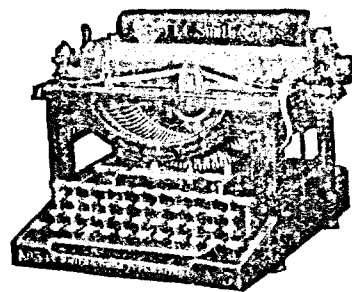


Fig. 4.

A MECHANISM BOOK.

Mr. P. K. Ramasamy Iyer, A. C. I., of 10, Esplanade Row, Madras, has just published a very useful booklet for the use of operators and owners of Typewriting machines. The booklet deals extensively with the mechanism of the L. C. Smith & Bros.' Typewriter which are now largely used in High Schools, Colleges and various other Mercantile and Government offices. The book is priced only 3 As. and we would highly recommend it to all people interested in typewriting.

COMMERCIAL SCHOOL AT BANGALORE.

The Government of Mysore has sanctioned the opening of a class in the Commercial School at Bangalore to teach printing. The hours of attendance will be made convenient for the class

of pupils that may seek admission to it. The Superintendent of the Government Press has instructions to inspect any private press welcoming his assistance, and to offer suggestions in view to improving such establishments. The Government are also prepared to consider the question of providing for higher instruction and training in the several branches of the Art of typography.

OXFORD DIPLOMA IN COMMERCE.

At last even Oxford University has paid homage to the commercial age by resolving to establish a diploma 'suitable for persons intending to pursue a business career,' though the voting was only 35 as against 26 on the other side. Mr. P. E. Matheson, Fellow of New College, in moving the adoption of the preamble to the statute, said:

In the last few years there had been increasing demands upon both Oxford and Cambridge for men who had taken a University course for business. A University education alone was not going to qualify a man for business, but it was hoped that for a certain number of men it was desirable to make the study of economics and political science such that when they got to their business they might look upon it in a proper way and with some scientific knowledge of the groundwork on which it was based. It was thought proper that there should be some scientific study of the principles of banking, accounting, and the law of contracts, and also for a diploma of this kind that the student should be familiar with at least one modern language besides his own. A course of the kind was substantially a course which would give a man a really liberal education for the two years in which he was engaged upon it, and would give him a good deal of information on entering the business world.

The President of Corpus (Mr. Case) strongly opposed the motion in a speech in which he dreaded that Oxford might eventually become a revolutionary body and expressed his strong disapproval of giving diplomas on subjects of which 'the University was so profoundly ignorant' as banking, accounting and foreign exchanges. The Rev. E. M. Walker of Queen's College lamented that the step proposed was a concession to the spirit of commercialism. The President of Magdalen (Professor Warren) opposed the proposal, while Mr. Sidney Ball of St. John's supported it, believing that it would increase the demand for University men in business.

Reviews and Notices.

ENGLISH HISTORY, ILLUSTRATED FROM ORIGINAL SOURCES, 1715—1815, BY H. E. ICELY, M.A. (A. & C. BLACK). 2s.

This is the latest volume added to the excellent series of "source" books in English History published by this enterprising firm. Every History teacher of the present day feels the necessity for these supplementary reading books to stimulate thought, to avoid mere memorizing and to make History teaching of the greatest possible value by inducing the pupils to take an active share in the process of working mental exercises. The History of the 18th Century is so complex, materials available so abundant that the choice of extracts is very difficult. Nor is it possible to maintain the continuity in the narrative. The author has therefore rightly chosen only the more important of the events of this period and the extracts are concentrated on them from different points of view. Few or no reference is made to such leading constitutional facts of the period as the rise of the Cabinet Government, the development of Party System, etc. Even yet there are given in the extracts sufficient premises to allow of a reasonable and reasoning deduction. The present volume will be of great value to teachers and pupils of the next School Final Class who study the Hanoverian period for the special portion. Extracts on the Character of the Three Georges, the South Sea Bubble, Burke's Estimate of Walpole as Minister, the Corruption of Parliament, Pitt in Opposition, Pitt as Orator, Pitt as Minister, the Revolt of the Colonies, the "Pilot that weathered the storm," etc., are sure to make the subject, otherwise dull and monotonous, very interesting and the teaching attractive.

THE JUNIOR REGIONAL GEOGRAPHY—THE BRITISH EMPIRE WITH ITS WORLD-SETTING—BY J. B. REYNOLDS. (A. & C. BLACK). 1s. 4d.

Miss J. B. Reynolds has earned in the scholastic profession a reputation for the application of regional method to the teaching of geography in schools, though this particular presentment of the subject is chiefly the work of University teachers like Professor Herbertson and Mr. Mackinder. In the series of books entitled Regional Geographies she provides a scientific treatment of the subject set forth in a clear and attractive style which commends itself to the teachers and the taught alike. The chief feature in her book is that the area under discussion is first divided clearly into its

natural regions and the results of geographical conditions which characterise each are then logically deduced. We have seen several books on the British Empire; but what marks out the present volume from the rest is that in the present volume is presented an outline sketch of the rest of the world. This is of great value to form a true conception of the Geography of the Empire. The geography syllabus which confines its attention purely to the British Empire deserves to be condemned outright. Canada, for *e.g.*, is no geographical unit. With a general view of the whole of the North American Continent it is much easy to understand fully the various geographical phenomena of this portion of the empire. The 'world setting' that is presented in the book will enable the pupils to link together the various portions of the Empire in a manner that is difficult when each portion is treated as an isolated unit. The value of some of the British possessions, especially the smaller ones, depends mainly on their position with regard to various countries and cannot be rightly appreciated without some knowledge of their surroundings. The Empire's commerce is extensive and a knowledge of the chief producing regions and markets of the world is in consequence necessary and a book which attempts all this in a short compass ought to be welcome to teachers. The book is profusely illustrated and contains a very large number of maps and diagrams.

A HANDBOOK OF GEOGRAPHY, BY A. J. HERBERTSON, M.A., PH. D., Vol. II. (T. NELSON & SONS). 4s. 6d.

When reviewing the first volume of this book in the July (1912) number of our *Review*, we pointed out that that book supplied a long-felt want of a work intermediate between the ordinary Elementary school geography and such standard works of reference as Dr. H. R. Mill's *International Geography*. The present volume deals with Asia, Australia, Africa and America. Throughout the book there is abundant evidence of thoroughness. The physical features of each Continent as a whole is described fully and the description is also continuous to enable the student to understand the various parts of the skeleton before studying the circulations and coverings of the earth's surface. The treatment is first regional and next political. After a general account of the distribution of the chief elements of each country, political divisions and descriptions follow. Essential facts and educationally valuable elements are emphasized. The book is full of maps and diagrams, some of

which are published for the first time. These two volumes by Dr. Herbertson are sure to prove standing works of reference.

We are sorry however to note the volume before us has some defects which it is hoped, will be set right in the subsequent editions. India is very meagrely dealt with and is out of date in some points. A book published in 1913 contains the Census figures of 1901. We have not yet got rid of Eastern Bengal and Assam. The information is what can be got from ordinary text-books on Indian geography.

In fairness to the author, we must mention that what is stated is thoroughly accurate. Text-book writers and teachers of Indian geography will get many of their erroneous notions regarding Indian monsoons corrected after a careful study of this book. Speaking of south-west monsoon, Dr. Herbertson says: "From mid March to mid June a low pressure area forms over a region of increasingly high temperatures in Southern Asia. As it increases in intensity, the Southerly winds swirling into its centre are followed by the south-east trades which pass with a sweep of storms right across the Equator. These winds bring moisture from the Indian Ocean which they precipitate on all exposed mountain sides and on the plains at their feet from a great distance from them. The change to rain comes from 1—15 June. Cloudy rainy weather prevails till September. During the next three months pressure rises in Northern India and the retreat of the south-west monsoon takes place. These retreating currents and not the north-east monsoon curve over the Bay so as to increase the Madras rainfall (October to December)."

We are amused to read that South India is one of the richest mineral regions of the world. We hope with the author that the use of electricity may lead to important developments. We note that in connection with iron mining and industry no reference whatsoever is made to the Tata Iron Works. We are not able to follow the author when he says that three-fourths of the people are Hindus or Brahmans and that "Trivandram is the capital of Travancore State wherein education is advanced for India."

OXFORD GEOGRAPHIES—A GEOGRAPHY OF THE BRITISH EMPIRE—BY A. J. HERBERTSON AND R. L. THOMPSON. (CLARENDON PRESS). 2s. 6d.

This book belongs to the series of Oxford Geographies edited by A. J. Herbertson. It opens with an account of the British Isles and nearly

half of it is taken up with the geography of the mother country. India is given less than 20 pages and the account given is very meagre and of an elementary character. Canada, Australia and British Africa receive fuller treatment. The treatment throughout is regional. Political divisions are also mentioned and described. The book is thoroughly up-to-date and contains a number of maps in black and white. It is pleasing to note the historical summary in connection with some of the parts of the British Empire. It would have been extremely valuable if the author had devoted some sections at least to show the bearing of Geography on History.

CONSTRUCTIVE WORK—PUPILS' BOOK, SET II, COMBINED WITH GEOGRAPHY AND HISTORY, BY ED. J. S. LAY. (MACMILLAN & CO). Book I. 4d. Books II & III. 5d. each.

Messrs. Macmillan & Co. are doing a decided service to elementary education by the publication of three sets of books on constructive work. There is also a teachers' edition of these books. How much would the Indian elementary school teacher profit by these books being adapted and rendered into vernacular languages! The constructive work suggested in these books is of an eminently practical character; the handwork is treated as a method and the exercises which are intended to supplement the work on the most modern and approved lines are not only closely connected with the objects to be found in every school but are calculated to train the child on truly educational lines to be active, intelligent and self-reliant. Part I of the book is closely connected with Geography. The first lessons deal with "Rapid sketching," "Learning to sketch and to use the eyes," "Look about you every day," etc. The subsequent lessons deal with Scales and distances, plans, measuring distances on the map, plotting walks, angular measurement, simple surveying, contour lines, studying globes and maps, thermometers, barometers, winds, rainfall, production and trade charts. The lessons are all carefully graduated and are on concentric lines. The books are replete with hints and suggestions to observe, to record and to construct. They are also full of apt and suitable illustrations. Part II of each book deals with English History. A number of very interesting and suggestive historical diagrams connected with each period are presented. It is intended that the children should without any guide lines cut out shapes from coloured paper and paste them in an exercise book kept for the purpose.

The exercises will be found to give excellent training for the hand and the eye, valuable for the teaching of facts and for recapitulatory lessons. The teachers' edition is specially valuable as it helps to formulate and carry out schemes of manual work connected with the ordinary subjects of the school curriculum.

PRELIMINARY ARITHMETIC, BY AUGUSTUS BARRACLOUGH, M.A. (UNIVERSITY TUTORIAL PRESS). Price 1s. 6d.

This is a well got up little volume of 216 pages and is intended for English pupils of ten to fourteen years of age. The book contains definitions, rules, worked examples and exercises and is specially useful to candidates preparing for such examinations as the Preliminary Cambridge Local and provides sufficient work for the pass standard of the Junior paper. For Indian Schools the book is practically of no value but an intelligent teacher of a Lower Secondary School will find ample information for the teaching of arithmetic in his class room. The book will also be a valuable addition to the Library of the School. We congratulate the printers on the excellent finish they have given to the little volume.

JUNIOR ARITHMETIC (WITH ANSWERS) BY R. H. CROPE, B.A., SEVENTH IMPRESSION (THIRD EDITION) REVISED AND ENLARGED. (UNIVERSITY TUTORIAL PRESS). Price 2s. 6d.

This volume of 393 pages is meant for the Junior Forms of English Schools and is an abridgment of Mr. Workman's 'The Tutorial Arithmetic.' The difficult portions of the higher work are omitted but the order of the chapters and the method of treatment are same. The book covers the whole field of arithmetic and also contains chapters on Approximation (contracted multiplication and division) Algebraic symbols (simple equations and problems) and Graphical Arithmetic. The book will take a position among standard Text-Books in Arithmetic for Indian Schools if it is only adapted for such use by the introduction of Indian Currency and Tables of Indian Weights and Measures. As it is, it is invaluable as a book of reference to the Indian Teacher and his pupil, and as such deserves a place in the Library of every High School.

A SCHOOL ARITHMETIC FOR INDIAN SCHOOLS, BY HALL, STEVENS AND SIMS. (MESSRS. MACMILLAN & CO). Price Re. 1-12-0.

This is a handy volume of more than 500 pages and is an edition of Hall and Stevens's 'A School Arithmetic' adapted to the requirements of Indian Schools by the Rev. Andrew Sims, B.A., of the London Mission with the introduction of Indian Currency and Tables of Indian Weights and Measures side by side with the corresponding British Tables. In the course of the work necessary changes have been made and a large number of examples have been altered in accordance with the needs of Indian students in different Provinces.

The book in its present form can be safely used as a text-book in any Indian High School. There are certain special features of the book which give it a unique position in the field of Arithmetic. They are (1) The method of Approximation is carried further than has hitherto been attempted in any other text-book of the kind. (2) The method of Aliquot Parts (or 'Practice') is not made the subject of a separate chapter. (3) Besides a separate chapter on Simple Graphs, graphical methods are frequently used especially in connection with Proportion and Variation. (4) There is no formal treatment of Recurring Decimals or of the Cube Root. Cube roots that occur are determined by factorization or by the use of logarithms. (5) The use of Four-Figure Logarithms is fully explained and illustrated and Tables of Logarithms and Anti-logarithms are supplied.

We are sure that this book as at present modified will keep the foremost rank in the field for several years. The authors, Hall and Stevens, are well known to every school-boy and this is a sufficient recommendation for the popularity of the present volume in Indian High Schools.

GEOMETRICAL OPTICS, BY A. S. PERCIVAL, M.A., M.B., B.C. (CANTAB). MESSRS. LONGMANS, GREEN & CO). Price 4s. 6d. net.

This is an excellently got up volume of 132 pages primarily intended for medical students as a text-book on the subject of Geometrical Optics for their preliminary scientific examination. The book also contains all the optics required by an ophthalmic surgeon and is also of some value to students of physics.

There are chapters on pinholes and shadows, reflection and refraction at plane and spherical surfaces, and lenses. Methods, both analytical

and graphical, for the determination of the Cardinal and the Nodal Points of a thick lens, are fully explained and illustrated. There is also a reference made to Spherical Aberration. Though the book is not of much value to the mathematician it is we believe invaluable to those for whom it is meant.

THE S. P. G. HIGH SCHOOL MAGAZINE.

The fourth number of the first volume is before us and is particularly interesting, being a double number in commemoration of the 150th anniversary of the S. P. G. High School and College. The editorial columns are full of comments on this unique event in the history of the College. In the article "*Our 150th Anniversary*" are found the Historical Resume and the interesting address of Mr. Stone who presided on the occasion of the anniversary and those who care to read these will readily concur that the institution deserves to be proud of a record of usefulness and prosperity for a century and a half. Dewan Bahadur T. Desikacharyar, a devoted but unostentatious student of ancient South Indian History, has contributed a well-thought-out paper on "*The Coins of the Cholas*," which contains many new facts of an authoritative character. The article on "*Seetha—the Ideal Woman*," is a critical study of his paragon of virtue. The "*Basket of Words*" is continued in this number and there is good deal to amuse the reader on the word Doctor. Altogether this number maintains the high level of excellence of the previous issues.

PUBLICATIONS RECEIVED.

Geometrical Optics, by A. S. Percival, M.A., M.B., B.C. London: Longmans, Green & Co. 4s. 6d.

George Eliot's Silas Marner, by T. Cuthbertson Jones, B.A. Bombay: Oxford University Press. Re. 1-8-0.

Preliminary Chemistry, by H. W. Bausor, M.A. London: University Tutorial Press. 2s. 6d.

Will the Brahmo Samaj Last, by P. C. Mozoomdar. Calcutta: The Brotherhood, 82, Harrison Road.

The Children's Shakespeare—Scenes from Julius Cæsar. London: Macmillan. 4d.

Piers Plowman Histories, Junior Book No. 1, 9d.; No. II, 1s.; No. III, 1s. 3d.; No. IV, 1s. 6d.;

No. V, 1s. 8d. London: George Philip & Son, Ltd., 32, Fleet Street.

A General History of the World, by Oscar Browning, M.A. London: Longmans, Green & Co. (Edward Arnold). 5s.

Indian Educational Notes.

MADRAS.

Orders Educational.—The Government are pleased to sanction a grant not exceeding one-half of the actual expenditure nor Rs. 4,000 towards the cost of construction of two blocks of dormitory and refectory rooms attached to the R.C. Boarding and Training School, Trichinopoly, subject to the following conditions:—

(1) that in carrying out the work the suggestions of the Chief Engineer in his note are adopted; and (2) that all the conditions prescribed in the Grant-in-Aid Code have been duly complied with.

2. On the above conditions being fulfilled the grant will be paid as funds become available.

The Government are pleased to sanction a grant not exceeding one-half of the actual expenditure, nor Rs. 4,375 towards cost of the certain extensions and improvements to St. Joseph's Industrial School, Tindivanam, subject to the following conditions:—

(1) that in carrying out the work the suggestions of the Chief Engineer in his note are adopted and (2) that all the conditions prescribed in the Grant-in-Aid Code have been duly complied with.

2. On the above conditions being fulfilled the grant will be paid as funds become available.

The Government are pleased to sanction a grant not exceeding one-half of the actual expenditure, nor Rs. 7,229 towards the cost of construction of a third storey to the building occupied by the S. P. G. High School, Trichinopoly, subject to the following conditions:—

(1) that in carrying out the work the suggestions of the Chief Engineer in his note in G. O. No. 646, Educational, dated 12th November 1910, are adopted; and (2) that all the conditions prescribed in the Grant-in-Aid Code have been duly complied with.

2. On the above conditions being fulfilled the grant will be paid as funds become available.

The Government are pleased to sanction a grant not exceeding one-half the actual expenditure, nor Rs. 12,759 towards the cost of construction of a

building for the Ganapathi Secondary School, Mangalore, subject to the following conditions:—

(1) that in carrying out the work the suggestions of the Chief Engineer in his note are adopted, and (2) that all the conditions prescribed in the Grant-in-Aid Code have been duly complied with.

2. On the above conditions being fulfilled the grant will be paid as funds become available.

3. The Government approve the action of the Director of Public Instruction in permitting the school authorities to purchase the site in anticipation of the sanction of Government to the grant.

The Government are pleased to sanction a grant not exceeding one-half of the actual expenditure nor Rs. 4,300 towards the cost of construction of an additional building for the High School at Gopalamudram, Tinnevely district, subject to the following conditions:—

(1) that in carrying out the work the suggestions of the Chief Engineer in his note are adopted; and (2) that all the conditions prescribed in the Grant-in-Aid Code have been duly complied with.

2. On the above conditions being fulfilled the grant will be paid as funds become available.

The Government approve the proposals of the Director of Public Instruction for the distribution of the special grants of four lakhs and Rs. 30,000 for the equipment of secondary and elementary schools, respectively.

The Government are pleased to delegate to the Principal, Government Training School, Rajahmundry, the power of exempting candidates for admission to the school from the age-limit prescribed by rule 114 (2) of the Madras Educational Rules.

The Government are pleased to sanction a grant not exceeding one-half of the actual expenditure nor Rs. 7,400 towards the cost of construction of warden's and servants' quarters attached to the American College, Madura, subject to the following conditions:—

(1) that in carrying out the work the suggestions of the Chief Engineer in his note are adopted and (2) that all the conditions prescribed in the Grant-in-Aid Code have been duly complied with.

2. On the above conditions being fulfilled the grant will be paid as funds become available.

Under section 21, sub-section (4) of the Indian Universities Act 1904, the Governor in Council is pleased to sanction the further affiliation to the University of Madras of the Madras Christian College in Branch I—Mathematics—of the B.A. (Honours) degree course.

The Government are pleased to sanction a half grant not exceeding Rs. 7,500 to the Municipal Council of Salem towards the cost of providing the local college with a hostel. The amount will be met from the balance of the lump grant of 2.25 lakhs sanctioned by the Government of India in Finance Department letter No. 228-F., dated 18th July 1912, under 22, Education for hostels.

2. The Accountant-General will be requested to place the amount at the disposal of the Municipal Council before the close of the current year.

The Government are pleased, as a special case, to sanction a grant not exceeding Rs. 6,900 nor the difference between the actual expenditure and the contribution of Rs. 5,000 promised by the management, towards the cost of construction of a hostel for the Christian students of the Noble College, Masulipatam, subject to the following conditions:—

(1) that in carrying out the work the suggestions of the Chief Engineer in his note are adopted; and (2) that all the conditions prescribed in the Grant-in-Aid Code have been duly complied with.

2. On the above conditions being fulfilled the grant will be paid as funds become available.

Under section 21, sub-section (4), of the Indian Universities Act, 1904, the Governor in Council is pleased to sanction the further affiliation to the University of Madras of the Central College, Bangalore, in Group (ii-B)—Chemistry—of the B. A. Degree (Pass) course.

The Government are pleased to sanction a grant not exceeding Rs. 31,082 towards the cost of constructing the Coles Memorial Students' Home and Boarding School, Kurnool, subject to the following conditions:—

(1) that in carrying out the work the suggestions of the Chief Engineer in his note are adopted; and (2) that all the conditions prescribed in the Grant-in-Aid Code have been duly complied with.

2. On the above conditions being fulfilled the grant will be paid as funds become available.

The Government are pleased as a special case to sanction an additional grant of Rs. 1,442 towards the cost of construction of a building for the St. Mathias' School, Vepery, Madras.

In the circumstances represented by the Director of Public Instruction the Government are pleased, as a special case and in modification of G. O. No. 995, Educational, dated 12th November 1912, to sanction a grant of Rs. 17,500 or one-half of the actual expenditure, whichever is less, towards the cost of construction of a building for the Hindu High School, Ambasamudram. This grant is sub-

ject to the conditions laid down in the Government Order quoted above.

In the circumstances stated by the Director of Public Instruction the Government are pleased to increase the maximum amount of the grant sanctioned in G. O. No. 814, Educational, dated 20th November 1911, towards the cost of constructing a building for the Anjuman-i-Mafid-i-Abla-i-Islam Technical and Industrial School, Madras, from Rs. 10,496 to Rs. 15,694 or one-half of the actual expenditure.

The Government are pleased as a special case to sanction a grant not exceeding one half of the actual expenditure, or Rs. 16,837, towards the cost of the hostel buildings which have already been completed in connection with the American College, Madura, and of the proposed improvements and additions thereto subject to the following conditions:—

(1) that in carrying out the proposed work the suggestions of the Chief Engineer in his note are adopted; and (2) that all the conditions prescribed in the Grant-in-Aid Code have been duly complied with.

2. On the above conditions being fulfilled, the grant will be paid as funds become available.

The Government are pleased to sanction a grant not exceeding one-half of the actual expenditure, or Rs. 29,050, towards the cost of construction of a building for the Fort Girls' High School at Trichinopoly, subject to the following conditions:—

(1) that in carrying out the work the suggestions of the Chief Engineer in his note are adopted; and (2) that all the conditions prescribed in the Grant-in-Aid Code have been duly complied with.

2. On the above conditions being fulfilled, the grant will be paid as funds become available.

In paragraph 62 of the Report on Public Instruction in the Madras Presidency for the quinquennium 1906-07 to 1911-12 which dealt with the Secondary School Leaving Certificate Scheme, the Director of Public Instruction observed:—

"I take this opportunity of expressing my hope that heads of colleges and officials will co-operate with Government and the Department in the reform of secondary education which is in progress by not accepting any certificate which does not afford evidence of proper attention having been paid to the 'B' subjects. A scrutiny of these marks is necessary to ascertain whether a candidate for Government service possesses, in the language of the Public Service Notification, 'sufficient knowledge of the ordinary subjects'."

2. The particular attention of all heads of Departments will be drawn to this appeal for co-operation with the Director of Public Instruction in his efforts

to ensure adequate recognition of the school work done by holders of leaving certificates. It is a cardinal feature of the scheme for the award of secondary school-leaving certificates to attach value to the character and result of a boy's entire school career in preference to the bare record of his success at any single examination.

Madanapaltee Teachers' Conference.—Forten days from the 19th ultimo vacation classes were organised for the benefit of the Elementary School teachers of Madanapaltee, Vayalpad and Punganur Taluks, by the Sub-Assistant Inspector of Schools, Madanapaltee Range, Mr. K. Alwar Chetti with the encouragement of the Assistant Inspector of Schools, Chittoor District, Mr. Raghunatha Chari and with the help of the Supervisors. These classes were held in the Madanapaltee High School premises. Much useful instruction was imparted to the teachers on various subjects such as Vernacular, Prose, and Poetry, Surveying, Civics, Hygiene, School Gardens, School Museums, Geography, Kindergarten, Arithmetic, Manual Work, Physiology, Official Correspondence, the use of Grammar and Stories and action songs, Object Lessons and Pictures. Much interest was roused in the teachers by the most impressive and exhaustive lectures of Mr. K. Alwar Chetti. Mr. Vavilkulam Subba Row, Presidency College Telugu Pandit, was requested to deliver a lecture to the teachers on the necessity for religious and moral instruction in Schools. The meeting was presided over by Mr. Nemali Pattabhirama Row, B.A., ex-Dewan of Cochin on the 26th ultimo. Mr. V. Subba Row brought home to the minds of the audience that without a deep love for the Vernacular literature there could be no love for the country, nor love for one's own religion. His lecture was most erudite, interesting and impressive and abounded with quotations. He made a powerful plea for Vernacular study and showed how the modern style tended to degenerate, disfigure and discourage all love for Vernacular literature which simply tolled its death knell. He most pathetically appealed to the audience not to kill Vernaculars and thus bring ruin upon the country and themselves and the yet unborn generation. The Chairman endorsed the opinion of the lecturer and explained how every attempt was being made to arouse interest in and to revive vernacular study in all its pristine purity and force.

One of the most interesting and edifying features of this Conference was the part played by the Siddareddipalle Result School boys of Vayalpad Taluk. In two sittings they exhibited their knowledge of Civics, Vernacular Grammar, Hospitals, Police Administration, Loyalty, by means of short, lovely and interesting dramas accompanied by sweet songs. This added to the lustre and interest of the occasion.

The vacation classes were brought to an end on the 28th ultimo by valedictory speeches delivered by a number of visitors on the importance of the teaching profession.

A History Professor.—Mr. Saunders, M.A., of the Chicago University, has been appointed as History Professor of the American College, Madura. Professor Saunders is said to be a man of high qualifications in History and is expected to arrive about the 1st of September.

Opening of new schools.—The Inspector-General, Madras, has recommended the opening of 141 new primary schools at a cost of Rs. 22,959, the appointment of additional hands, an increase of pay and allowances for the teaching of music and needlework in girls' schools at a cost of Rs. 10,494 annually; the opening of Kannada Upper Secondary classes in the Anglo-Vernacular School at Davanagiri and in the Middle School at Nanjanad, for providing recruits with higher general culture as teachers for Primary and Middle Schools at a cost of Rs. 2,400 per annum, and the establishment of a Central Boarding School for Panchama students at Mysore as an experimental measure at a cost of Rs. 4,000. The whole of the Education Committee's recommendations, have been approved except with regard to the revision of scales of second master pay amounting to Rs. 46,633 per annum.

Tiruvallur High School Day.—Speaking a few days ago as Chairman of the Tiruvallur High School Day, the Hon. Mr. V. S. Srinivasa Sastri made an interesting suggestion, that old boys meeting together should think of improving the school under whose roof they met. It always struck Mr. Srinivasa Sastri as an imperfection in the arrangements that no machinery was provided for interesting old students in the welfare of a school. He had known some really useful ideas come from those actually unconnected with the management of an institution. Old boys who were connected with other schools might advantageously be consulted on points that turned up now and then in connection with the management of their old school. They would in most cases be actuated by love for it and not by unworthy jealousy. And on the annual school-day, according to Mr. Sastri's excellent suggestion, there 'should be' a small conference, an intimate conference, with every guarantee of the proceedings 'being confidential, consisting of the management, the staff, and the more influential among the old boys, to thresh out the more important problems and to suggest the necessary reforms.'

Udamalpet High School.—A correspondent writes from Udamalpet:—The prize distribution to the students of the Board High School, Udamalpet, was held on the 6th instant. Mr. F. R. Hemingway, I.C.S., presided. There was a large gathering. The function began at 5-15 P.M. with the reading of the report by Mr. T. Kunhiraman, the Headmaster, who pointed out that the late outbreak of the plague in the town had rendered it impossible for the school to maintain its usual high level in the public

examinations, and that it had also affected adversely the financial position of the school. The prizes were given away by Mrs. Hemingway. Mr. Hemingway in his concluding address remarked that the school had on the whole done well considering the disadvantages from which it had been suffering last year. He asked the old boys of the school not to forget the institutions where they had received their rudiments of culture, but to take an active interest in its future welfare. He also pointed out the urgent necessity there was for a good Students' Hostel in the town and he called upon the gentlemen present to interest themselves in the matter. The meeting terminated with a vote of thanks to Mr. and Mrs. Hemingway proposed by Khan Bahadur Abdul Ruzzak Sahib.

Education in Anantapur.—At the instance of the Local Sub-Assistant Inspector of Schools and with the sanction of higher authorities, a Conference of Inspecting Officers and Elementary School Teachers was held for five days from the 26th May to the 30th in the Edward Coronation Hall, under the presidency of Mr. Herbert Champion B.A., Inspector of Schools, 3rd Circle. It was attended by all the Sub-Assistants and Supervisors and more than 200 Elementary School Teachers of the Anantapur and Gooty Ranges. A carefully well-arranged programme of work, including the explanation of syllabuses according to standards, lectures on teaching, and model lessons by the Inspecting officers was gone through. One of the special features of the Conference was the systematization of the work of teachers of various classes in connection with the teaching of various subjects under the scheme of studies prescribed for Elementary Schools and in accordance with local requirements. Judged from the attendance, the substantial work done, and the enthusiasm manifested by the assembled teachers the Conference was an unqualified success for which much credit is due to the indefatigable energy of the Local Sub-Assistant, Mr. R. Krishnaswami Iyengar, and the interest evinced in the matter by Mr. P. Ramanujachari, the Assistant Inspector of Schools, and the co-operation of the other Sub-Assistants especially Mr. H. G. Krishna Rao of Gooty. The proceedings were brought to a close by a few words of advice by the President who also highly complimented the Local Sub-Assistant for the excellent work of a practical nature he had done towards improving the quantity of instruction imparted in Elementary Schools in Anantapur District.

Education in Kandukur.—For ten days, last month, the local Sub-Assistant Inspector of Schools Mr. H. Ramachar, B.A., L.T., efficiently conducted the vacation classes for all the teachers in Kandukur Taluk similar to the one he arranged last year for teachers in the Kanigiri Taluk. They were held in the premises of the Board Higher Grade Elementary School there and were attended by over 100 teachers.

from Board Aided and Unaided Elementary Schools. They were the first of the kind in this range. The Sub-Assistant Inspector with the assistance of the local Supervisor imparted much useful instruction to the teachers on the neat and correct maintenance of the registers and methods of teaching the various subjects of the scheme of studies for Elementary Schools as well as on the framing of syllabus and the work to be done in the Teachers' Associations. Mr. Ramachar with his experience as late Headmaster of the Government Training School, Bellary, and with his present experience as inspecting officer, of the needs of village education, so ably conducted the classes that they appeared to be miniature training schools. The chief subjects dealt with were Vernacular, Space and Number work, Drawing, Elementary Science, general knowledge, recitation and drill, the utility of school garden and museum. In addition to lectures on these subjects, the teachers were made to work practical examples which were corrected by the Sub-Assistant and his Supervisor. Model lessons were also given in Vernacular Prose and Poetry, general knowledge, etc. The chief feature of the lectures was the harmony that the Sub-Assistant introduced between the old indigenous method, and the modern methods of teaching.

The Srirangam High School.—The increase of sanction to Rs. 18,000 from Rs. 10,000 granted by the Government of Madras to the Srirangam High School towards meeting the building charges has given universal pleasure to the Trichinopoly public, as this is a deserving institution which has quite a record of ample work done ever since it was started two decades back. It is very creditable that the institution has gathered round it a band of enthusiastic teachers who not simply content with their usual sphere of work have been striving their best to place the institution on a sounder and more permanent basis. Mr. M. C. Rajagopal Naidu, B.A., L.T., the Head-Master has been doing very solid work in this way and Mr. S. K. Mathrubutham Iyer, the first Assistant, took a patriotic tour to Rangoon to collect donations for the upkeep and improvement of the School. The school authorities have purchased a plot of land on which the school building is being built. It only remains to hope that the school will have the better support and good-will of the local magnates.

A Hostel for Dharakota.—The interesting ceremony of laying the foundation stone of the George Coronation Hostel, in connection with Sri Rajah's Secondary School at Dharakota, was performed by the Collector of Ganjam. A report of the working of the school was read by the Head Master of the school, followed by recitation of verses in Uriya. The Hon'ble the Raja Saheb, the founder of the school, spoke of the kind advice occasionally given by the Collector for the improvement of the school. The Collector then gave away the prizes and medals to the students for their proficiency in different subjects. This done, the Collector proceeded to lay

the foundation stone and declared it well and truly laid. Lastly, the Collector made an impressive speech detailing the charities of the Hon'ble the Raja of Dharakota and the esteem in which the Government rightly held him for all the works of generosity and charity for the people of the district.

Guntur District Conference.—The following Resolutions were adopted at the Guntur District Conference:—Mr. K. Venkatapayya, B.A., B.L., of Guntur, proposed that the study of Vernaculars be enforced in all schools and colleges. Mr. C. Venkatadri in seconding the proposition explained the state of the Vernacular study in schools and that students never cared to study except with the object of passing the examination with a little translation. This was unanimously supported and carried. The next Resolution related to the undesirability of allowing candidates to write colloquial vernacular in the School Final Examinations since the Telugu language differed in various parts of the Telugu spoken districts. The proposition was supported by Mr. V. Ranga Rao, B.A., B.L., of Guntur. It was opposed by Mr. V. Lakshminarayana Pantulu Garu of Guntur. He said that it was bad to shut out the books prescribed for the School Final Examination. However, the proposition was put to vote and carried by an overwhelming majority. Mr. K. Lakshminarayana Pantulu Garu spoke upon the necessity of sending a memorial to the District Board to establish a Lower Secondary School at Pedanandipadu village. The next Resolution adopted by the Conference was to request the Government to establish an Industrial School at Guntur. This was seconded by Mr. K. Venkatapayya and carried. The next resolution related to the re-establishment of Training Schools at Guntur and Rajahmundry. Resolutions relating to National Education, Local Self-Government, were then passed.

BOMBAY.

Baroda Library System.—The Library System, which has worked so well in Baroda is to be further developed. A new branch of 'Visual Instruction' is to be opened in connection with the Central Library Department at a cost of ten thousand rupees. The object of this scheme is to give the benefit of education not only to those who can read but also, and especially to those who are innocent of the art of reading—for the enlightenment and entertainment of such by means of the cinematograph, the magic lantern and the stereoscope.

Indian Actuary and Auditor.—We are glad to learn that Mr. Mahadeo R. Tambe, a graduate in Arts and Engineering of the University of Bombay, has passed Parts I and II of the Institute of Actuaries examinations and has become an Associate of that institute. He served for three years as an Articled Clerk to Messrs. K. S. Aiyar and Co.,

a leading Firm of Auditors in Bombay and then proceeded to England to sit for the examinations. He passed the Intermediate and Final Examinations of the Society of Incorporated Accountants and Auditors standing first in the Honours Division at the former examination. He took a first class in Part I of the Actuarial examination and acquired practical actuarial experience by working as an apprentice for a year in the office of Mr. and George King, F.I.A., a leading actuary in London and the consulting of the Bombay Life Insurance Co., Ltd. Mr. Tambe has now become an Associate of the Institute of Actuaries as well as an Associate of the Society of Incorporated Accountants and Auditors, London. He is the first and only Indian, if not the only person in India, who is both an Actuary and an Incorporated Accountant. We trust his example will be followed by other Indian graduates.

Growth of Schools.—Evidence of the gradual growth of schools in India is provided in the quinquennial report (1907—12) of the Bombay Presidency just published. From this it appears that the total number of educational institutions of all kinds in the Presidency rose from 13,967 to 16,460, while the number of pupils increased from 720,547 to 922,877. The latter figure represents 3.4 per cent. of the total population of the Presidency and 2.27 of its population of school-going age, the corresponding percentages at the commencement of the quinquennium being 2.8 and 1.89, respectively. Secondary schools now number 559 with an attendance of 74,601 scholars, as against 517 with 57,983 scholars: in the case of primary schools the advance, as might be expected, is more marked, the number of such schools having risen from 10,482 to 12,763, and the figures of attendance from 579,629 to 757,130. During the five years the total annual educational expenditure, both direct and indirect, from all sources, rose from Rs. 1,06,43,000 to Rs. 1,36,17,000, an increase of 28 per cent. Of the latter amount, provincial revenues contributed Rs. 53,98,000, as against Rs. 43,08,000 at the beginning of the period. The total expenditure from all sources on primary education in Bombay is now 58 lakhs. Towards this, provincial revenues contributed nearly 23 lakhs, mostly in the shape of grants to Local Boards and Municipalities.

CALCUTTA.

Education in Bengal.—The following Notification is published in the *Calcutta Gazette*:—A Committee was appointed in 1911 as an experimental measure, for a period of three years, to advise the Director of Public Instruction, Bengal, in the selection of drawing books for use in schools and in regard to any other matters touching on Art in which the Education Department is concerned. The whole question of the teaching of Art schools and colleges and of the cultivation of the

artistic sense of students has recently come under the consideration of Government. His Excellency in Council, while recognizing the value of the services rendered by the Art Committee in this direction, is nevertheless of the opinion that its usefulness would be greatly enhanced by an extension of its hitherto comparatively limited powers and functions. It has, therefore, been decided to strengthen and enlarge the Committee itself and to entrust it with increased duties and responsibilities. The Governor in Council is accordingly pleased to direct:—(a) that the Committee shall be styled the Art Advisory Committee and shall be constituted as follows:—President, the Principal, Calcutta School of Art. *Members.*—The Principal, David Hare Training College; the Inspector of Schools, Presidency Division; the Inspector of Schools, Presidency and Burdwan Divisions; the Vice-Principal, Calcutta School of Art; E. Thornton, Esq., F.R.I., B.A., and N. Blount, Esq., nominated by the Art Gallery, Babu Gaganendra Nath Tagore. (b) that the duties of the Committee shall be to advise the Director of Public Instruction in regard to—drawing books for use in schools, curricula for instruction in Art, whether in special institutions or in schools and colleges for general education, the general question of Art teaching in Bengal. The Committee will in the first instance hold office for two years. The Director of Public Instruction is requested to report each year on the measure of success attained by the Committee in performance of the duties entrusted to its charge. If any vacancies occur on the Committee the fact should be brought to the notice of Government for necessary action.

North Bengal Literary Conference.—At the sitting of the North Bengal Literary Conference Babu Surendranath Roy Chowdhury submitted report for the last year. Babu Jogendra Chandra Chakravarti, Secretary, Reception Committee, read his report in which among other things he referred why the Conference could not sit during the Easter. Akshoy Babu announced that the Oxford University was compiling a history of India in twelve parts of which two parts will be devoted to Bengal. The Varendra Research Society have been asked to write these two parts. This announcement was received with great enthusiasm. The Conference has done very useful work in uniting in a common bond of fellowship the prominent intellectuals of the Province. They have provided a platform and meeting ground for the scientist, the poet, the journalist, the antiquarian, and the patrons of literature.

Historical Society.—Lecturing before the East India Association, Mr. Wilmot Corfield regretted the suspension of the activities of the Calcutta Historical Society owing to the ceaseless drain of the members to England. He advocated the formation in London of a Calcutta Historical Society, one of the chief works of which would be the preparation of a comprehensive history of the premier city of India;

also the erection, either on the Surrey side of the Thames, or on the site of the Crystal Palace of an Indian Hall and Museum absorbing the present one at South Kensington. The fact of India being of paramount importance to the Empire needed to be brought home to Londoners. Mr. Charles Buckland, while favourable to the proposals, pointed out the financial and other difficulties of the scheme.

Seal's Free College.—The prize-distribution of the Seal's Free College to the meritorious students came off very recently at the College premises in Halliday Street. There was a large attendance of noted gentlemen of the town. The report was then read out from which we take the following:—The school has kept in view the cardinal object of imparting sound education to the boys. Its chief aim therefore is to assist the struggling poor and the middle classes in the education of their sons. The text-books accordingly are judiciously selected and preference is given to cheap and useful books. The school mainly aims at instilling a taste for literature and art, and developing both the moral and intellectual faculties of the students. The members of the managing committee, though they held but a few meetings during the year under review owing to the death of their late President Babu Nobin Chand Bural, have all along a great interest in the regular work of the school. The work of the lower classes is constantly supervised by the senior teachers, and great attention is paid to the teaching of each individual boy in the class, and to the formation and development of good habits and moral character. Half-yearly and annual examinations are held and exercises are given every week in the first four classes. The answer papers are carefully corrected, marked and returned to the boys. Marks obtained by them at the exercises as well as the results of the half-yearly examination are duly recorded and taken into account at the annual promotion when necessary. Progress reports are sent to the guardians after publication of results of the half-yearly and the annual examinations. Guardians are requested to report to the teachers the conduct of their wards at home, their causes of absence, etc.

PUNJAB.

Delhi Residential College.—In the course of the next three years St. Stephen's College, Delhi, under Principal S. K. Rudra, is to be re-organised on a residential basis, and removed to the new Capital. The old College buildings will be handed over to St. Stephen's School. The new St. Stephen's College will be limited to 200 residential students, who will be lodged in five hostels. The European staff of Professors from Oxford and Cambridge will be increased to eight, and the Indian staff to ten, and later on to twelve. It is proposed to make the College on every side thoroughly efficient. The European professors will

all be resident and in charge of the hostels, and most of the Indian staff will be in residence also. The Government of India have accepted the scheme put before them by the College authorities, and have placed at their disposal for immediate building purposes one lakh of rupees as a mark of that acceptance. It is hoped that an ample site will be afforded with large playing fields and the best sanitary and healthy conditions. The College will draw its resident students not only from Delhi, but also from the Punjab and other parts of India. At present it will remain affiliated to the Punjab University, but there is a strong hope that in the course of time Delhi will be the seat of a Residential University. For that reason the new development of St. Stephen's College which has been outlined above will be in accordance with the standard of the future University. Two new Professors, both first-class honours men from Oxford and Cambridge, will join the staff of the College in October.

ALLAHABAD.

Primary Education in U. P.—The following are the names of the Members of the United Provinces Primary Education Committee:—Mr. T. C. Pigott (President); Messrs. S. H. Freemantle, W. J. E. Lupton, C. A. C. Streatfield, E. A. Richaran (Official Members); Dr. Sunder Lal, Babu Gangā Prasad Varma, Munshi Asghar Ali Khan, Rev. R. Clancy of Muttra, Raja of Pimpur and Babu Ghasi Ram of Meerut, (non-officials) and Mr. I. D. O. Elliott, Secretary. Meetings of the Committee will be held at Naini Tal.

Bulls' Own Literary Club.—The second anniversary of the above literary Club was held in the compound of Babu Brahmananda Sinha, near the Mahomedan Boarding House. Dr. Satish Chandra Banerji presided over the meeting and there was a fair gathering; among those present being Babu Brahmananda Sinha, Mr. C. Y. Chintamani, B. Harish Chandra Ghosh, Babu A. C. Mitra, B. Basanta Kumar Mukerji, Pt. Ram Charan Sukla, Dr. H. C. Ghoshal, B. Niranjan Mukharji and Mr. N. K. Mukharji. The proceedings began with a song in praise of Sarasvati sung by four of the junior members of the Club. The Chairman then asked the Secretary to read out his report, which was printed in book form covering over 13 pages of the royal 8vo size. In his report the Secretary explained the origin and traced the progress of the Club and wrote of the work of the year. After the reading of the report the junior members recited some selections in English and Bengali. In this connection may be mentioned the names of two boys—Mr. Moti Lal Mukharji and Amarendra Nath Sinha—aged only 4 or 5 years. The pieces recited by these two boys were much appreciated. On the recitations being over, the Chairman kindly distributed the prizes to the boys. Mr. A. C. Das

gave a silver medal to the member of the Club who stood first in his class in Indian History. This prize was won by Mr. S. C. Sinha. The Chairman delivered a brief speech after the distribution of prizes in which he generally appreciated the aims and objects of the Club and wished every success to it. He advised the members to try to open a Library, as being most essential to a Literary Club. Pt. Ram Charan Sukla thanked the Chairman on behalf of the Club and this brought the proceedings to a close.

TRAVANCORE.

Scholarship.—Miss Vieyra, a daughter of the Chief Secretary to the Travancore Government, is given a scholarship of £200 a year for four years, to go to Edinburgh and pass the M. A. of that University there. Any student, after his public school course is over, may join the University. There is a preliminary examination in English Language, a Classical Language and one part of Mathematics. The papers for the preliminary will be of the standard of the Madras Matric, so much so that those who have passed the Matriculation of the Madras University generally have an easy walk over in the preliminary. Then the student attends a course of lectures in the subjects he chooses for his M. A. and passes in instalments. The student is allowed to finish his course only in three years. Travancore already has got two or three Edinburgh M. A.'s.

There is a rumour that Mr. Gopala Menon, M. A., Assistant to the Professor of History in the Trivandrum College, is going to be sent to Oxford or Cambridge for a course of training in History. This would be quite welcome.

MYSORE.

Education in Mysore.—The Government of His Highness the Maharajah of Mysore have sanctioned the opening of 141 new Primary schools at a cost of close on Rs. 23,000 per annum. Sanction has also been accorded to another proposal of the Inspector-General of Education relating to the entertainment of additional teachers and to an increase in the pay of the teachers in Girls' Schools who teach music and needle work. This will involve an additional expenditure of about Rs. 10,500 per annum. Two other proposals made by the Inspector-General and sanctioned by Government may be mentioned. They are the opening of Canarese Upper Primary classes in the Anglo-Vernacular School at Davangere and the Government Canarese Middle School at Nanjangud, which will provide recruits with higher general culture to go forth as teachers for Primary and Middle Schools. The establishment of a Central Boarding School for Panchama students at Mysore as an experimental measure at a cost of Rs. 4000 has also been sanctioned. The proposal of the Inspector-General, that a few

of the inspecting officers of the Educational Department should be deputed every year to selected Normal Institutions in British India for such periods as may be necessary so that they may acquire an insight into the latest methods of primary education, has been approved.

Foreign Notes.

GREAT BRITAIN.

Indian Wranglers.—There are two Indian wranglers this year in the Cambridge Mathematical Tripos, out of a total of 31. These brilliant young country-men of ours are Mr. R. Chandra of the Lahore Government College and Mr. H. Shivdasani of Elphinstone College, Bombay. Our congratulations on their distinguished achievement.

Parents' National Educational Union.—Lord Beauchamp presided at the opening of a four days' Conference of the Parents' National Education Union at Carlton Hall, Westminster, on May 5th. In opening a discussion on a paper by Mr. J. St. G. Heath entitled "Education and Social Sympathy," Lord Beauchamp said he was never taught anything about social sympathy at school, and he was afraid the same could be said of the pupils at the public schools of the country at the present time. He contended that there should be more education given upon the benefits of peace, for instance. As time went on, and as the circumstances of the world changed and became more complex, there was an increasing need of peace. The teaching of philosophy that force and war were not only wrong but useless, was likely to appeal to our present day men of action, and he did not think any one could deny that, when once it was proved to the business man that war was bad for him, he would be more likely to listen to that argument than to the argument that war was in itself an evil. Our education in social sympathy should extend not merely to social sympathy which was national, but to one also which was international.

International Congress of Students.—The ninth International Congress of Students is to be held at Ithaca, New York, U. S. A., from August 29th to September 13th of this year. It has a strong committee headed by Dr. Woodrow Wilson, the President of the United States. Students of all nations are invited for an international intercourse and frank discussion of ideals and experiences regarding their problems. The object of this Conference is to promote a spirit of international brotherhood and humanity, by encouraging friendship and mutual understanding between the students of the world. Each national group will be an independent unit and students will be placed in correspondence with one another. The delegates will visit several States and Universities of the United States, where they will be guests of Governors and others. In the end,

they meet at Washington, the national capital, where the President will hold a special reception.

Health in the Training of Children.—Mr. M. E. Sadler, lecturing at the Leeds University on John Locke, among other things, said that Locke was the first to insist upon the essential importance of health in the training of children. He perceived that 'knowing is seeing' and, therefore, the forming of impressions from direct experience was a more vivid power in education than the memorizing of masses or words which attempted to convey experience at second hand. He maintained that manual training and the learning of a trade should form part of the education even of those born to a competence. And, in the conviction that virtue is the first and most necessary of a man's endowments he made the teaching of a simple faith in God and of the practise of prayer the fundamentals of early education.

Association of Head Teachers.—Several important Resolutions were passed at the Annual Conference of the National Association of Head Teachers, which was recently held. The meeting discussed at length the proposed educational reforms to be instituted by the Government. Mr. J. W. Iliffe, Sheffield, moved a Resolution hailing with profound satisfaction the public pronouncements of the Board of Education and of the Lord Chancellor with respect to the proposed national system of education co-ordinating all forms of educational effort, primary, secondary, and University; and expressing the opinion (1) that State secondary education on a different basis should be organized so as to afford facilities for preparation for the technical industries as well as for academic purposes; (2) that such an adequate number of scholarships in these secondary schools should be provided as to secure that every child capable and fitted to benefit by such secondary education should have the privilege of doing so; (3) that a system of maintenance scholarships should be established to enable children of poor parents to continue their education in such secondary schools; and (4) that leaving scholarships should be established to enable these children to proceed to the technical Colleges or to the Universities. He said the Resolution was formed with a view to providing driving force for the proposals which Lord Haldane wished to bring before Parliament. Referring to the scholarship question he remarked that having got their scholarship system it was a mere mockery to offer scholarships to the poor boy or girl if, having received them, they were unable to take advantage of them through poverty. An amendment was moved to the clause relating to scholarships, to the effect that education should be free in all Municipal secondary schools in receipt of Government grants. It was urged that only 5 per cent. of the 600,000 children who left elementary schools annually entered secondary schools. The amendment was rejected and the Resolution was

carried. The question of forcing up children regardless of their attainments was introduced by Mr. Batey, Sheffield, and the Conference instructed the Council to take into consideration at the earliest possible opportunity the important and pressing question of the retrograde and uneducational practice of many education authorities of insisting upon the promotion of scholars, regardless of their educational attainments, and not only to bring the matter forcibly before the Board of Education by a deputation, if possible, but also to take every possible means of emphasizing to parents and the general public the harmful effects of such action. The Council was further desired to urge upon the Board of Education the desirability of reducing as early as possible the size of classes in primary schools, in order to secure the maximum amount of individual training. On the proposition of Mr. Cowgill, Bradford, a Resolution was passed urging the establishment by statute of school clinics with dental departments, the cost to be defrayed from the Imperial Exchequer.

The late Alfred Austin.—The death is announced of Mr. Alfred Austin, the poet laureate. He was appointed by Lord Salisbury in 1896 some years after the death of his predecessor, Lord Tennyson. Mr. Austin's appointment gave rise to much adverse criticism as a much greater poet, Swinburne, was passed over, it was believed because of his radical views. Mr. Alfred Austin was born in 1835, and was thus 78 years old at the time of his death. He graduated from London University in 1853 and was called to the bar four years later. He practised only for a few years and had never an intention of permanently remaining at the bar. On the death of his father in 1861 Mr. Austin devoted himself to foreign travel and literature. When in England he generally lived in the country. Among his poetical works are 'Randolph: a Tale of Polish Grief,' 'The Seasons,' 'The Golden Age,' 'Madonna's Child,' 'The Tower of Babel,' 'The Human Tragedy,' 'Savonarola,' 'Lyrical Poems,' 'Narrative Poems,' 'Prince Lucifer,' 'Fortunatus the Pessimist,' 'Alfred the Great,' 'England's Darling,' 'A Tale of True Love,' 'Flodden Field: a Tragedy,' 'The Door of Humility,' and 'Sacred and Profane Love.' Mr. Austin also wrote a number of prose works, among which are 'The Garden that I Love,' 'Spring and Autumn in Ireland,' 'Haunts of Ancient Peace' and 'A Lesson in Harmony.'

LITERARY NOTES.

'Four Poets' by Mr. Stopford A. Brooke (2s. net) is a new volume in the 'Reader's Library'. The four poets are Clough, Matthew Arnold, D. G. Rossetti, and William Morris. The critical quality blends with eloquent appreciation. The author is a friendly guide for young men whose literary taste is forming.

Mr. Fisher Unwin will have ready this month, under the title of 'Burma under British Rule: A Model Possession,' an English edition of the work recently published in France by Professor Joseph Dautremet, of the School of Oriental Languages, Paris, formerly French Consul in Rangoon. The translation is by Sir James George Scott.

Towards the end of this month Messrs. Chapman and Hall will publish a new work by Mr. W. S. Lilly entitled 'The New France,' containing a series of studies written chiefly with the object of showing how the essential ideas of the great Revolution are reflected in existing conditions on the Third Republic.

'Problems of Power' by W. Morton Fullerton (Constable, 7s. 6d. net) is a study of European Statecraft, from Ladowa to Kirk Kilisse! This work helps the citizen of the empire to follow current events intelligently.

Richard II, edited by Henry Newbolt. (Clarendon Press, 1s. 6d. net) is an admirable student's edition of Shakespeare's play, with a glossary and introduction. The reader will be delighted to look at this delicate little series of the plays.

In writing the 'Life of Muhammad' (Christian Literature Society, 3s. net) the author, the Rev. Canon Sell, has treated some subjects at considerably greater length than others, but scarcely anything of importance has been overlooked. His statements of facts are based upon original authorities, and the deductions he makes therefrom are given in a fair and impartial spirit.

Mr. Werner Laurie will have ready this month 'The Correspondence of Goldwin Smith,' selected and edited by his literary executor and secretary, Mr. Arnold Haultain, who has added a bibliography of Goldwin Smith's various writings. The correspondence includes letters from Lord Rosebery, Mr. Chamberlain, the late Lord Salisbury, John Bright, Gladstone, Peel and many other celebrities.

The fourth volume of the late Dr. Gairdner's 'Lollardy and the Reformation in England' will be published by Messrs. Macmillan shortly with a

preface by Dr. William Hunt, containing an appreciation of the historian's work in general, and of his 'Lollardy' in particular. The fourth volume, which brings the narrative to the death of Edward VI and the first year of Mary's reign, was left by Dr. Gairdner in an unfinished state, but has been edited and seen through the press by Dr. Hunt, in fulfilment of a promise 'finally confirmed in a farewell visit to him shortly before his death.'

A timely addition is about to be made to the Cambridge Historical Series in a history of 'The Ottoman Empire, 1801-1913,' by William Miller. The work brings the record through the Balkan war down to the armistice and conference in St. James's Palace, leaving Turkey 'once more what she was in the first half of the fourteenth century—a purely Asiatic Power.'

Mr. W. Lyon Bleasdale has written 'A Short History of English Liberalism,' which Mr. Fisher Unwin will publish during the present season. The book traces the progress of Liberalism during the past century and a half, chiefly by the method of quoting speeches and letters which illustrate the way in which the governing classes regarded themselves and their subjects, and the gradual modification of the prevailing ideas of these classes. Mr. Bleasdale concludes with a chapter in which he deals with the present Government, examining its successes and failures in maintaining the true Liberal cause.

'Modern Grubb Street and other Essays' is the title of a collection of studies and sketches by Mr. A. St. John Adcock which Messrs. Herbert and Daniel announce for early publication. Mr. Adcock treats of such topics as 'The Literary Life,' 'Poetry and the Public,' 'A Gentleman of the Press,' and 'The Ideal Holiday.' In his earlier books Mr. Adcock has given evidence of the easy and engaging style that befits an essayist and the coming volume is likely to find a welcome from readers of a bookish turn.

When Messrs. Walter Scott's biographical series of 'Great Writers' first began to appear, a wit—the *Nation* believes it was Oscar Wilde—dismissed the volumes as 'great writers by little men.' The taunt was thoroughly undeserved, for many of the biographies were written by men of distinction and weight, and the series is one of the decided value. Messrs. Walter Scott are to make fresh addition to it, and a volume on 'The Life and Writings of Maurice Maeterlinck' by Mr. Jethro Bithe is now in the press. Mr. Bithe is the editor of a couple of volumes on contemporary French and Belgian poetry.

The Board of Education have just published a table of Summer Courses in England, for the information of Education Authorities, teachers and stu-

dents. The table gives particulars of 27 courses, including three Summer Schools of Geography, seven courses dealing chiefly with educational handwork, elementary science and Kindergarten work, one course in Child Study and the teaching of young children, one on the direct method of teaching Latin, six courses in various branches of agriculture and horticulture, and nine general courses dealing with several subjects.

The Directors of the Encyclopædia Britannica have adopted the excellent plan of bringing out a yearly volume (The Britannica Year Book) supplementary to the new edition of the Encyclopædia and designed to bring all its information as far as possible up to date. In the first issue just out there is a full and well-compressed article on India from the skilled hand of Mr. J. S. Cotton, who, as editor of the *Imperial Gazetteer* is the most experienced compiler in England of Indian reference material. The article contains brief summaries of the Census, the Administrative and Political History, Finance, the Native States, etc. Naturally the most interesting part is the section dealing with the political and social changes of the last few years. It is written, of course, with knowledge, and in general with great fairness, although now and again Mr. Cotton permits himself to reflect the official tone and opinion especially in regard to occurrences connected with the unrest of the Minto periods.

The Cambridge University Press will shortly publish a study of 'The Municipalities of the Roman Empire,' by James S. Reid, Professor of Ancient History in the University of Cambridge. The work is based on a course of lectures originally delivered in the University of London and repeated, with some changes, in the United States, first as 'Lowell Lectures' in Boston, and afterwards in the Columbia University, New York. The sections embracing the eastern provinces of the Roman Empire have been expanded in book form for the sake of completeness.

The Oxford University Press has in preparation a new edition of Sir C. P. Ilbert's Study of 'The Government of India,' to which a second supplementary chapter has been contributed on the Coronation Durbar and its consequences.

Among the books to come from Messrs. Pitman next month will be a study of 'The Federal Systems of the United States and the British Empire: Their Origin, Nature, and Development,' by A. P. Poley, who shows how the creation of the federal systems of Canada, Australia, and South Africa was influenced by the Constitution of the United States, and what the federation of the United States owed to the British Constitution.

It is understood that Mr. G. M. Trevelyan has just finished correcting the proof-sheets of his biography of John Bright, and that the book will be published early next month by Messrs. Constable.

Lewis's Scientific Circulating Library, of 136, Gower Street, London, W. C., besides containing a splendid collection of modern medical and scientific books, includes all branches of engineering science and general technology, and it is claimed that every book of any importance in these subjects is in the Library. The catalogue contains upwards of 11,000 titles of works. A reading room is open daily to subscribers. Among the regulations, one that will appeal to teachers is that books may be retained as long, or exchanged as frequently, as suits the convenience of subscribers.

Messrs. Longmans, Green and Co's new Books:—*Essentials in Early European History*, by Samuel Burnett Howe, A.M., Head of the Department of History in the Plainfield High School, Plainfield, New Jersey. With Illustrations, Coloured Maps, and Frontispiece. Crown 8vo. pp. xviii. + 418. Price 7s. 6d. net.

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SCHOOL AND COLLEGE SPORTING NEWS.

St. Joseph's College Sports.

Their Excellencies Lord and Lady Pentland accompanied by an A. D. C., were present at the Annual Combined Sports of the St. Joseph's College and Cadets held at the St. Joseph's College. Wet weather prevailed, with a high wind blowing all the while. The programme consisted of twenty-two events. Of these the Club swinging by the senior boys and the Swedish drill by the juniors were gone through exceedingly well. From the tenth event, Lord Pentland, along with the judges from the course, watched with keen interest, the different events. The Babies' race particularly attracted both Their Excellencies' attention. All the events were keenly contested and good sport was witnessed. The starters were Messrs. Nugent

Kidd and Hackett. The judging was done by Colonel Ward, Captain Fitzgerald, Captain Valentine Brown, Brother O'Farrell and Mr. McGuirk. Throughout the afternoon the N. V. R. Band was in attendance. Lady Pentland presented the cups and prizes.

The Governor said:—"I wish this College every success and I wish the winner of the races every success not only in such races as the one we witnessed, but in the great race in life." Brother Doyle, the Principal, in eloquent terms, referred to Their Excellencies' interest in their College and hoped to have the privilege of welcoming them again. Three cheers were given for Their Excellencies on their departure.

London University Athletic Union Sports.

The Eighth Annual Sports Meeting of the University of London Athletic Union was held at Stamford Bridge on May 22nd. The meeting was favoured with fine weather, the number of entries was far larger than of recent years, and the attendance also was much better. A cup, presented by Lord Rosebery, the Chancellor of the University, for the most successful College, was offered for competition for the first time, as were the Birkbeck College Challenge Cup, the Lady Egerton Cup, and the Collins' Cup.

The performances of the afternoon were very satisfactory, and two of the records for the meeting were broken—the Hurdles by Paget Tomlinson,

the old Cambridge Blue, whose time was 17½ sec., and the Three Miles by C. O. Read of Birkbeck College, who won in a splendid finish by inches from H. W. Badford of Wye College in 15 min 59½ sec.

London Hospital was successful in carrying off four out of the five challenge cups offered for competition, namely:—

The Rosebery Cup for the best College, 60½ points (8 firsts, 1 second, 1 third, and 1 tied third). Birkbeck College was second with 32½ and Guy's Hospital and University College tied third with 13 points.

The Lady Bask Cup for the best individual performance was won by Paget Tomlinson (London Hospital) by 24 points (3 firsts and 1 second), with White (Birkbeck College) second with 17 points and Stewart (London Hospital) third with 14 points.

The Lady Egerton Cup for the 100 yards was won by Stewart of London Hospital in 10½ sec. against a strong wind.

The Collins' Cup for the long jump was won by Paget Tomlinson, while the Birkbeck College Challenge Cup, for the College of the winner of the Mile, was won for Birkbeck College itself by A. J. White.

At the conclusion of the meeting the prizes were presented to the winners by Dr. Gregory Foster, the Provost of University College.

SIR A. SASHIAH SASTRY, K.C.S.I., An Indian Statesman—a Biographical Sketch

BY

B. V. KAMESVARA AIYAR, M.A.

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The Educational Review.

Every Viceroy, unless he happens to be a King Log, comes to India with a definite, clear-cut principle of administration to apply to Indian affairs. Lord Curzon's ideal was efficiency and efficiency he set about to secure, efficiency at any cost, efficiency though it cut millions to the quick and drove them into sullen discontent. Not that this single-minded devotion to the demon of efficiency was barren of results. Benevolent despotisms do bring about some solid good, witness the re-organization of our Universities and the creation of the Archaeological Department. But in pursuing his ideal, Lord Curzon sowed the wind and left his successor to reap the whirlwind. Lord Minto presiding over our destinies during an outburst of elemental passions, when the desperado had learnt the fatal lesson of cold-blooded murder as a weapon of political retaliation, believed in the iron glove on the right-hand and the velvet glove on the left. When the storm is on, the only thing to do to strike down the masts, clear the deck and serve out strong drink to the able-bodied seamen. Repression tempered by concession helped Lord Minto to weather the storm. Then came Lord Hardinge with a different ideal. Concessions are needed to rally round the moderates but they will at best benefit the articulate few; but they cannot touch the root of the evil. Repression, whatever its temporary value during crises, can ultimately breed but more discontent. No evil is remedied unless its cause be removed. The true cause of all evil in India, whether it be the political evil of discontent, or that root-evil of superstition which lies behind all our trouble is the appalling ignorance of the

people of India. Education, wide-spread education, and not repression nor concession, not reproof nor flattery, is the only potent rod of Ammon that can charm away the evils that obsess the land.

Lord Hardinge, with the true vision that is accorded to the statesman that is born (and not made by family connections or self-made by blustering self-advertisement), saw that anarchism in politics, and anarchy in social organization and religious life can only be cured by the spread of knowledge. Hence when the deputation of the Indian National Congress met him on the 3rd January 1911, he said, "In the body of your address you refer to various broad questions affecting the welfare of the masses, which I can assure you the Government of India have entirely at heart. The realization of some of these proposals would entail a very considerable increase to the normal expenditure of the Government and would in all probability require new sources of revenue to meet it. The educational problem is one, however, the Government of India have taken in hand." It is unnecessary to enumerate here the various acts of Lord Hardinge's Government in the furtherance of education, for we have recorded and commented on them all in our columns. But it is worth while to realize how His Excellency has been constantly preoccupied with this one subject, for if all administrators and all public men realized this quite as well as the Viceroy does, the progress of education in the land will be much more rapid than it is. Speaking to the Muslim League, Lahore, early in 1911, he said, "The goal is still distant when every boy and girl and every young man and maiden shall have an education in what is best calculated to qualify them for their own part in



His Excellency The Right Hon'ble LORD HARDINGE, P.C., G.C.M.G., G.C.V.O., G.C.B., G.M.S.I., G.M.I.E.

life and for the good of the community as a whole. This is the ideal we must put before us." Hence how appropriate is the celebration of the Viceroy's Birthday—the children's day—throughout India by the very children whose education and uplifting Lord Hardinge has placed in the forefront of his programme.

Speaking to the Muhammadans of Karachi, Lord Hardinge said, "A grave responsibility rests upon me to see that the efforts now being made are wisely directed, not only because I am the Head of the Government of India, but also because I owe it to my grandfather's memory to endeavour, as far as in me lies, to shape to the best ends a policy in the initiation of which he took so keen an interest." This noble heritage of the ideal "triumph of peace" is so prominent in our Viceroy's mind that he never omits to drive home into the minds of his hearers—and these are as much the officials as the non-officials—the necessity of the widespread of education. To the Sikhs of Lahore he pointed out the value of agricultural education and the advantages of the Lyallpur College. To the Rajahs and Chiefs of the Punjab he spoke of the great educational work in Lahore. The fruits of this great trust in the efficacy of education have been many. The Universities of Aligarh and Benares and the State University of Dacca have gone beyond the stage of mere projects and will very soon be opened. They are inspired by the belief "that the more such Universities are multiplied and distributed over India, the better will it be for the cause of Indian education." But the noblest pronouncement of our Viceroy is contained in the following passage from his speech on the Budget of 1912:—"The sky is clear so far as the human eye can judge, and we are ready for our next advance. On what lines shall

we proceed, and for what goal shall we strain? To that question my answer is clear and unhesitating. We have secured the defence of the country. We have removed our great handicap in international trade. It is now our duty to turn all our energies to the uplifting of our people. To that task we are giving freely in the Budget which you have discussed to-day. Is it too much to hope that it will be the dominant policy of the coming years? The Finance Member told the Council of the hopes that rose in my mind when first I took charge of my high office. By those hopes I still abide, and in them I am more than ever confirmed. It is only by the spread of knowledge and by the resolute struggle against avoidable disease and death that India can rise among the nations. It is with this ideal that I sincerely trust our finances will remain in touch. The path will not always be smooth. Funds cannot always be available or enthusiasm always fervid, but we have made a beginning and we cannot now turn back."

Yes, we cannot now turn back, but we can turn into bye-ways and we can mark time. In our Presidency, during recent years there has been a noticeable shrinkage of Colleges and of Secondary Schools. In the name of that very demon of efficiency that animated the soul of Lord Curzon many institutions have been given the quietus. We do not plead for the multiplication of indifferent schools. On the contrary, we have frequently bemoaned the terrible inferiority of our schools to those of Europe and America and have given accounts of how they do it in those continents so that the enthusiasm of our school-masters here may be roused. But the best way to deal with an inefficient school is to mend it and not to end it. If a school or college cannot

provide for the sound teaching of Physics and Chemistry, why not it be organized as an institution for the teaching of History and Geography? Why should it, instead, be reduced to a lower grade school. Similarly, if the Syndicate will not place obstacles in the way, how many second-grade colleges can be raised to the first grade, teaching one or two Branches—say History, Philosophy or Indian Languages. Nearly half-of-our second-grade colleges can become first grade on these lines, because the increase of cost would be little, if the D. P. I. will give such institutions a slightly larger grant than now and if the Syndicate will give its sympathetic help. But the two 'ifs,' are two big 'ifs.' No amount of viceregal enthusiasm can accomplish much unless there is a similar degree of local enthusiasm not only for the increase of the efficiency of what education there is but also for the spread of what education is possible under present conditions.

Speaking of the curtailment of Primary Schools in Rawalpindi, Lord Hardinge said: "The spread of elementary education is a subject in which my Government takes the deepest interest, and I am glad to think that the additional funds we have been able to reserve for this purpose will be taking their course through the main provincial channels and their way down the district tributaries and help to fertilize the intellectual soil of Rawalpindi." In a recent issue we complained that these streams of Imperial generosity become divided and sub-divided on a mechanically conceived basis of statistics, so that individual streams become so lean as to degenerate into dribblets that could do no one any good. Unless the Local Governments have a well-thought-out scheme of developing different kinds of schools in

different localities and employ these windfalls from the Government of India in accordance with that scheme, starting or aiding institutions as they are necessary, instead of offering as now an unexpected grant, in some cases considerable, in others despicable, to almost every school and expecting it to be spent within a prescribed date on some educational purpose or other, the Imperial streams will not enrich any soil.

We cannot better follow up the above all-too-inadequate account of our Viceroy's views on the uplifting of the people of India by means of education than by giving a brief

account of the scientific system of National Education devised by the British Science Guild and published in a recent number of *Nature*. We hope this note will create a holy discontent in the minds of our readers with the present state of education in India. The first requisite of education is for local authorities to provide for healthy growth during infancy and throughout school life; in India, if you tell a Municipal Councillor that this is one of his duties, he will regard you as a madman. The second is the absolute necessity of manual work and related practical exercises throughout the whole course of school instruction; in South India, not even six schools provide for this. The third is efficient public Elementary schools within the reach of all children and attendance at school compulsory until the age of 14; we may get this a hundred years hence, if we keep up the agitation started by Mr. Gokhale. The fourth is attendance at Continuation schools for all young persons not receiving suitable instruction; in India we have not heard of Continuation schools.

The ideal of public education according to the British Science Guild.

too-inadequate account of our Viceroy's views on the uplifting of the people of India by means of education than by giving a brief

The fifth is suitable Secondary Schools available for all who can profit by them; the sixth is the institution of *School Certificates* as passports for Universities, and the seventh to give a secondary place to examinations as against school records; in South India, we are trying to secure this in a small measure. The eighth is the co-ordination of technological work with University work; in India we have no technological work worth the name. The ninth is "Increased grants to Universities and other places of higher education for purposes of ensuring the reduction of fees for all courses;" in India this is anathema. The tenth is the improvement of the position and conditions of service of teachers; this is a subject over which every one who is not a teacher sheds crocodile's tears and none does anything. The last is the readjustment of the shares of the cost of education borne by the national Exchequer and by local authorities, so that educational progress may be made a national responsibility; in other words, next to public health, education ought to be the first care of the State. This is exactly our Viceroy's position and would that others besides him realized this!

In Evening classes provision is made in London, for "tuition, at almost nominal rates, in all stages of science, technology, arts and crafts, commercial subjects, economics, and literature, in well-equipped institutions from qualified teachers." The gross annual cost of this work is about £400,000 and nearly 200,000 pupils attend these classes, of whom 80,000 are above the age of 21 years. It is reported that though the pupils that attend these

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classes go there after a hard day's labour, tired physically and mentally, they show a very great eagerness to learn. "The Evening student has less time for study, but he makes more effective use of it. He has practical knowledge that forms an excellent basis.....In many institutions evening students are doing work in their subjects quite equal to that required for a University degree." The work done there is so good that the evening continuation schools are going to be thoroughly reorganized; they will be called "institutes" instead of "schools." The specialization of the functions of individual schools will be made to depend upon the social, educational and industrial demands of the districts of London where they are situated. Their work will be brought into line with that of the higher institutions, such as the polytechnics and the junior institutes will be affiliated to the senior ones. Contrast this feverish anxiety in England for the spread of education with the shrinking of our secondary schools and with the state of our technical schools, which like angel's visits are few and far between.

The Director of Public Instruction in a recent communication wants employers of clerical labour who are Government officers and Principals

of Colleges to give due weight, in assessing the worth of School Leaving Certificates, to the entries under what are called B. Subjects, viz., Elementary Science, Geography, Indian History, Drawing, etc. These are subjects which have to be taught in different ways in different schools. One uniform public examination is not desirable or possible in these subjects and so the framers of the "School Final Scheme" have left it to the sense of honour

of Headmasters to devise proper syllabuses in these subjects, arrange to have them taught in accordance with modern methods and to estimate the progress of their pupils in them by awarding marks. The circular of the D. P. I. implies that these subjects are being neglected in schools. We do not believe it is so; but if they are really neglected, the means above resorted to for compelling Headmasters not to neglect these subjects ought certainly to be objected to. External, indirect force, such as is exerted by examinations, is invoked by this means, a force which never did nor ever can do good. If the D. P. I. thinks that these subjects are not taught as they ought to be, a circular to Headmasters is sure to recall them to a sense of their duty. The Inspectors of Schools, too, can easily remedy the defect, such as there is, if during their annual visit, they call up for the syllabuses in these subjects, examine pupil's note-books, and get the teacher to give a lesson in their presence. The Inspectors form the only available lever for uplifting school work. But the great difficulty in this Presidency at present is the fact that one Inspector is a specialist in science and in his circle science work is well done but there is little enthusiasm for other things. Another is a good classic and so on. And just now there is no history and geography enthusiast on the Inspecting staff! Time was when as *ex orienti lux*, all wisdom flowed from one particular circle! It is high time, the D. P. I. arranged, as the Board of Education does in England, to issue detailed syllabuses, notes on methods of instruction, special reports, etc., and guide Headmasters and Assistant-Masters in their teaching work. At present the D. P. I. and Inspectors do much more office work, compil-

ing and sending up returns than this kind of educational work.

We teach in the science classes of our schools that nitrogen is an inert, inactive element. Active nitrogen. Faraday wrote many years ago to a friend, "What of nitrogen? Is not the apparent quiet simplicity of action all a sham?" and the Honourable R. T. Strutt, F.R.S., has after two years of patient and ingenious experimentation proved that in this, as in many similar flashes of intuition for which Faraday was noted, the great Victorian scientist was perfectly right. At the Royal Institution Strutt gave an account of his work. He passed a rapid stream of rarefied nitrogen through a tube and sparked through the gas on its way by a series of high-tension electric discharges from a Leyden jar. The gas became visible as a whirling cloud of brilliant light, for at this stage the nitrogen molecules had split into single atoms. "Nitrogen atoms in this condition are uneasy, and are anxious to find partners again. But to do this takes time. The reunion of the nitrogen atoms is attended with the emission of yellow light." This reunion of nitrogen atoms occurs more quickly the lower the temperature. This is the only instance of a chemical action quickened by cooling. This monatomic nitrogen unites chemically with substances with which cold ordinary nitrogen will not combine. It combines with chloroform vapour and forms cyanogen. It unites with mercury vapour and forms an explosive compound.

Much good scientific work is being done at the Solar Research Observatory at Kodaikanal, which does not come within the notice of the public, because there is no scientific magazine in India to record

scientific research that goes on in India. Mr. Evershed has devoted himself among other things, to the visual and photographic observation of the frequency of prominences on the Eastern and Western limbs of the sun. He has accumulated a vast deal of observations during the period 1904—1911 and examining them statistically and issued a bulletin on the subject. He has taken special precautions to eliminate the personal equation which introduces bias in the investigations. He finds that there is a distinct predominance of frequency at the eastern limb, the average percentage of excess being 52.70. Similar observations elsewhere in the world confirm the accuracy of these results. But as regards the cause of this excess of prominences in the Eastern limb of the sun, the connection, if any, between this and phenomena of the earth, there is some vague speculation, but nothing certain known.

THE LORD SYDENHAM COLLEGE OF COMMERCE, BOMBAY.

1. We publish in this issue the regulations, recently adopted by the Senate, on the motion of Mr. K. Subramani Aiyar, for the conduct of the examinations leading up to the Bachelor of Commerce Degree of the University of Bombay as well as two Press Notes issued by the Government of Bombay in connection with the establishment of a College of Commerce in that city. We heartily congratulate Mr. K. Subramani Aiyar on his having finally succeeded, after years of strenuous endeavours, in prevailing upon the University of Bombay to institute a Degree in Commerce. In the words of the Hon'ble Sir Narayan G. Chandavarkar, Kt.,

late "Vice-Chancellor" of the University of Bombay and now Dewan of Indore, "Mr. K. Subramani Aiyar's advent in Bombay is a landmark in this city. I know and Mr. Subramani Aiyar knows how he used to come and tell me that he was bent upon getting the commercial curriculum recognized by the University and I know how at times he was a little disappointed at the slow progress of his cause. But I knew that he was a man not to give up what it was his mission to accomplish. Mr. Subramani Aiyar is a thin man but a very volatile man; his volatility has worked wonders. He is a missionary and has achieved his mission, and has with his characteristic energy and perseverance prevailed upon the University to recognise the study of commerce. He is a Brahmin, and a Brahmin's business is to go and beg; he has begged—begged, not for himself, but for commerce and a commercial college."

2. While we recognise the institution of a University course of studies in commerce enabling young men to be trained for business careers as a landmark in the history of Indian education, the institution of such examinations would by itself have served no purpose if it had not been accompanied by the establishment of a well-equipped College of Commerce capable of preparing our young men for the newly-instituted Degree. Lord Sydenham has therefore rendered a distinct service to the cause of Indian education by having secured the financial support of the merchant princes of Bombay and of the Government of India and arranged for the establishment of a Government College of Commerce with an income of about Rupees forty thousand a year.

3. From the Press Note issued in June 1912, it appears that two Endowments for the College of Commerce. Rs. 3,25,000 have been received by Government for the foundation of two chairs in the new College, that an annual subscription of Rs. 10,300 has been promised by six Mercantile Associations in Bombay and that an annual grant of Rs. 15,000 has been sanctioned by Government. Again about three lakhs of rupees have been collected by the Lord Sydenham Memorial Committee for the erection of a suitable building for this new College. A brief narration of these facts makes it evident that, but for Lord Sydenham and the merchant princes of Bombay such a well-endowed College could not have been established, at least for some years to come and but for Mr. K. Subramani Aiyar's persistent efforts, there would have been no University course for which the students of such a College could be trained.

4. The College is to start work on the 22nd October 1913, before which date the Principal and the senior Professor, selected from among the graduates in Commerce of the Universities of Manchester and Birmingham, are expected to arrive and take over charge. Two lectureships on Rs. 300 to Rs. 500 are reserved for Indians possessing the required qualifications. We understand that amongst the students trained by Mr. K. Subramani Aiyar in Bombay there are two graduate Incorporated Accountants, a graduate Actuary, and a graduate who is both an Actuary and an Incorporated Accountant. Besides these, there are about half a dozen other Indians who by their qualifications and experience are also fitted for lectureships in the College.

5. The course is for three years and admission is restricted to Examinations and practical training. such as have passed the Previous Examination of the University of Bombay

or the Intermediate Examination in Arts of any other Indian University. Students have to pass the Intermediate Examination in Commerce at the end of the first year and the final examination for the Degree at the end of the third year. As the course provides for three voluntary subjects, students may specialise either (1) as Bankers or as (2) Actuaries or as (3) Accountants and Auditors. The vacations have been so arranged as to coincide with the busiest seasons for Auditors with a view to enable students of this College to acquire practical training by working under practising Auditors or in Banks and Life Insurance Companies, during their vacations.

6. Under-graduates of an Indian University other than that of Bombay must have passed the Intermediate Examination in Arts of their University before seeking admission into this College; otherwise, they must, after passing the Matriculation Examination of their own University, join an Arts College in Bombay in January and keep two terms in that College from the third January to the 30th September, pass the College examination in September and then join the College of Commerce on the 22nd of October on the strength of the Principal's certificate that they have satisfactorily carried out the work appointed by the University of Bombay for the first two terms in Arts.

7. We quote the following remarks about the scheme of studies for the Degree from the report of the Committee appointed

Scheme of Studies.

in 1911 to report on the best method of encouraging the study of commerce—a report for which Mr. K. Subramani Aiyar was mainly responsible:—

THE COMPULSORY COURSE.

(a) "Recognising, as they do, that higher business training ought to be based on a systematic study of economics, the Committee have included in the compulsory course a study of Political Economy and of Applied Economics in its various aspects."

(b) "During the first two years after matriculating, candidates for the Degree in Commerce will study English on the same lines as candidates for the Bachelor of Arts Degree, while in the last two years of their course, candidates for the Commerce Degree will devote their attention to English Composition."

(c) "As a certain amount of commercial knowledge is necessary for all business men, subjects like Mercantile Law and Practice, General Accountancy, and Economic Geography have been prescribed for all students."

VOLUNTARY GROUPS.

"Provision has been made for a certain amount of specialization at the Degree Examination, so that candidates may be able to devote special attention to the group of subjects which will be most useful to them in the special career to which they are looking forward and for which they have an aptitude. Three voluntary groups have been provided one of which must be offered by each candidate for the Degree, viz., (1) Exchanges, Investments and Currency, (2) Accountancy and Auditing, and (3) Actuarial Science with Relative Mathematics."

8. "We are of opinion that there is a distinct demand for the services of young men trained in the way we suggest, and

that the institution of a Degree on the lines recommended will open out new careers for Indian youths, and help Business houses in securing the services of trained youths, who can be gradually advanced to the highest positions in Business, while, we are convinced, that the cause of liberal education will in no way be imperilled, by the recognition of Applied Economics and the study of Business Problems." There will further be considerable scope for these graduates in Commerce as practising Actuaries and Auditors since the Indian Life Insurance Companies' Act and the Indian Companies' Act recently passed by the Imperial Legislative Council require the accounts and statements of such companies to be verified and audited by qualified Actuaries and Auditors.

The Law College Re-organisation Scheme, Madras Law College Re-organisation Scheme. as formulated by the Government, breaks a distinct spell that till now hung over the legal education in this Presidency. The important features of the Re-organisation are that it reverts to the old system of allowing the College Professors liberty to practice—an arrangement which any one interested in the cause of true and sound education, can have no hesitation in condemning. A decade has passed since that scheme was discarded in favour of a full-timed College which has worked satisfactorily as seen in the results of the F.L. and B.L. Examinations of the Madras University. The results in the University Examinations during the period prior to 1901, were anything but satisfactory. The working of the College,

then, was still more unsatisfactory. Professors being men in active practice, were frequently absent in the mofussil and classes had to be dismissed for the unavoidable absence of the Professors. Matters led to such a climax that people could hardly yet forget the pungent articles entitled "Law College day by day" that used to figure in one of the Madras dailies. It was this undesirable state of things which made the Government convert it into a full-timed College. And the Vice-Principal, and the Assistant Professors who were appointed in the beginning of 1901, were not allowed to practice. This salutary condition has been slowly and gradually relaxed with the consequence that men regard the appointment only as a secondary vocation to be subordinated to the all-absorbing interests of a practitioner. Instances are not unknown and (we are informed) are of frequent occurrence, that these practising lecturers come to the lecture-room 10 minutes late and close their lectures 10 minutes earlier. It is impossible for a practising Vakild or Barrister who has his case ready to be called in the High Court at 11 A.M. and who has to argue an intricate and important case before the Judges, could keep his mind clear and cool, apart from the distracting facts and authorities of his case, to lecture to an intelligent set of young men in an instructive and edifying manner the previous hour. An argument is advanced that the best practising lawyers only could turn out as successful lecturers in classrooms. The very statement of the fact is its refutation. We have only to refer to the honoured names of Sir Frederick Pollock and Sir William Anson to justify the refutation, if any justification were needed. Moreover the peculiar aptitude necessary for

success at the bar is quite different from the attainments necessary for a successful professor or lecturer and in the majority of instances, the two do not co-exist. The Western nations and foremost of them, the English people have come to realise this. At a time when specialization is the order of the day, it is strange and surprising that the Government should resort to the old-fashioned methods of saddling the successful practitioner who has too little time for his Court-work with the additional burden of lecturing to the students of the Law College. There was an excuse for a resort to this practice during the days of Sir V. Bashyam Iyengar, Ramachandra Row Saheb and Mr. Mitchell, for then the distinguished scholars in the legal profession did hardly exist. But now, when things have changed, and when men with the highest academical distinctions which University could offer can be found in the legal professions, it is against all reason and good sense, that their services are not secured exclusively for the Law College, and that the interests of the College should be made to rise and fall with the varying quantity of leisure that a hard-worked practitioner could ill afford. Active service for twelve years before becoming entitled to pension will enable the Government to get men of ripe experience and scholarship for the place and if Professors are started on a decent salary, say at Rs. 1000 per month, and Asst. Professors on a salary of Rs. 500 with an eventual pension after 12 years, they will gladly give up the uncertain income and inconvenience incident to the life of a practising Vakild. The pay and prospects of the Principal ought also to be increased *pari passu*. Under the scheme just brought forth, it is

indeed a matter for surprise that the Government have, in the case of the Law College, adopted a policy which is far from securing distinguished scholars of law to its service. The pay and prospects of other technical colleges are graded and they have the sure prospect of a pension after they retire. The peculiar difficulties that lie in the way of attaining distinction in the legal profession, apart from the question of costs in its equipment, ought indeed influence Government in providing a liberal scale of pay and in framing rules for the pension of those engaged in imparting instruction in Law. On the other hand they are treated with scant consideration and the existing staff except the Principal, we are told, are not entitled to pension. There are difficulties in the way of framing rules to regulate pension and the duration of the service in connection with Law College. The peculiarly prolonged training in Law and the degree of attainments requisite in a Professor of Law will not allow a man to be drafted into its service at the same time as his compeers are drafted in other professions. The rules that regulate the appointment, service and pension of the Judges of the High Court may be usefully kept in view in this

connection. The Principal, who should be second to none of his Assistants, should not practice and yet his pay is only about Rs. 1250, while the two Professors who draw a pay of Rs. 500, may enjoy a lucrative practice. It does not require any ingenuity to see that such Professors would pay any heed to the welfare of the College. The Principal besides being a lecturer has to discharge other onerous duties of his office, and it is not erring on the side of liberality if his pay is made to range from Rs. 1500 to 2000.

The Law College has developed enormously for the last ten years. It needs strengthening; strengthen it in all ways possible—but strengthen it with men who can give their undivided time and energy to it but not with men who can scrape a few minutes from their busy time and make their jaded time when they have to take some rest, a means of replenishing their purse. The last if not the least of these reasons is the legal profession in Madras is a most popular and paying one and as such the public have a right to expect the Government to pay greater attention if not at least as much attention to the Law College as it does to technical Colleges.

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A Text-book of Tamil Composition

Specially adapted to meet the requirements of
S.S.L.C. and Intermediate Examinations

(Prepared in accordance with the recommendations of the University of Madras)

BY

G. DAMODARA MUDALIAR, B.A.,
Tamil Reader, Office of the Registrar of Books, Madras
(sometime an Assistant in the Wesley College, Madras).

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Chapters I and II deal with the spelling of words, and give the definitions of certain technical terms which are used in the work. The uses of *செ* and *செ*, *செ* and *செ* are defined and illustrated by examples.

Chapters III to VI explain broadly the different parts of speech with special reference to the inflections and tense-particles, which obtain in modern Tamil.

Chapter VII deals with compounds and explains the distinctions between case-relation and non-case-relation compounds and those between elliptical and non-elliptical compounds.

Chapter VIII deals with Sandhi. Those rules which are obligatory are considered first, and those which are optional are treated briefly towards the end.

Chapter IX (Syntax) deals with the arrangement of words in, and the analysis of, sentences.

Chapter X (Common errors) is, briefly, a summary of the previous chapters, and gives a number of exercises for correction under the heads of Wrong Spelling, Use of Colloquial Words, Use of Improper Forms of Words, Wrong use of Sandhi and Mistakes in Syntax.

Chapter XI deals with Punctuation.

Chapter XII explains, by means of examples, the structure of Sentences and Paragraphs.

Chapter XIII explains some chief Figures of Speech, such as Simile, Metaphor, Hyperbole, etc.

Chapter XIV (Prose style) treats of the essentials in good composition, viz., Perspicuity, Brevity, Simplicity, Euphony and Picturesqueness. This chapter contains a large number of examples from standard works such as Panchatantram, Pen Kalvi (Vedanayakam Pillai), Tamil Essays (Prof. T. Chelvakesavaraya Mudaliar), Bhartrihari (Pandit K. S. Gopalachariar), etc.

Chapter XV gives general instructions as to the way in which essays may be written. A select list of subjects for essay-writing is given at the end of the chapter.

Appendix I gives the list of Loan Words approved by the University of Madras.

Appendix II contains a list of books that may serve as models for Tamil composition.

Telugu Edition in preparation.

SRINIVASA VARADACHARI & CO., TRIPPLICANE & ESPLANADE, MADRAS.



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THE CORRELATION OF HISTORY AND GEOGRAPHY.*

ABOUT this time of the year 1907, I had the privilege of opening a discussion on "The Teaching of Elementary Science in correlation with Geography in the lower forms of Secondary Schools."† I dwelt at some length on the observational aspect of the teaching of Geography and showed how the subject might be begun in nature-study. The immediate neighbourhood of the pupils—the sky above, the earth below, the fauna

* A paper read at the Seventh Secondary Teachers' Conference, Vizagapatam, on 15th May 1913, by Mr. K. S. Parabrahmam, B.A., L.T.

† Published in the *Educational Review*, February, 1908.

and flora around—together with the natural phenomena of every day life, is pregnant with lessons of geographical significance. These, when brought into proper relation with the accumulated experience of observers in wider fields, lay the foundations of a rational study of Geography. I also drew your attention to the main lines of connection between Geography on the one hand and the natural sciences on the other. Though Geography cannot claim to be ranked as a separate science in the sense in which Physics or Chemistry may be considered as distinct units, yet it provides a common meeting ground for the workers in the various fields of nature-study and mathematics—Climatology, Cartography, Geodesy, Geology, Anthropology, Ethnology, and the like. There is no branch of knowledge having any bearing on human comfort or progress, that cannot be brought into relation with Geography. The Royal Society refuses to recognise Geography as an independent and definite branch of study; nevertheless the educationist regards it as *par excellence* the science of sciences. It affords the teacher infinite possibilities of co-ordination with the other subjects of instruction, specially in the lower classes. Starting with Geography as centre, his teaching can be made to radiate out in all directions, touching history and language, nature-study and mathematics,

drawing and modelling. In the hands of a skilled teacher, Geography becomes one of the most powerful means of training the intellectual and æsthetic faculties of the child, no less its manual and tactile sensibilities.

I submitted for your criticism and approval syllabuses in elementary science for all classes—from Standard 3 to Form III—including in my scheme as much of Physics and Chemistry, Botany and Zoology, Geology and Astronomy, as is required for a clear understanding of geographical principles. I also laid some stress on the human note—the relation of the habits, dress, and occupation of man to local geographical conditions. I contributed to one of the earlier issues of "The Teacher" a short article on "The New Geographical Outlook," suggesting the continuance of the study of the "natural-knowledge" side of Geography even in the High School forms. The classes in Practical Geography conducted by Mr. G. Ramadoss at one of our annual conferences have given an impetus to this aspect of the teaching of Geography; and, in many of the leading schools in the circle, Practical Geography has been introduced as a regular subject. I may be permitted to remark in passing that undue importance is being given, as in England, to the *construction* of maps, in preference to a study, as on the other side of the Atlantic, of the *interpretation* of maps and of physiographical conditions.

I have thus far reviewed what has been done to give you an idea of the secure foundations on which our conception of the teaching of Geography rests. However much a knowledge of map-making, earth-lore, and meteorology be made the basis of a scientific study of Geography, our schemes would be incomplete if the geographical principles studied could not be applied to the actual

conditions of every day life. Our study of Geography would be soulless and insipid, if we could not view the world as the abode, nay, the dominion of man, its overlord.

I stand before you this morning to have a talk with you on the humanistic outlook of Geography. We shall investigate how the geographical conditions of a region have moulded the destinies of the people inhabiting it—how the physical aspects, the contour and configuration, the climate and the productions, have dominated man's activity in all directions. In short, we shall view Geography as the handmaid of History, and trace the influence of geographic controls upon its great movements. It shall also be within our province to see to what extent man's activities have been able to combat and modify the natural influences of geographical conditions. This interaction between humanity and its geographic environment, when duly understood and appreciated, should largely shape our ideas of the teaching of two of the most difficult and sadly neglected subjects of the school curriculum.

Before we proceed to examine the logical results of earth control on the strivings of man after social, economic, and political development, let us try to understand in a general way the connection between History and Geography.

The most elementary association between the two subjects lies in ideas of time and space. While History deals with time, Geography is concerned with space and situation. This connection of time and place is perhaps the weakest ground for linking together History and Geography.

As Geography deals with the topographical distribution of the earth, mountain, plain and

sea, and of everything that the earth sustains—plants and animals including man himself—and as History is the record of the progressive activities of mankind on the surface of the earth, it is impossible to conceive of any history of man apart from the real history of the earth. Battles are not fought in the air and men do not live in space. The two subjects present two different aspects of the same question, each being incomplete without the other. In this age of specialisation our cleavages should never lose sight of the intimate connection that subsists between two such allied subjects as History and Geography. In our enthusiasm for one of these we are apt to lose sight of the whole of which it forms a part. I have it on good authority that boys are fond of Geography and girls of History. As nature intended woman to be the complement and associate of man, so shall Geography leave the sciences which have given it its birth, and cling unto History!

There is yet a stronger ground for correlating History and Geography than of co-existence, sentiment or fellowship. A higher and more philosophical conception of the relation between the two subjects, lies in sequences—in the direction which the distinctive characteristics of a region give to the development of its inhabitants, and the way in which man endeavours to make the best of Nature's gifts. The progress of civilisation depends on two factors—the unceasing efforts of man and the steady operation of natural causes. These two forces do not act independently of each other towards a definite end, but act and react on each other all history through. This dependence on geographical environment is more direct and decided in the earlier stages of civilisation; but, as man rises in the scale of nations he casts off his

slavish dependence on Mother Earth, grasps the opportunities of environment, and learns to control and utilise them. The intimate bearings of geographical conditions on the distribution of man in communities or states must be of interest to the historian who aims at being more than a chronicler, and the efforts of inventive humanity to subjugate nature may be relegated to the domain of Geography.

Geography has been defined by Mr. Mackinder as the physical basis of history. We may with Mr. Scott Keltie go a step further and call it the physical basis of all human activity. As we take a rapid survey of the whole world, we find that the track of human civilisation and progress is modified and controlled by what forms man's immediate environment. The lie of the land, and the climatic and physical forces around set the conditions under which man must fade or flourish. The Laplander struggling for the bare necessities of life, is dwarfed in stature and cramped in intellect. The Cossack of the boundless steppe is an excellent horseman. With every excuse and opportunity for reading during the tedious winters, the Iclander has become a book-worm. The barrenness of the Cambrian mountains has made "Taffy a thief." The forests of Servia have turned the Serbs into swine-herds. The poor soil of Norway has driven the Norwegians to various wood industries—the manufacture of matches, the building of ships and the making of paper. 'Tændstikker Norway' is familiar to every boy the whole world over. Norway possesses a mercantile navy that in tonnage is surpassed by only three European powers. Saw-dust is so largely used in the manufacture of paper that "a tree in the morning is a newspaper in the evening!"

Nature was in a kind? no, whimsical mood when she created Ceylon, "the garden of India," and "the pearl of the Eastern seas." She has given it an advantageous position on the highroad from the civilised West to Australia or to the Far East. It is free from hurricanes, typhoons and earthquakes. The naturalist finds in Ceylon a greater wealth of plant and tree life—indeed 800 specimens more—than in India. "Spicy breezes blow soft over Ceylon's isle" from forests of nutmeg and cinnamon. Pearls from the Gulf of Mannar, rubies, sapphires and moonstones from the gravel pits of Ratnapur have turned it into a sort of jewel case. There are four rainy seasons—two that are wet and two that are less wet—and such a constant alternation of heat and moisture that "if you stick an iron crowbar into a macadamised road in Colombo, it will blossom like Aaron's rod." There are excellent roads and railways. Labour is cheap. The population is intelligent. But the soil is not fertile and the Singhalese can ill afford to lounge away their time. The German proverb

"Where a Hessian cannot thrive
None other need strive"

applies with equal force to the Singhalese.

The slope of the Balkan peninsula accounts for the persistence of the Asiatic tendencies of the Turks. The islands of the Ægean Archipelago which formed a series of stepping stones between the civilisations of Europe and Asia, enabled Greece, very early in its history, to take a prominent place among the civilised nations of the ancient world. Rome was destined by her position to influence the West rather than the East; and Roman institutions have had an enduring effect on the civilisation of Western Europe. The configuration of the Alpine region has made an invasion of

Italy from France easier than of France from Italy.

Thanks to the extent of fjords and the line of "skerries" protecting the inshore from the furious storms of the North Sea, the Norwegians have been sea-farers from the days of the vikings. The lagoons and the irregular shore-line of S. E. and S. W. India have developed a race of sailors from time out of mind. Chile with its indented coast-line, its protecting headlands, its excellent railways and powerful navy, bids fair to be the "Great Britain of the South." The civilisations of Greece and Rome, Carthage and Phœnicia were fostered under the sheltering influence of the landlocked Mediterranean—a sheet of water large enough to tempt a race of sailors, but without a perceptible tide to hinder navigation. Holland has been reclaimed from the sea. Spain sent out her fleets both from her Atlantic and Mediterranean shores. What would have been the history of England but for the geological subsidence which has given to the shores of North-Western Europe its present broken outline?

The fishing grounds of Plymouth and Devonport show what "salt water" has done for Drake and Raleigh, and History attests to what the "Sea-dogs" have, in their turn, "wrought on the salt water for their country." In fact fishing grounds have been the only satisfactory school for a navy—Royal or Mercantile. The sardine ports of Douarnenez and Concarneau have, in Lorient and Brest, the Plymouth and Portsmouth of France.

The position of Poitou between the basins of the Loire and the Garonne, has made it the scene of many battles, of which Poitiers between the French and the English is of special interest to us. The Vendée district

with its bewildering maze of wood and heath, stream and marsh, compares favourably with the North-West Frontier Province, affording, as it does, peculiar facilities for operations offensive and defensive to those acquainted with the topography. Chitral reminds of Fontenoy. Similar circumstances largely determined the course of the first part of the Boer War. The Romans showed their respect for the defence afforded by mountain bog and fen to the Iceni and the Trinobantes in the Roman stations of London and St. Albans. Belgium has been throughout history "the cockpit of Europe." The meeting place of Celt and Teuton, no wonder that it has witnessed such decisive battles as Stenkirk and Landen, Oudenarde and Ramillies, Quatre Bras and Waterloo. Holland, Bulgaria and Afghanistan are other typical "Buffer" States.

Austria lying open to the Black Sea and the plains of central Europe, has been subject to repeated incursions by the Asiatic nations. The races inhabiting the country are as varied as the physical features themselves. They have no common religion, language or fatherland—the Germans in N. W., the Slavs in N. E., the Magyars in S. E., and the Italians in S. W. No fewer than ten languages are spoken and four alphabets are used among them. These circumstances have given rise to difficulties in administration similar to those obtaining in Belgium. The absence of well-marked natural boundaries in the *pampas* is responsible for the nomadic habits of the people and the want of all political sympathies of the Gauchos. The Gaucho is so devoid of all sense of economy that he *walks a mile to fetch a horse to ride a quarter of a mile* on it.

The civilisations of India and China were

nurtured under the fostering influence of the Pamir Plateau. The impregnable position of the Swiss among the Alps has vouchsafed to them a life of independence amidst ambitious states. The cork forests and unnavigable rivers on the Spanish frontier have kept Portugal a separate state. The snowy crests of the Andes shielded the civilisation of Peru from the marauding savages of the *Selvas*; and the stimulating effects of altitude are visible in the high level of civilisation attained by the Peruvians. The Alps have been an important factor in the enlightenment of Europe permitting easy intercourse between nations, whereas the impassable barrier of the Himalayas has cut off India from all communication with China and Tibet. The Tibetan exclusiveness has become proverbial. We laugh to hear that he scratches his ears and puts out his tongue when he greets his friend. The Scandinavian mountains have rendered a "Norwegian question" possible in much the same way as the Irish bogs and the Irish sea have nourished the "Irish question," the relief of North Island the "Maori question," and the Scottish Highlands the "Crofter question."

"Mountains interposed
Make enemies of nations, who had else
Like kindred drops been mingled into one."

The fertile basins of the Euphrates and the Tigris, the Hoangho and the Yangtse-kiang, the Ganges and the Indus, were the seats of early civilisation. "Egypt was before civilisation began." These fluvial civilisations, hemmed in by mountains or flanked by deserts, became despotic and isolated. The agricultural pursuits have made the people stationary. The hot climate has undermined their energy and the yellow nations have fallen far behind in the race.

The Chinaman wishes to be left severely alone. The Hindu glories in a past that is lost in the abyss of time. The splendours of Egypt are buried in the sand-drift of the desert.

This dependence on rivers for food finds expression in the endearing epithets given to rivers—Mother Volga, Father Rhine, Sister Danube, Old Father Thames. The rapid growth of population along the banks has made the struggle for existence keen and has raised questions of intercourse and ownership. From time immemorial these river valleys, inviting conquest from without or fostering strife within, have been the scenes of rapine and slaughter. One of the earliest motives for war is the possession of more food-bearing lands for sustenance.

"The mountain sheep are sweeter,
But the valley sheep are fatter,
We therefore deemed it meet
To carry off the latter."

To take a specific example, in three distinct periods of the world's history—once during the war of the Austrian Succession, a second time in 1812 in the Napoleonic wars, and again in 1866 in the Austro-Prussian war—a series of battles were fought in the same line of the Elbe, either in the gorges of the Elbe where it breaks through the mountains between Bodenbach and Dresden, or at a short distance north or south of the valley. The Railway from Vienna to Berlin takes the same route—the line of least resistance. Hence the political and commercial importance of Dresden which commands the passes, e.g., the ravine of Plauen—through the Erzgebirge into Bohemia. River valleys have been the meeting places of both friends and foes, and the natural line for the railway always takes it through a battle-field.

Considerations of time and space prevent my taking more than a passing notice of the Danube basin—one of the most important theatres of European war. The lower courses of the river teem with fortified towns such as Silistria, Rustchuk, Sistova, Widdin. These fortresses guard the ferries, and are of no small importance in time of war. Plevna stood a long siege during the Russo-Turkish war of 1877. On the upper reaches is the fortress of Ulm—an important strategical centre of South Germany against possible French attacks on Alsace and the Rhine. The *Iron Gate* is guarded by the fortress of Belgrade, the capture of which by the Turkish Emperor, Solyman, in 1521, was the signal for the rapid expansion of the Ottoman empire along the valley of the Danube. In fact the Hellenic Mediterranean was the divergent focus of a migratory movement that, passing along the valley of the Danube, civilised the whole of Western Europe. The great battle which checked the onward progress of the Hungarians was fought on the Lech. The equally important encounter which put a stop to the Mongol inroads of the 13th century, took place near the eastern frontier of Austria proper. The flood of Ottoman invasion was repulsed from before the Hapsburg capital, Vienna, the guardian of the *Hungarian Gate*. Vienna is within easy reach of Bohemia across the line of Mährenwald. It also communicates with Northern Europe through the valleys of the Oder and the March, and commands the main highway of intercourse between East and West. Very naturally therefore several military events of decisive importance took place near this city—Rudolph of Hapsburg's victory which gave Austria back to the Germans 1273, the retreat of the Turkish army in 1529, John

Sobieski's victory which finally drove back the Ottomans, Napoleon's victory of Wagram (1809) which placed him at the zenith of his power. Austerlitz (1805) "that killed Pitt" is not very far off.

We can trace the history of the colonisation of Eastern North America along the great lakes, the St. Lawrence, and the mighty Mississippi. The great fortress of Ehrenbreitstein opposite Coblenz is "the Gibraltar of the Rhine." The Guadalquivir gave the Moors an entrance into Spain. The "Penjdeh" incident (captured by Komaraff 1885) took place where the Murghab valley (Afghan Turkestan) narrows into a deep defile. The Turkish garrison under the English general Williams held out (1854) bravely for six months at Kars in the valley of the Kur (Turkish Armenia). The entrance to France is Toulouse (on the Garonne)—*too loose!* Khartum stands at the junction of the White and the Blue Nile. Majubah Hill and Rorko's Drift are in the valley of the Buffalo. Charleroi on the Meuse, Talavera on the Tagus, Strassburg on the Rhine, Ratisbon on the Danube, all bear witness to the same great principle. Killiecrankie, Jena, Alma, Hohenlinden, Badajoz (*Bad-a-hos*), Cienfuegos (The'-oo-dad Rod-re'-go) may also be mentioned.

Again in Northern Italy a number of rivers break through the Alps and flow from north to south across the plain of Lombardy into the Po which takes an easterly course into the Adriatic. North Italy is surrounded by the Alps, and the well known passes of St. Gothard, Simplon, Bernard and Splügen, give access from Europe to the plains of Northern Italy. We should not be surprised if a number of battles were fought either to gain the passés, or to defend a passage across

one of the rivers. The battles of Lonato, Rivoli (1796), Chinsella (1800) illustrate the former. Lodi, Bassano (1791) Marengo (1805) Magenta and Salferino (1859) bear testimony to the latter. The valley of the Adigé, in particular, which gives easy access from Italy into Austria, has been the battle-field of Northern Italy. The valley is full of traces of the heroic struggles of Italy with Austria on the battle-fields of Montua, Caldiero, Roveredo.

Nearer home, the ridge of land over-looking the basin of the Ganges on one side, and commanding the gates of the North-West on the other, was, in the earlier periods of Indian History, the scene of much carnage and bloodshed. The battle of Kurukshetra (50 miles north of Delhi), the two battles of Tarian or Thalawari (14 miles from Thaneshwar) and the three battles of Paniput (50 miles to the north of Delhi) bear out the importance of the North-Western passes in deciding the destinies of the Indian peoples. The capital of the Indian Empire and the summer residence of the Viceroy are also on the same ridge.

It may be pertinent to the subject to discuss in this connection why the Swiss were the first to adopt the principle of compulsory military service. The four large cantons of Valais, Grisons, Bern and Ticino correspond more or less to the upper valleys of the Rhine, the Rhone, the Aar, and the Ticino. The Reuss runs between the eastern and western cantons. The upper Reuss valley derives the greatest benefit from the Föhn wind, and the lower Reuss valley formed part of the old duchy of Swabia. The responsibility of driving the Hapsburg oppressors into the Danube valley, and the Savoy intruders into Italy, devolved

on the three central cantons—Unterwalden, Uri, Schwytz. These cantons were peopled by a hardy race of mountaineers of German descent, who could ill brook the insolence of the Hapsburg officer, or the cruelty of the Austrian Duke. The men of Schwytz took the lead and delivered the country from the hands of the oppressors. The “battles of deliverance” were fought round the canton of Schwytz—Morgarten (1793) on the northern frontier, Sempach (1386) in advance of the western, Näfels ahead of the eastern. The heroic death of Arnold von Winkelried is still commemorated by an annual festival.

“Thus Switzerland again was free;
Thus Death made way for Liberty.”

The story of William Tell emphasises the spirit which fired the men of these cantons at that time. The military schools of Basel and Thun, the fortresses of Martigny and Andermatt speak for themselves.

Climate no less than any other geographical factor has influenced temperament, physique and intelligence. Its workings are traceable in the tone and cast of expression it has given to literature and religion. The fuming plains of a swampy water-logged delta in the tropics sap all energy and incentive to initiative or enterprise. The “delightful cold” of the Canadian winter, or the clear buoyant atmosphere of the Karroo, or, for that matter, even the dry scorching heat of the Australian desert, and the sharp extremes of the Tibetan Plateau or the Arabian Table-land, have had an exhilarating influence, and have developed courage and energy which are a good equipment for life. In specially favoured localities this courage and energy crystallised into a love of war and ferocity as seen in the Mahratta yeoman, the Scottish Highlander, and the Gurkha warrior.

The salubrious climate of Greece and the temperate habits of the people ensured to Greece health and buoyancy of spirits. Their interest in national games and bodily exercises had much to do with their personal beauty, which, in its turn, made them judges of beauty in other things. This æsthetic sense won for Grecian art and literature a world-wide and everlasting reputation.

The science of Astronomy had its birth in the level areas of South-western Asia, where the clear skies, the transparent atmosphere and equable climate made it easy for a study of the Heavens. The watchfulness of a pastoral people developed a spirit of enquiry, the twinkling of the stars contrasted vividly with the bright blue sky behind, and the lack of well-marked boundaries in an oriental desert made a knowledge of Astronomy indispensable, in much the same way as the annual obliteration of all marks of demarcation by the inundations of the Nile resulted in a study of Survey and Geometry.

Religion in its ultimate analysis is an expression of dependence on something that can gratify or torture us. Man throughout all time has deified that which has made the strongest impression on him. The school boy living and moving and having his being among mangoes and sweetmeats, why should he know of bliss in a life *to come*? Enough if he dreads the powers that can rob him of his holiday or bar his promotion. To the anxious mother the doctor who can save her collapsing son, is a god. The miser rolling in wealth is a worshipper of Mammon. The usurer sits before his golden pile every DEEPAVALI. The Red Indian bows before the munificent bestower of maize and meat. The Hindu, discovering the antiseptic proper-

ties of sunshine, has ordained the worship of the sun in all cases of illness. The importance of the timely arrival of the south-west monsoon to the Indian peasant, finds expression in the worship of INDRA and VARUNA. The superstitious reverence for the cow is nothing more than a poetic conception of clouds, whose udders pour down on plants and animals the showers of the nectar of life. The melting of the ice of the Neva is celebrated with great rejoicings in Russia. The loss of vitality on the sweltering plains of the Ganges, the presence of death in almost every form and shape gave rise to the doctrine of Nirvana. The mythologies of India, Greece and Scandinavia are other instances in point. The three great monotheistic religions of the world—Muhammadanism, Judaism and Christianity—had their origin in a desert. Compulsory self-denial gave predominance to the mind over the body. All the three religions preach the lesson of a harsh inhuman desert, *Renunciation, Thou shalt not*. The Jewish conception of a God of Justice, “a jealous God visiting the iniquities of the fathers on the children unto the third and fourth generation,” bears the impress of their Egyptian bondage. The promised land overflowing with milk and honey lies at the base of the Christian notion of the God of Love. The Muhammadan idea of eternal bliss, of unending sensuous delight attained by the faithful, is in direct opposition to the privations of life in an inhospitable desert. The study of Geography has thus revealed man as the creator of god—a god to suit his own needs and fears, his hopes and aspirations. I am afraid I am trespassing on holy ground!

Considerations such as these have led to a belief that forms of government should vary with the climate. The slavish dependence of

the Negro on Nature's bounties has its counterpart in the unquestioning obedience he yields to authority. The lassitude induced by the enervating climate coerces him into complete subjection. Picture to yourselves the untold horrors of a Chinese public examination! What do you think of being shut up in a solitary cell for full 48 hours with a bundle of question papers in your hand, and after a day's rest to pass through a second similar test. So trying is the ordeal that candidates are often found dead in the cells. The flexibility of the S. S. L. Certificate scheme breathes the spirit of freedom of temperate Germany. The physical disquiet of the Andean region—its volcanic eruptions and earthquakes, its tornadoes and hail-storms—are reflected in the political unrest of the South American republics.

“In the tropics Nature is an indulgent mistress but in temperate latitudes, She is the servant of man. The forceful energy and methodical labour, the foresight and thrift characteristic of milder climes—these vigorous attributes essential to comfort and progress demand institutions resting on the reason and respect of the people. The perpetual struggle with Nature corresponds to the unending conflict with the crown.

CAN GEOGRAPHY ACCOUNT FOR THE DESPOTISM OF THE TSAR?

“In the case of Russia, I would try to leave,” says Prof. Lyde, the “picture of (a) the vast plain, where man is overwhelmed by the tyranny of Size, where he is isolated from his fellow-man by the tyranny of terrific distances, where his initiative is crushed out by the tyranny of relentless monotony, where the absence of natural landmarks makes the church-dome, gleaming above the mist-cover-

ed lowland, the only guide to the benighted wanderer,—and (b) as the result of all this, where that wanderer in turn so acquiesces in sacerdotal tyranny that he denies his children all animal food, even milk and eggs, in the coldest parts of the year as soon as they overlap Advent and Lent, where the *perishableness of his wooden house*, by fire in the ice-bound winter or by the ordinary wear of fifty summers, *saps any Historic sense with which he might criticise tyranny*—whether political or sacerdotal, physical or climatic.”

The instances just submitted will suffice to bring out the bias which topography and climate have given to the course of human history. The intimate relation between “life” and the inorganic elements which have determined its distribution on the surface of the earth, was recognised even by the psalmist. “The cedars of Lebanon, which he hath planted; where the birds make their nests: as for the stork, the fir trees are her house. The high hills are a refuge for the wild goats; and the rocks for the conies.” This diversity of life, this adaptability of every species to its environment apparent in such a limited area, becomes all the more striking as we take a broader view. The differences due to the operation of natural forces are most in evidence in the life of plants, lower animals and savages. The semi-aquatic Esquimaux, the “hairy” Ainu, the wandering Bedouin, the Prairie Red-skin, the negro “panting at the line” and the omnivorous tribes of the Australian Scrub, all bear in their modes of life distinct traces of the influence of their natural surroundings. Like the polar bear, the Arabian camel, the Australian kangaroo or the African rhinoceros, they have either to adapt themselves to their environment or succumb to it. The hidden treasures of the

earth must remain to them a sealed letter. The exuberant basins of the Amazons and the Congo, the diamond fields of Kimberley, the coal-mines of China, the cataracts of the St. Lawrence, the prairies of North America, the gold veins of Kalgurli, the oil-wells of Pittsburgh and Baku have so long remained unexplored or undeveloped, untapped or unmastered. Unable to understand or utilise the physical forces about him, man invariably sacrificed ultimate good to immediate pleasure. The Australian blackfellow, his brain atrophied by ages of disuse, would hew down a whole gum tree to capture an opossum; the gentle Mashona of Zimbaye would not hesitate to set acres of grass on fire for a dish of mice; savages have not scrupled to reduce whole forests of useful timber to ashes to make a clearing for cultivation.

With advance in civilisation man has been able to rise above the blind instincts of his savage brother. Man alone of all living beings has recognised the intelligence with which he is endowed. He alone has learnt “to comply as well as to command, to conquer Nature by the observance of her laws.” *The memorable march of Hannibal along the little St. Bernard Pass stands out in all history as an illustrious example of what man’s courage and determination can accomplish in the midst of natural obstacles.** This is perhaps in direct antithesis to the advantage taken by the Dutch, as a last desperate resource, of natural conditions in their long war of independence against Charles V. What a sad disappointment to the enemy just when they were gaining ground to be ordered back by the surging floods!

* This I owe to the kind suggestion of Mr. C. Ransford in the course of his presidential remarks.

The application of steam to locomotion and the discovery of the electric telegraph have annihilated time and space, and have swept away all barriers to cosmopolitan intercourse. The mariner’s compass and the sextant have made navigation a science. The once trackless waste has now become a high way of commerce. Man has belted the globe with cables and spanned the continents with railways. The projected overland route to Australia enables him to go round the world in 35 days. The unmastered floods of rivers have been controlled and made subservient to man. The destruction of forests here and their conservation elsewhere have materially altered the conditions of rainfall and of climate. Steam drives the plough and reaps the harvest in many lands. A judicious system of irrigation and storage coupled with the boring of artesian wells, has made the wilderness blossom as the rose. A dreary landscape is now a smiling field of tasselled corn. The whiteman’s grave has been rendered sweet and wholesome by transplanting the Eucalyptus from Australia. The lavish use of hill stations has enabled him to work far away from home, and home itself has been brought within reach of a holiday. Who can belittle the importance of the Alpine tunnels, underground railways, suspension bridges, ship canals and other feats of engineering skill?

We may yet dream of the roaring Niagara working the machinery of the whole world. Ere long there may arise an industrial South Africa drawing its motive power from the Victoria falls, where the Zambesi compressed into a gigantic swirl plunges into a gorge 420 ft. deep; the cotton-mills of Bombay may yet be propelled from the Gersoppa falls, where the Sheravati river dashes over a yawn-

ing precipice half a mile high. It is not impossible that man’s inventive genius will one day enlist the ocean in his service.

In his perpetual struggle with Nature, man has grasped the inheritance of time and has learnt to overcome his surroundings. Does not this very subjugation of Nature emphasise the dependence of man on Nature’s gifts—coal and iron? Climate is still the master-hand under which he works. It still directs his doings and defines his limits. The natural elements have been largely subservient to him. Now and then, however, they rebel and undo his work to show him how insignificant he is when compared with the mighty forces of Nature. The intelligence within him gives him the courage to rally and repair the ravages caused, and proceed to harness nature with stronger bands. We have thus caught a glimpse of the limitations under which man works; and it is the business of Physical Geography to investigate these limitations—these conditions of equilibrium in the struggle between Nature and Man.

Apart from the changes wrought by inventive humanity in the physical world to make it adaptable to its requirements, there is yet another phase of human activity which the progressive teacher of Geography cannot ignore. The previous history of a country is largely reflected in its present geographical condition. What a flood of light does a knowledge of the tribal migrations of the people of Asia towards the West about the beginning of the Christian era, throw on the differences—racial, linguistic and personal—of the peoples of modern Europe! Is not a study of later European history essential to a clear appreciation of the modern strategical values of state boundaries, and of the elements in continental affairs that may, in the near

future, lead to changes in the political map of Europe? The stimulus which the American Civil War has given to the production and manufacture of cotton in India, and the circumstances that have contributed to the unique commercial importance and prosperity of Bombay are too well known to need special mention. Is not the failure of supplies of flax and hemp from Russia during the Crimean War, responsible largely for the jute trade of Dundee? Could we afford to underestimate the part played by the Napoleonic wars in the development of the "lumber" trade of Canada? The unreliability of the importation of Baltic timber led England to look up to Canada for supply, and the lumberers rose to the occasion. Canada owes a deep debt of gratitude to the lumberers—the only possible pioneers of the country—who cleared the forests, made roads and bridged the rivers.

The military walls round important cities preventing their natural expansion along the lines of least resistance, the difference in gauge between the railways of two such adjacent countries as France and Spain hindering through communication, are typical of the absurdities in which nations have indulged even in these civilised times.

How could we appreciate the importance of lace as an article of export from Paraguay, if we did not know its previous history? That country was from 1865—1870 engaged in a futile heroic struggle against the combined forces of Brazil, Uruguay and Argentina. The war depopulated the country, and out of 1,400,000 inhabitants only 221,000 (1/6) were left, of whom not more than 29,000 (1/7 of 1/6) were males over 15 years of age. The large number of women accounts for the importance of lace as an industry. In spite

of capitalists to advance money, a level surface making transport by rail or road both cheap and easy, a genial and varied climate and a fertile soil, the country has not developed, as the surviving old men, women and children have proved unequal to the task.

The short-sighted policy and the religious bigotry with which the *Inquisition* extinguished the indigenous Moorish industries can alone reconcile the entire absence of foreign commerce with the apparently advantageous position for trade of the peninsula.

The material and political splendour of Egypt, lost in oblivion, has been partially restored by the British occupation of the country. England has borne her share of the white man's burden in looking to the two essential needs of Egypt—*water* and *justice*—and the *fellahin* enjoys peace and prosperity unheard of in the annals of Egypt.

Thessaly has taken to heart the cruel raids of "the unspeakable Turk." Having groaned under the Turkish yoke for many painful years, Thessaly has realised the insecurity of her position on the frontier even after her restoration to Greece. Its natural resources are very limited, and, thinly peopled as it is, it is no wonder if the country is not as prosperous as it should otherwise have been.

The defeat of the galleons of Seville was but the prelude to the part England was destined to play, as mistress of the seas, in after history. The annihilation of the Spanish Armada, the enterprising spirit of the "Devonshire worthies," the union of England and Scotland under one king, the cowardice and peace policy of James I, laid the foundations of a greater Britain beyond the seas—"the grandest and most wonderful political and commercial fabric" history has known. Trade has practically followed the

flag, and every Englishman is justly proud of his inheritance—a sea-girt empire over which the sun never sets—an empire 12,000,000 sq. miles in extent, counting 400,000,000 inhabitants, differing widely in colour, race and speech, but one in loyalty and devotion to the British flag.

"Fair is our lot—Oh goodly is our heritage!
He has smote for us a pathway to the ends of all earth."

To the British Empire and to India of which it forms a part, we shall now restrict our investigations. As the field is very extensive, I have noted the geographical influences in Indian and British History in the form of syllabuses, I should rather call them topical lists, which I submit for your kind acceptance.

* 1. List of Geographical influences in Br. History.

* 2. List of Geographical influences in Ind. History.

Long before any attention was paid in England to Geography in its scientific and practical aspects, Germany had worked it out somewhat elaborately both as a subject of research and of education. On the Continent as well as in America Geography has proved its claim to independent existence as a necessary branch of human knowledge by being capable of original and quantitative research. The literature available to the German reader is very extensive. Indeed in Germany the humanistic aspect of geography has been recognised as a separate unit, and labelled "Anthropo-Geography."

But in England the movement to improve the teaching of geography does not date very far back: the repellent text-books of our

school days, are still extant, and the dry-as-dust methods of study have not completely died out. Of late, however, a few good books have been published by enterprising firms catering to the needs of the up-to-date teacher. The list herewith submitted is by no means exhaustive but represents the more important books worth the teacher's attention. None of the books noted have been written to suit Indian schools; yet teachers will find in them new ideas and suggestive trains of thought.

† List of Books.

Just a word more and I shall have done. We have yet to consider to what extent this interdependence of history and geography should influence our ideas of teaching. We are all agreed that, for a clear understanding of many points in history, a knowledge of the scenes of the events, and of the position of the places mentioned is essential. The map, the *physical* map and not the political, should be displayed, and any geographical information necessary should be furnished. I hope you will also endorse my view that the mere ability to draw a map, and to mark the position of places on it, is no guarantee that the pupil has a grasp of historical geography. I am also sure that the consensus of opinion here is that there is too much geography, specially military geography, for a history student to learn, and that, therefore, a detailed study of a typical campaign or two, and the military manoeuvres in a couple of decisive battles, just to give himself a little variety, is all that the history teacher can be expected to undertake. Throughout the history lesson, however, the relative position of mountain ranges, table-lands, plains and valleys, and the resulting determination of water courses

* To appear in a subsequent issue.

† To appear in a subsequent issue.

together with air, rain and sunshine in all their complicated kaleidoscopic combinations, should be placed in bold relief before the pupils, and they should be encouraged to see how these conditions, forming as they do man's immediate environment, have operated on history.

I may be permitted to notice the modern tendency of subordinating the scientific study of geography to the humanistic outlook of history. The physiographical side of geography which alone affords real mental discipline, is entirely thrown into the background. The physical characteristics are connected with the life of the people, and such information is given as may throw some light on the history and modern position of the country under study. Such a treatment naturally fits in with the lines of attack of the history teacher, but cannot be dignified as "Scientific Geography," nor assigned a separate place in a school curriculum. The 'readers' I am alluding to, might be used in the history class or in the geography lesson for extra reading. Here their utility ends.

I was amused to notice analogy in the method of treatment in a parallel series of history and geography readers. In the earlier stages, the study of the home region goes hand in hand with that of the lives of the heroes of the home land. In the middle stages a general treatment of broad movements covering large time areas in history is made to correspond to a study of the outstanding features of geographical regions. In the higher stages landmarks of European and world history are taken up alongside of the general geography of the world on a regional basis. Analogy is not correlation nor is juxtaposition interdependence.

Some educationists have also suggested that both the subjects should be combined

and two interesting series of readers have already been published. One series emphasises Geography. The other subordinates it to History. Both the series have much to recommend them except their disciplinary value. Amalgamation is not correlation. The very idea of correlation implies that the two subjects have different points of view. While Geography deals with the causal relations of space and situation, *where* and *why there?*, History is concerned with sequences of events in their time relations *when*, and *why then?*

Geography treats of *man and earth*, History of *man and man*. Starting with nature, Geography ends with a recognition of the inter-action between man and nature. History takes a much wider outlook. History has its foundations in the influence of environment on man. The superstructure would, however, be wanting if it did not go a step further and aim at a knowledge of the political and social evolution of man, an insight into the springs of human action, and an idea of the duties and responsibilities of man as a member of society and citizen of an empire.

The history teacher should have in view the conditions imposed on history by geographical circumstances, and the geography master, in his turn, *while strictly adhering to the scientific treatment of his subject*, should, as occasion arises, *refer to the facts of history only in so far as they have tangibly affected the geographical condition*.

An examination of the series of readers above referred to, will at once reveal to the most superficial observer the danger of amalgamating the two subjects. The bright pictures presented and the Cinematographic displays of scenes from the world's History

A CRITICAL ESTIMATE OF GRAY, GOLDSMITH AND COLLINS.

GRAY was a poet with lofty imagination. Goldsmith spent his energies in writing prose and poetry. The name of Gray is always associated with his immortal *Elegy* while the name of Goldsmith is known all over the civilised world with the spread of the glory of the immortal *Vicar of Wakefield*. Both of them have achieved lasting fame with a very small volume of poetry. They differed widely in their mode of composition. Gray laboured his verse as the jeweller polished the diamond.

Goldsmith wrote with the artless simplicity of nature. Goldsmith's *Deserted Village* is a striking picture of one of the saddest features of the civilisation of the world. The success of the poem was instant and enduring. Gray, incomparably the best critic of the period, heard the poem read by his friend Nicholls and exclaimed, "This man is a poet." Goldsmith's best poems, the *Traveller* and the *Deserted Village*, were both written in the Popian Couplet. His best drama is "She Stoops to Conquer." He wrote *Histories of England*, of *Rome* and of *Animated Nature*. Ease, a peculiar charm and inimitable naturalness characterise his works.

Gray's *Elegy* is one of those rarest poems which achieve at once a fame and name which they ever after retain. It is perhaps the best known and in its own life the best poem in the English language. Mr. Palgrave says: "They are perhaps the noblest stanzas in the language."

The author who had a prejudice against being considered a man of letters did not publish until seven years after he had begun it and then only he committed it to print

and Geography interest the pupil—I should say, fascinate him—but at the same time rob him of the power of sustained thought. On account of the disconnected character of the scenes presented, neither historical nor geographical causation can be perceived, much less appreciated. The child begins to generalise on insufficient data, and gets into slipshod ways of thinking, or, what is more likely to happen, is carried away by "the impressionist pictures," and refuses to take kindly to more serious work.

Addressing a professional audience, I need not dwell on the necessity of correlating allied branches of knowledge. The co-ordination of studies, or "Apperception masses" as the Germans would have it, is but a technical way of expressing the popular psychological idea of "*proceeding from the known to the unknown*." *Continuity, Fellowship, and Economy* are the three factors governing the operations of nature. The past is indissolubly bound up with the future through the present, and thoughts follow each other in a chain. The faculty of speech brings to the front the sociability of man from the intellectual side. Nature never presents one-sided problems, and the psychologist recognises this fact in his theory of "the Association of Ideas." All intellectual material that is not brought into relation and harmony with the previous contents of the mind, fails to be assimilated. The first of the five formal steps of Herbart, which explores the previous thought—contents of the brain, ensures economy of effort in making the presentation easy.

"Thought must be kindled at the fire of thought."

"Nothing in this world is single;
All things by a law divine
In one another's being mingle."

K. S. PARABRAHMAN.

because the editor of the *Magazine of Magazines*—an 18th century forerunner, in name at least, of the 'Review of Reviews'—proposed to publish it without his leave. It has been through numberless editions and has been translated into many vernacular languages. It is a poem that ought to be got by heart by every student. The best known tribute to this poem is associated with the name of one of the most brilliant of British Generals and one of the most fateful battles which decided the destiny of the new world.

Lord Mahon wrote thus :—

On the 13th September 1759 the night before the battle on the plains of Abraham, General Wolfe was descending the St. Lawrence with a part of his troops. Not a word was spoken—not a sound was heard beyond the rippling of the stream. Wolfe alone—thus tradition has told us—repeated in a loud tone to the other officers in his boat those beautiful stanzas with which a country churchyard inspired the muse of Gray.

One of the telling lines in the poem :

"The Paths of Glory lead but to the Grave"

must have seemed at such a moment fraught with mournful meaning. At the close of the recitation Wolfe said :

"Now Gentlemen, I would rather be the author of that poem than take Quebec." Lord Byron called the *Elegy* "The corner-stone of Gray's Poetry."

GRAY AND COLLINS.

A comparison between Gray's method of allegorical representation and that of Collins shows that the allegories of Collins are finished ones with more of flesh and blood than the former's.

Gray chooses telling adjectives while Collins

has an eye to vividness of detail. Gray's allegories as found in his *Bard* are bold and clear, whereas Collins' representations are subject to the reproach of vagueness and obscurity owing to their effort of furnishing details. Collins in his "Ode to Passions" shows the presence of a genius.

Taking a particular piece of Gray's other vigorous poems, the 'Bard' has a special significance about it. It is founded on a tradition current in Wales.

The Bard, the last of his race, the bulk of whom Edward had ordered to be murdered that they might not resist, invokes the vengeance of Heaven on him and shows him the futility of the conquest as well as the pangs of remorse he has to suffer. In this poem, the poet gives a striking picture of the Bard's sable garb and haggard eye and streaming hair and beard :

"On a rock, whose haughty brow,
Frowns over old Conways foaming flood,
Robed in the sable garb of woe,
With haggard eyes the Poet stood"

The poet then indulges in a pathetic fallacy and says :

"Hark, how each giant oak and desert cave
Sighs to the torrent's awful voice beneath
Over thee O' King ! their hundred arms they wave
Revenge on thee in hoarser murmur's breathe ;
Vocal no more, since Cambria's fatal day,
To high born Hoel's harp or soft Llewellyn's lay."

The dead Bards and their magic mastery over the sphere of songs are particularised. When he is mourning over their loss he sees a vision of other ghosts present in the distance and joining with him in prophesying the future of the king.

The sad fortunes of his descendants are traced. The capture and murder of Edward II by his wife known as "The She Wolf of

France" whose clime is invaded and ravaged by the issue of her, joins Edward III is recounted.

But in spite of Edward's (III) grand conquests his death-bed is deserted and he dies in solitude. Black Prince is dead, and deserted by his friends. Sometime after the kingdom is torn by the Civil War attended with great loss of life and bloodshed and disgraced with many foul murders.

As a sample of immediate retribution they foretell the death of Edward's beloved wife and the prophecy being complete, the ghostly vision of the Bard's slaughtered companion vanishes.

The Bard then sees another vision of the resuscitated glory of the old British kingly line

"Girt with many a Baron bold
Sublime their starry fronts they rear ;
And gorgeous Dames and Statesman old
In bearded Majesty appear."

The poetic version of Shakespeare, Spencer and Milton appear in all their richness and variety and the Bard triumphantly points out the futility of Edward's impotent efforts to stifle the spirit of the poetry.

The tradition on which the Bard is founded is wholly worthless and rests on no sure foundation. It is current in Wales that Edward when he conquered the country, ordered all the Bards to be put to death. In the poem we notice two special features: Vindictive spirit and an assertion of the eternity of poetry. This duality is characterised by some as a defect in the structure.

The first intention of Gray was that the Bard should declare prophetically that poets should never be wanting to celebrate true virtue and valour in immortal strains.

XIX

But Grosse is of a different opinion. He says "But fortunately for his readers Gray was purely diverted from abstract considerations of history into a concrete observation of its most picturesque forms and forgot to trace the ardour of poetic genius in painting pictures of Edward II's imprisonment and of the massacre of the Bards at the battle of Camlin.

Some of his contemporaries H. Walpole and others alleged that the poem was marred by obscurity of historical allusions. It is however groundless and a little knowledge of History clears all doubts.

The opening is admirably startling and effective; the historic pictures and scenes that pass before our eyes are invariably vivid and are unrivalled for concision and force especially the stanza about Elizabeth.

Amidst the profuse abundance of his impersonations he aims always at presenting the purity of Grecian outline. His fancy like that of Shelly roamed freely through all the varieties of Spiritual Polytheism.

William Collins was one of the truest lyrical poets of the age. Even while he was a student he had written his *Persian Eclogues*. He came out of the University with a reputation for capacity and indolence. His "Ode on the Death of Thomson," beginning :—

"In yonder grave a Druid lies" is one of the finest poems in the English language. Collins' best poem is the "Ode to Evening" and his most elaborate poem is his "Ode on the Passions," in which fear, rage, pity, joy, hope, melancholy and other abstract qualities are successively introduced making a trial of their merits on musical instruments. The manner in which each passion is made to acquit itself, is ingeniously conceived.

"The lovely little Ode to Evening" consists of a few stanzas and the whole poem seems "dropping with dew and breathing the fragrance of the hour."

His best critic says of his poems:—"His range of flight was perhaps the narrowest, but assured by the highest, of his generation. He could not be taught singing like a finch, but he struck straight upward for the sun like a lark."

[N.B.—The writer lays no claim to originality.

Most of the ideas are taken from the lectures of the Rev. J. M. Russel of the Madras Christian College.]

R. R. BHASHYAM IYENGAR.

NEW CURRENTS IN TELUGU SONG.

"CERTAINLY, I must confess my own barbarousness; I never heard the old song of Percy and Douglas, that I found not my heart moved more than with a trumpet." It was with a keen recollection of this famous sentence of Sir Philip Sidney's that the present writer pored over a simple and unpretentious ballad, which reached him by an accident, an unbearable summer noon last year. A few pink sheets folded carelessly into a thin and sallow packet were placed into his hands to while away a tedious hour. The pages were turned with a feeling of listless languor; there was nothing within sight, but the blinding rays of the sun; there was not the remotest chance of the mind being refreshed in such surroundings, and lo! to his intense astonishment there was unfolded before his eyes, a Telugu ballad, whose moving pathos went straight to the heart. It was a gloomy tragedy, enacted in its essence in many a

Hindu home, proclaiming in its mourning notes the baneful consequences of some of our social institutions. There grew a beautiful maiden in a sweet mountain valley; a greedy father gave her in marriage to a dotard for material considerations, and she disappeared one evening amidst the lotuses of the adjoining tank, preferring death to such conjugal unhappiness. Here was a theme full of pity and sorrow and it was worked to such a pitch of suffering and softened with such tenderness that it was difficult to restrain one's tears. Here was intrinsic merit enough to justify further interest and enquiry; and there was the additional circumstance that it was mainly in directions somewhat alien to the history of Telugu literature. Telugu poetry was being enriched by new currents of feeling and workmanship, as the result of its contact with the rich treasures of English literature. And none interested in the subject of Telugu literature, or in the influence of English on Indian vernaculars could afford to ignore such striking tendencies, especially at a time distinguished by a widely-felt desire for the improvement of those languages. The ballad was from the pen of Mr. G. V. Appa Rao, of Vizianagram, a Telugu scholar and poet of considerable ability and repute, who had long been endeavouring successfully to introduce new impulses into Telugu literature.

A review of some of his recent productions in verse must thus be of considerable value for a study of some of the possible developments of Telugu poetry in the future, and more generally, as affording an instance of literary evolution, in obedience to external impulses of a powerful and desirable type. In a country in which progress is retarded at every step by the purblind champions of conservatism, it becomes almost a duty to wel-

come such well-meaning reformers. Profiting by the literary models of an alien tongue other than Sanskrit is unfortunately an unfamiliar process to every one of the numerous vernaculars of the land, and the first appreciable innovations are to be traced in movements of this nature, which have come into existence only within the last few decades.

It is idle to deny the existence of ballads in this land. Many a wandering minstrel may be seen singing the deeds of old chieftains to groups of assembled villagers under the spacious shade of the banyan. But we believe, the ballad-form has been used with undoubted literary value about it, for the first time in Telugu literature by the poet here. When Bishop Percy ventured to publish the *Reliques of Ancient Poetry* he thought it necessary to put in an apology in the preface for having concerned himself with what may be called "vulgar" literature. It is significant that nobody should have had the courage to do so for Telugu ballad literature, even with the expression of some scepticism as to the wisdom of such a procedure.

A cursory examination of the ballad referred to already is sure to reveal its striking literary merits. The poem seems to open with a sudden outburst of tinkling silver bells arresting our attention, attuning us to a sympathetic enjoyment of what is to follow. Though the poem represents a reformed type in literature, there is a rare and loving insight into the pious Hindu rites in which the youthful heroine finds consolation. There is a true knowledge of the playful ways of childhood displayed in the explanation of the main cause of her misery after marriage. It was the ridicule of her playmates, who scorned the lass that married a "grand-father" that she could not bear. Her parting words—she

was thought to be changing her home, but she was really flying to the arms of Death—are a study by themselves in the delineation of the true ideal of sacrifice and spotless love that ought to actuate an ideal woman. They are characteristic of a true Hindu heroine! "Brothers, let service to our dear father and mother be your constant care; do not swerve from your faithful worship of our family goddess, the Mother of all Mothers; offer at her feet the best flowers and fruits of the season; when the members of our family come together in joy, let there be a thought for one who is not with them"—and the most tender touch of all,—"confer my name as a token of memory on one of your children." As she disappears, we feel a true heroine has vanished from the stage, leaving the wicked world in darkness, for the absence of such a light. It is a tragedy that must come home to every Hindu heart and cry for immediate redress. It is an artistic impulse that has been responsible for the production, but it will not certainly be maintained that its value is lessened, by its capacity for rousing attention to a grave social peril, that is responsible for not a little of the unhappiness around us.

Numerous social principles, full of the liberal impulses of to-day are skilfully woven into the poems of Mr. Appa Rao without the least detriment to their artistic spirit. Orthodox Hindu sentiment may stagger at some of the radical ideas embodied in his poems, but to the cultured mind they are significant of the new light that is illumining our social life, enabling us to perceive the wrongs of centuries. The popular Hindu ideal of the divinity of the husband, which though capable of some moral influence does not certainly tend to equality in love, is severely handled in the poem entitled *Sovereigns*,

There is in the poems a rude shock to popular sentiments as in the plays of Ibsen and Bernard Shaw, but the effect must be equally wholesome. "It is an old-world saying that the husband is a God," says the husband himself, "he is a comrade," and proceeds to offer his spouse not the jewels of gold which in a moment of feminine weakness she longs for, but the inestimable wealth of his love.

The spirit of the social reformer is patent even in the poetic treatment of the philosophical allegory of King Lavana from the *Gnana Vasishtha*. It turns on the Kshatriya ruler's love-experiences with a girl of the untouchable class. It is terrible in its grim realism, and is as poignant in its emotional appeal, as it is full of import to the social philosopher.

From such heights of sublimity there is an occasional transition to the familiar scenes of home-life. The poet sets out to string a few pearls together. The young Hindu husband has returned to the village from his stay in Madras, full of the new spirit, setting convention at defiance and drifting away gradually from the life of his people. There is a curtain-lecture; the wife administers a gentle rebuke; there is an exposition of the conflict between the new and the old, and at the threshold of great changes the poet cannot help casting an anxious look at the departing world. The youthful radical is warned against the possible deception of home-life in his over zealous pursuit of reform. Is it not possible to look upon this as a declaration of caution by the poet himself?

The version of the Greek tale of *Damon and Pythias* is a brilliant example of his ability in the easy and graceful narration of a story. Out of the very scanty material

afforded by classical literature he has evolved a poem full of picturesqueness and animation. The Greek setting is described with extraordinary vividness, with a very fine sense of sound and colour. The island of Samos is there before us in all the glory of spring. Each stanza is a complete picture in itself reminding one of some of the perfect landscape-painting of Tennyson in poems like the *Palace of Art*.

It is a similar love of nature that is perceived in the *Songs from the Blue Hills*, a miscellaneous collection of poems dealing mainly with life and scenery on the Blue Hills, in "the sweet half-English Nilgiri air." A piece of striking merit is one containing a declaration of love at first sight. The beauty of repose which according to Lessing is the special province of painting and sculpture is curiously enough brought out here in poetry, in describing the charms of the person to whom the lines are addressed. As they are read, there is a profound realisation by the reader, of the truth uttered by the Greek Simonides, that poetry is eloquent painting.

Numerous other pieces of merit are found among the poet's writings—the Telugu world will probably soon have the privilege of reading them in a collected edition. It must be a task of no ordinary interest to examine them in detail and appreciate the variety of new elements that have been introduced into Telugu song. But enough has probably been said to draw attention to the success that has been achieved in these new lines of poetical activity. It is only necessary to add in conclusion that there is in the poems an absolute disregard of rhetorical artificiality and poetic convention, which have always been the bane of Indian literature and who will be so rash as

to forecast the scope and significance of this movement which has the genuine ring of poetry and applies itself to the treatment of the primary emotions of humanity in a commendable spirit of high seriousness?

OOTACAMUND,
11th June 1913.

P. SESHADRI.

A COURSE OF STUDY IN ENGLISH HISTORY FOR THE HIGH SCHOOL CLASSES.

"OLD order changeth, yielding place to new" is a time-honoured saying, which characterises every stage of human development and thought. While this is true in all aspects of human experience, it is none the less so in the field of education. Progress, and not stagnation, is the key to success and without change there can be no progress. We clearly see before us in our every-day life what changes have been overtaking us, consciously or unconsciously, and how we have to adjust ourselves to those changes though a certain degree of inertia is to be overcome at first.

Coming to the point, we find that in the field of education, every year brings along with it new methods of instruction which, of course, take some time to spread to the masses. Whoever, of those at least engaged in the teaching profession, does not know that in English the direct method of teaching has taken the place of the translation method, in mathematics old methods have given place to the introduction of graphs, and in History and Geography the old chronological and the 'where and what' methods have been replaced by the modern and more rational ones in the light of psychological investiga-

tions? But still, in most of the schools, much difficulty is felt, especially by those who are possessed with a conservative spirit, in following those methods, partly owing to the fact that they are not yet fully aware of the wholesome results of such methods.

Reserving my observations on the teaching of English and other subjects to a later issue of this journal, I shall take this opportunity of throwing a few suggestions regarding the teaching of English History according to the most modern, approved and common-sense methods. From my own experience as a History teacher, I can, with a certain degree of a knowledge of existing conditions, assert that most teachers of History do not realise the importance of, and the necessity for, a well-graduated syllabus in History, for which they are only partly responsible. If, at all, there is any subject in the school curriculum, upon which the Headmaster looks with a step-motherly affection, it is History. The general tendency is to relegate it to an insignificant place in the curriculum and a consequent disgust for the subject is often the net result. Further History teachers are not specialists but those for whom no other work can be found. A fair percentage of schools, have in fact no syllabus and the few schools, that have an apology for a syllabus, have done it in the most slipshod and hackneyed lines. The essential difference in History teaching between the old methods and the modern ones, consists in that, in the olden days, there was too much adherence to text-books, but in the modern days, a happy compromise has been effected, on the German lines, between text-book and oral instruction. The teacher, who sets himself to frame a well-regulated syllabus for the High School forms, should not ignore the fact that he should give

greater prominence to topics rather than to single events centring round a certain personage or a locality and that, as in Science and Mathematics, a fair amount of practical work should be set. It has been well said that 'what the benches, the test-tube and other apparatus are to the science student, so are the documents, maps and other sources to the History student;' and as such the syllabus should be framed on the topical method, giving a certain degree of prominence to practical work which will consist in the students' working upon the documents as thought-materials, drawing up of lines of time and preparing genealogical tables, plans and sketches of battles and events.

Having chalked out the lines which a good syllabus will take, I shall here stop with a course of studies comprising all the above requirements and covering at present the Anglo-Saxon and the Norman periods. Of course, I have not made any distinction here between *detailed* and *non-detailed* as it may be safely left in the hands of teachers.

An Outline Scheme of Work in English History on the Anglo-Saxon and the Norman Periods.

TOPICS HEADINGS.	PERIODS TO BE DEVOTED.	PRACTICAL WORK.
I. (a) History of England—History of the land and not of the race—influenced mostly by the Geographical formation and situation of Great Britain	2	
(b) Political, strategical, and commercial effects of the Geography, internal as well as external, of the Islands	1	Physical Map of the British Isles.
II. (a) <i>Britain before the coming of the English, 330 B.C.—410 A.D.</i>		
Period of unwritten History. Country before its separation from the continent (Paleolithic) After separation (Neolithic) New Bronze-age. Period of written History commencing with the intercourse of Britain with the civilised world.	1	
(b) <i>Roman Britain.</i> Caesar's invasion and account of Britain from original sources as far as possible (Caesar's Gallic War, Bks. IV & V). Roman Conquest of Britain—Limits and nature of the Roman occupation. Effects of their occupation and their departure. Compare with the English occupation of India	2	Map of Roman Britain indicating the chief roads.
III. A. <i>The Making of England. The coming and Christianisation of the English, 410—979 A.D.</i>		
1. (a) The English invasion. (b) Their German homes.	2	Map of the English German homes.
2. <i>Their Settlement.</i>		
(a) The English after the conquest. (b) Kent and the conversion of the English.	1	Map showing the settlement of the English.
3. <i>The Strife of the Nations.</i>		
(a) The Supremacy of Northumbria and its character. 593—685 A.D.	1	
Celtic and Roman Christianity—Synod of Whitby.		
(b) The Supremacy of Mercia, 685—825. Offa	1	

B. The coming of the Danes and the Consolidation of the English. Main stages in the attacks of the Northmen. The rise of Wessex. Egbert and Alfred the Great—The work of Alfred. Results of the Danish invasions and settlements. The conquest of the Danelagh and the imperial claims of Wessex. Edgar and Dunstan.	3	Map showing the Danelagh.
C. The Tenth Century Constitution of England.	1	
IV. <i>England under foreign kings. 979—1216 A.D.</i>		
The Danish kings and the English Restoration. 979—1066 A.D.	2	Route of William I.
(a) Ethelred and the Danes. (b) The Struggle between the English and the Danes, 1013—1016 A.D. (c) Canute 1016—1035 A.D. (d) Edward the Confessor. Harold II. Battle of Hastings and the Coming of the Normans.		Genealogy of Harold II. from Egbert.
V. Manners and society of the age	1	
VI. <i>The Norman Rule, 1066—1154 A.D.</i>		
(a) <i>The four Norman kings.</i>		
1. The story of the Conqueror—Feudalism, its causes and forms—a strong central government—William's civil and ecclesiastical policy—New Forest, Domesday book—William's character and last days	2	
2. <i>William Rufus.</i> His Government, a tyranny—quarrel with Anselm—First Crusade—conflict between the King and the Barons, causes—last days	2	
3. Henry I.'s wise administration—Itinerant justices	1	
4. Stephen—Civil War—Anarchy—character of the reign— (English Chronicle)	1	
Besides the work shown above, a line of time also which will be drawn by the pupils will come under <i>practical work</i> .	55 B.C.	Invasions of Julius Caesar, 55—54 B.C.
	54 A.D.	Conquest of Britain by Claudius, 43 A.D.
	154 A.D.	
	254 A.D.	
The line of time covers a period of about 1120 years from 54 B.C. to 1066 A.D. A line 1 ft. in length may be taken and divided into 12 parts, each part covering events of a hundred years. Only events of historical importance are to be selected, as otherwise, the line will have to be overcrowded with names and will look clumsy.	354 A.D.	Evacuation of the Romans, 410 A.D.
	454 A.D.	Landing of the Jutes in Kent, 449 A.D.
	554 A.D.	
	654 A.D.	Synod of Whitby, 664 A.D.
	754 A.D.	
	854 A.D.	Treaty of Wedmore, 878 A.D.
	954 A.D.	Massacre of the Danes, 1002 A.D.
	1054 A.D.	Battle of Hastings, 1066 A.D.
At present, I have thought it enough to draw one roughly, as it will serve my purpose well.	1154 A.D.	

(To be continued.)

S. G. SUBRAMANIAN

THE UNIVERSITY AND THE VERNACULARS.

THANKS to the warm discussion at the last meeting of the Senate about the subject, the position of the vernaculars in the curricula of studies prescribed by the University of Madras has become one of the burning topics of the day. But as with so many other "burning topics" in this country, the issues involved are not clearly perceived even by those who are vigorously engaged in the controversy. Hence it is as well for us to know what are the real questions at issue, that we may form our opinions on the question and express them and thus help to create a well-informed public opinion in the place of the spurious article which passes for it. It is the aim of this paper to try to do this.

We are told that under the old regulations of the University, the vernaculars occupied a prominent place from which they were hurled down by the ruthless hands of the framers of the new regulations. This may be rhetoric, but is not truth. For the study of the vernaculars was never compulsory under the old system. Nearly 40 per cent. of the graduates of the University graduated with their second language as Sanskrit and they were perhaps the most brilliant graduates. Some other students took French, Latin, and other languages, as their second language. Hence it is absurd to talk of having made the study of the vernaculars optional for the first time under the new regulations.

When the new regulations were first passed by the University, they made no provision for the compulsory study of the vernaculars at all but relegated them to a subordinate position among the optional groups of subjects. This fact, no doubt, detracts from the genuineness of the plea urged by the advocates in the Senate of the present system that the study of the vernaculars has improved under the present system. That may be a fact, but we do not owe it to the Senate but to the Government of Madras who

introduced vernacular composition as a compulsory subject in the curriculum for the Intermediate examination.

Thus the new regulations as amended by the Government would have made provision for the compulsory study of the vernaculars by all the aspirants for the degrees of the University—a thing which was not dreamt of under the old regulations. But an agitation was started in the Senate by some of those very Fellows, whose enthusiasm for the vernaculars is now unbounded, with the object of introducing Sanskrit translation as an alternative subject for vernacular composition and of reducing the percentage required for a pass in vernacular composition from 50 to 40. This fact is not very creditable to the consistency of the enthusiasts for the vernaculars.

Hence, under the present system, so far as the University is concerned, the large majority of students studying in the Intermediate classes learn vernacular composition, except the few who learn translation into English from a classical language. Besides this, provision is made for the study, by students who are interested in the subject, of the vernaculars by giving them a place in the optional groups. The new regulations have not had a sufficiently long lease of life yet for us to judge fairly of their working but the number of students taking up the vernaculars as optional subjects for study is not so disappointing as one may expect.

I do not refer to the position of the vernaculars in the school curriculum because the University has practically nothing to do with it now. The School-Leaving Certificate Scheme has almost completely superseded the Matriculation examination conducted by the University. I myself strongly hold that particular attention ought to be paid by the boys while at school to their vernaculars. If it be not done now, things ought to be mended. But if they are to be, the proper authority to do so is the Government and

not the University. Curiously enough, the responsibility for the school curriculum, such as it is, is also laid at the doors of the University.

Having now described the present system, I may make an attempt to examine the charges made against it. First, then, it is urged that the present system has reduced the number of students taking the vernaculars. But it is conveniently forgotten that a much larger number of students than under the old system learn vernacular composition. And it must also be remembered that those who study the vernaculars—and they are not an inconsiderable number—do so because they feel genuinely interested in the subject. And it will be conceded on all hands that it is far better that a few such students should study the vernaculars than that a large number of them study the vernaculars because they cannot help it.

Again, it is also urged that the non-study of the vernaculars will make our students denationalised. I do not know in what sense they use that word. If by that word they mean that our students who do not study the vernaculars will become less patriotic and more alien in their habits and manners than those who study them, I flatly contradict it—witness the hundreds of graduates in Sanskrit who never studied a vernacular book either at school or at college and who are no whit less patriotic than their contemporaries. And what is there in the vernaculars which is likely to make a man patriotic? I challenge these enthusiastic advocates for the vernaculars to produce one genuinely patriotic passage from classical vernacular literature. But even granting for one moment that this so-called denationalisation is likely to take place, is it such a real danger?

The question is one which must be frankly faced and answered. For an unwillingness to do so is hampering our progress in all directions. The question put in another form is this—Are we to continue to be picturesque, curious, in a word

to be the museum of the world, wherein people can see all grades of civilization from the fifth century before Christ? Or, are we to march forward on the path of progress and take our rightful place among the nations of the world? The question, put in this form, admits of only one answer. But the difficulty comes in when people refuse to see that this question is really the question about denationalisation, put in another form. Further he must be an enemy of progress in India, who does not want that every unit of energy available in the country should be used for the spread of Western ideas which can be done only through the study of Western literatures.

But by the word "denationalised," they may mean that our students will become irreligious if they do not study the vernaculars. So much of cant has been talked and written about the necessity of our students being so brought up that they must not cease to be religious, that I must beg leave here to express my emphatic protest against this attempt to mar the true ideal of education. We ought to be more anxious to make of our students "honest, manly, and useful" citizens, than to make them glibly talk about the Bhagavad Gita and the Upanishads which have baffled the intellects of much maturer men.

Another cry which is raised against the new system is that, if our students do not study the vernaculars, they will find it impossible to communicate with the masses. There is no doubt that all of us want that our educated men ought to be able to influence the masses which they can do, only if they can talk to them in their own language. But the difficulty comes in as to the means by which this very desirable object is to be attained. It is fairly evident that a student who learns vernacular composition must be well able to express his thoughts in his mother-tongue fluently and accurately—I am only defining the art of composition—and certainly not

less able because he has not studied the classical works in his mother-tongue which are usually written in a language which, in the opinion of a distinguished Tamil scholar, can never have been that of the people. I will go further and say that the more a man steepes himself in the classical works of his mother-tongue—I speak only of Tamil,—the less easy it will be for him to achieve this object. I speak with some knowledge of the pedantic Tamil which our Pandits are never tired of using. So, if what we want is that our students should have a working knowledge of their vernaculars sufficient to enable them to make themselves understood, the present system under which they learn vernacular composition is the best that I can think of, if certain necessary changes are introduced in the method of teaching the same.

I think I have now met fairly all the objections which are levelled at the present system. But there are certain positive arguments in its favour which I will advance. For one thing, I aver that our students, after having reached a certain stage in their educational career, should have absolute freedom to choose the subjects of their study. In so far as the present system secures this liberty to the student, I claim that it is an improvement on the old. And any attempt which is made to increase the scope of compulsory studies is an attempt to set back the hands on the clock of educational progress in this province. For obvious reasons, the study of English must be compulsory as also that of a scientific subject. Hence it is evident that, unless the student is to be relegated to the unenviable position which he occupied under the old scheme, the study of the vernaculars cannot be made compulsory.

Again, if the study of the vernaculars is really so enchanting, so useful and so necessary as it is claimed to be by their enthusiasts, we can well rely on the students and their guardians to ensure that a large number of students take to the study of the vernaculars. If they do not do so, then

I hold that it is a strong argument that extravagant claims are made on behalf of the vernaculars. But there may be others who want that, though the study of the vernaculars may not be all-important, some at least of our students should study them. To them, I am sure, the answer, hinted at in an earlier part of this paper, that it is better that a few who have really a taste for the study, should do so, will appeal.

Again, the reproach has been cast upon us, not without reason, that the education that has been imparted to us for the last fifty years and more has not produced many scholars amongst us who, by their researches, have contributed to the knowledge of the world. If that reproach is to be removed at all, our students must begin to specialise fairly early so that they may go out of their Colleges well equipped to carry on researches in their chosen fields of knowledge.

Again, we, in India, are all looking forward, with longing eyes, for the day when India will have a common language. I know I am treading on delicate ground, but I venture to express my opinion that English has as much chance as any other language of becoming that one language in this country. And I can imagine no better fate for India. If the day comes when English is the common language of the people of India, the day of the political and social regeneration of India cannot be very far from then. Such being my firm conviction, I strongly deprecate any attempt to reduce the importance of the study of English in the curriculum. And the natural result of the agitation for the compulsory study of the vernaculars will be that.

There is one consideration which has been overlooked by these gentlemen and which throws a curious light on their appreciation of the relative importance of the languages of this land. It will not be seriously disputed that Sanskrit is older than any vernacular in this country and that all the Dravidian vernacular literatures with which alone we are concerned now,

have drawn their inspiration mainly from Sanskrit. Again, the study of a classical language has been recognised both in Western countries and in other Universities in India as a valuable part of a student's education—witness the position of Latin and Greek in the older Universities of England and the position of Sanskrit in the Calcutta and the Bombay Universities. And yet, what do we see here? Not a word is said about the necessity of studying Sanskrit. On the other hand, it has been made abundantly clear by how that the enthusiasm of these advocates for the vernaculars does not extend to Sanskrit. But if our object is that the education of our students ought also to include an acquaintance with their national ideas and ideals, I can imagine nothing better calculated to achieve that object than a study of Sanskrit. And if Sanskrit can be introduced into the compulsory portion of the curriculum without affecting the position of English therein, I personally will vote for the change.

It is an irony of fate, that while civilised countries all over the world are preferring the useful in education, we are choosing the picturesque; while they are preferring the progressive, we are choosing the retrograde; and while they are preferring the active, we are choosing the contemplative. The cry all over the world now is for scientific education and more of it. But we turn our eyes backward and wish to resuscitate languages and literatures which cannot help us in our march of progress but which may retard it. We should wish that as large a number of our students as possible should take to the study of the human, physical and natural sciences that they may help to create in this land the true scientific atmosphere which is the *sine qua non* of progress in the industrial, educational or social spheres of action. But our would-be educational experts want our students to discuss the beauty of women, the intrigues of petty Rajas, or the inaccurate histories of kings

and kingdoms or the perpetual intervention of the thousand and one gods of the Hindu mythology in human affairs, in an impossible language. Such, at any rate, is the theme of most of the classical works in the Tamil language.

I should consider myself badly misunderstood, if I am taken to say that the present system cannot be improved. I strongly hold that it can be and that it ought to be. And I have the authority of some of the members of the now famous Committee of the Senate to state that the Committee itself feels that some improvements will ere long have to be made in the system. I am only insisting that the principle of compulsion in the study of the vernaculars must go.

As I have said in another part of this paper, the study of the vernaculars at school must be considerably improved. Apart from the reason already advanced that our students must have a working knowledge of their vernaculars, I also hold that if the vernaculars are to have a fair chance, the students should have an opportunity of judging for themselves as to the desirability of studying them which they will not have, unless they are introduced to the study of the vernaculars while at school. This paper is not concerned with the means by which this is to be effected, for it is a matter which rests with the school authorities and the Education Department.

But, as regards the subject of vernacular composition in the curriculum of studies for the Intermediate examination, the University can and ought to effect some improvements in the method of teaching the same. Many such may be suggested but perhaps the most effective way of improving it is the prescribing of certain text books which the students must be made to study with the same attention which they bestow on books prescribed for non-detailed study in English. This can be ensured by including questions bearing on the subject matter dealt with in those books in the

examination paper in vernacular composition. The objection that there are no suitable text-books is based either on ignorance or prejudice or both. I can name at once prose works in Tamil like the late B. R. Rajam Iyer's *Kamalambal Charitram*, Mr. A. Madhaviiah's *Padmavati Charitram*, the late Mr. S. M. Natesa Sastri's *'The Two Orphans'* and Mr. P. Sambandam's *Dramatic Works*, which can well be studied by our students. I am sure there are such works in Telugu and the other vernaculars. Unless such text-books are introduced, vernacular composition will continue to be the unsubstantial thing that it is now, with its scanty two hours a week, serving only as a peg on which enthusiastic advocates of the present system may hang their praises of the better study of the vernaculars now. And some improvement is also possible by way of giving a more eligible position to the vernaculars in the optional groups both in the Intermediate and the B.A. classes. If and when these changes are effected, the advocates for the compulsory study of the vernaculars will have their cause still more considerably weakened.

I have done the task I set to myself in this paper. But there are a few misconceptions underlying this agitation which I should like to correct here. For one thing, it is not correct to say that the Senate, at its last meeting, decided for the first time that the study of the vernaculars is not to be compulsory in the curricula of the University. For the matter of that, the study of the vernaculars has never been compulsory in Madras, except for a few weeks and no examination was conducted under such regulations. The Senate, at its last meeting, only adopted the report of a Committee of the Senate which it appointed at a previous meeting for considering this question. They may be right or wrong in having adopted that report but certainly they did not interfere with the regulations in any manner. On the other hand, they only confirmed that things ought to con-

tinue as they were. Hence this agitation must have been started long ago, especially when one hears that nothing was expected of this Committee, having regard to its composition.

This leads me on to point out that it is not very clear what the organisers of the numerous public meetings want when they ask the Government to veto the action of the Senate. The Senate has not done anything, e.g. passed any proposition, which the Government can veto. Perhaps they want that the Government should tell the Senate that their decision to retain the *status quo ante* is wrong and that they must set about revising the regulations and make the study of the vernaculars compulsory. But 'vetoing' is not the word to express this idea.

Finally, I must confess that it beats me to understand how we, Indians, can ask the Government to interfere with the decision of the Senate arrived at after mature deliberation. For who does not remember the great agitation in the country against the officialisation of the Universities by the recent Universities Act? And now what are we doing but out-Curzoning Curzon himself? But perhaps the greatest evil under which our country labours now is the paucity of thinkers, men who can see far and see clearly.

S. SATYANURTI.

STUDENTS' CONFERENCE, BHAVNAGAR.

PRESIDENTIAL ADDRESS DELIVERED BY
MR. K. J. SANJANA, M.A.,

PRINCIPAL, SAMALDAS COLLEGE, BHAVNAGAR.

I shall begin by remarking that, to the best of my belief, the effects of such Conferences would be more durable and their results more immediately attainable if they were accompanied—if not actually preceded—by educational activities of two other kinds. In the first place, we require the general public to devote more attention and more money to educational institutions of all sorts, thus widening the extent as well as the purpo-

of existing institutions. At present, the educational activities of India are—with certain very commendable exceptions—mainly confined to the Government and to such States as this of Bhavnagar: the great mass of men in the educated professions and the land-holding, industrial, and commercial classes hardly participate in such activities. Of course the Government as also many of the Native States are not doing as much for education as the Governments, say, of England, France and the German Empire do for their peoples; but I am sure I am not far mistaken in saying that the proportion of private and local expenditure on education to that of the State will be found to be much smaller here than in the countries I have mentioned. To take one instance only—a rather extreme instance it must be said—the London County Council spent last year about six million pounds sterling on Education, out of which the receipts from Government came to about 1¼ million, the rest of the cost falling on the general body of the rate-payers of London. The rate for Education, which was ¼d. in the pound when London was first given complete local self-government, now stands at the high figure of 1s. 9½d. in the pound. . . . There are many directions in which cities and corporations and united bodies of rich and educated people could work with profit to the country and credit to themselves in the field of education. Elementary as well as industrial and technical schools are required to meet local wants and to elevate the condition of the masses; and denominational schools for primary and secondary education on a religious basis are also needed amongst many communities. Neither the Paramount Power nor the authorities in Native States can so thoroughly understand the local wants of any place or the needs of a small community as the people themselves; and in the present state of our country it would be neither expedient nor wise for them to institute religious or even moral instruction on any denominational basis. I do not want to belittle the efforts that our people have already made in the cause of edu-

cation; but I heartily wish that such efforts may be more continuous and more strenuous. In this connection I may be permitted to congratulate the citizens of Bhavnagar on their formulating a small but sound scheme of industrial education to commemorate the great services rendered to this State by the Honourable Mr. Prabhashanker Pattani.

In the second place, we require the educational institutions which we already possess to be more efficiently and more intelligently managed. There ought to be greater co-ordination between our aims and the system of education and administrative method which we adopt; and something must be done to check the huge waste of intellectual effort on the part of our boys on account of our present teaching methods, which are not only unsuited in many ways to our circumstances but which would in great part be considered effete under any circumstances. This requires an alert watchfulness and a sound educational policy on the part both of Government and of the educational bodies formed by the people; it requires also—in a greater degree—the reform of the teacher in almost all grades of schools. Something may be done to attain the latter end by instituting Teachers' Schools and by selecting as teachers candidates who give promise of real teaching power. But when all is said and done the fruitfulness of our methods will largely depend on the personality of the teachers we employ; and this personality can reach the needed standard of excellence only by *internal reform*. We want our teachers—both elementary and secondary—to form a body of devoted persons, who would keep up their zest for education throughout the period of their employment, who would be willing and eager to master their subjects as far as their power can go, to improve their deficiencies in the manner of teaching and to find out methods which have been approved by long experience in countries more fortunately circumstanced. For these purposes it is necessary to institute Teachers' Societies and

Teachers' Libraries everywhere in the land; and cordially as I welcome this Students' Conference, I cannot help regretting that there is not held side by side with it a Teachers' Conference which could help us in strengthening the position of our teachers, in fortifying their courage in the discharge of arduous and often thankless tasks, and in improving their methods which they have been forced to adopt mostly at haphazard.

It is not relevant, in my opinion, to enter here into any disquisition about the definitive property and nature of *education*, and I will not discuss at any length the difficult question of the content to be assigned to the term. If only a few of the opinions on this second point were taken and put together, it would be found that almost everything fundamentally affecting man and his affairs and his activities has been at one time or other included in the term *education*. Besides connoting the general intellectual development of the child and the adolescent boy, the term has been used to signify a high degree of cultivation of literature and of the arts and sciences on the part of the young man. Education has also, in some quarters, been identified with knowledge of the technical arts and mastery of industrial skill; and those who take this view of the goal of education would like to see the finished products of their system taking up at once some industrially, economically or professionally useful pursuit. Others again have laid chief stress on the formation of character; and would desire the young man of education to take his place in society as a law-abiding, God-fearing citizen or to form a healthy political unit of a harmoniously growing nationality. If only a small part of these objects, and others such as physical culture, were to be realized even approximately, it is evident that the chief portion of the resources of the State would have to be devoted to the carrying out of educational policy alone, and the leaving age of the pupil would have to be very considerably increased. We should therefore rather take our existing educational

system, defective as it is, as the fundamental fact of the situation, should see in what directions it requires reform and extension, and try to devise ways and means for such urgently required changes as would not either severely tax the resources of the State and the people at large or require our present methods and present teachers to be discarded wholly or even in great part.

Coming now to the educational activity with which we are immediately concerned, I have to observe that the main purposes of such gatherings as this are evidently the promotion of fraternity and good-fellowship amongst students and the instilling into their minds of some idea of their membership of a society to which they owe definite duties. These objects of education, which may be said to form the social or perhaps the national side of the content of the term, have been emphasized by a school of teachers which has lately come into prominence; and one of the most eminent of them, Prof. Eucken of Germany, has laid it down that the great aim of education should be "to treat the pupil as one who is called to the task of a good life and the bearing of high responsibility." But this aim has also been steadily kept in view by almost every great writer on the subject. Herbert Spencer is never weary of criticizing the ordinary school and college curriculum for its utter failure to recognize that the educated pupil was destined to become a true citizen and to carry on the national life of the country. Bain remarks that "as the supports of life and the pure sense agreeables and exemptions come to us in great part through the medium of fellow-beings, the value of the social regards receives from this cause an enormous augmentation." "It would appear strange," he therefore says, "if this motive could ever be overlooked by the educator, or by any one; yet there are theories and methods that treat it as of inferior account." But almost all the older writers, and Eucken himself—unless I am greatly mistaken—counsel the instruction of the pupil in such sentiments by the teacher himself;

and lay it down that this should be done by indirect methods and by collateral efforts, so as not to interfere at all with either the mental development of the pupil or the moral discipline of the school. Thus Bain observes—"the intense emotions, from the very fact of their intensity, are unsuited to the promptings of severe culture." He dwells on the heightening effect on the pupil's mind of the *general multitude*; and says that "any effort made in the sight of a host is, by the circumstances, totally altered in character; and all impressions are very much deepened;" and concludes that "if this stimulus were always to coincide with high mental culture, the effect would be something that the imagination hardly dares to shadow forth. It is, however, a power that may be propitiated by many different means, including shams and evasions; and the bearing upon culture is only occasional." Hence such thinkers, in the fear of producing only superficially educated pupils or pupils who would assume the airs of sanctimonious little men of the world, would confine the imparting of such education almost exclusively to the teachers' part; they either do not mention any great efforts in this direction on the pupil's part or view them with distrust and disapproval. The extreme position on the other side—the doctrine of the social education of the pupil by his own social efforts—can be expressed in the concise language of Prof. Dewey: "The only way to prepare for social life is to engage in social life. To form habits of usefulness and serviceableness apart from any direct social need and motive, and apart from any existing social situation is, to the letter, teaching the child to swim by going through motions outside of the water. The most indispensable condition is left out, and the results are correspondingly futile."

It is not without difficulty that a choice could be made between the opposing methods of developing the social side of education which I have here roughly sketched. But I believe, looking particularly to the circumstances of our country,

that it would not be necessary to do so; and that the best results could be achieved by duly combining the two methods as far as possible. The teacher, notwithstanding the fact that his ordinary duties are engrossing enough, can yet do something to inculcate the high responsibility of social life by showing that he has a high ideal of his own duties in the corporate life of the school. By a thorough mastery of his subject, by practising absolute justice between boy and boy and by employing patience and tact in dealing with the backward and the refractory, he can set before his pupils the example of a good life and heighten the moral tone of the society formed by them, which is distinct in kind from family life in the range of its social activities and in the power of calling forth the corresponding virtues. The teacher can also appeal to social and patriotic motives as occasion arises in the course of his lessons. The heads of schools also can contribute something towards the same result by the provision on favourable occasions of direct social tasks which are commensurate with the state of development of the pupil's mind. The allotting of joint lessons in subjects of study as well as experiments in subjects not in the curriculum, games and social and other gatherings may be mentioned as examples. Each school should try to develop its distinctive social life on its own lines; and on occasions like the present the various lines may be brought together for comparison, with great intellectual benefit both to teacher and pupil. The earlier the child is taken up for social education the better will it be for the development of the social virtues; for afterwards the growing difficulty of the subjects of study and their specialization in the higher forms of schools or in industrial and technical institutions tend to separate student from student and make the task of social unification proportionately harder. But in all class-teaching in the matter the appeal should be indirect; any direct lessons on the civic virtues, besides being generally devoid of interest to the young boy, are apt, in my opinion, to hinder the proper development of his powers of observation

and thinking. Formal social meetings also require great skill and tact on the part of the heads of schools to be of real use to the pupils.

The great stumbling block in the way of national harmony and social co-operation is aloofness of mind or intolerance of spirit, the presence of which is often manifested in a spirit of intense though perhaps illiberal fondness for one's peculiar ideals and manners. Such aloofness or intolerance frequently originates in misunderstandings, which many often be innocently conceived and the very conception of which is sometimes not even consciously entertained. It is to my mind the primary duty of every citizen of a State to try his best to remove such hindrances to unity by cultivating a broad and imaginative sympathy with other units of the State who may happen to belong to different provinces or castes or creeds; and I do not see why this principle should not be acted upon in our educational policy. I should conclude that, with the safeguards which I have pointed out above, the practice of social education may be introduced into our theory even almost to the extent suggested by the words of Prof. Dewey. In the case of our land, the need for social co-operation in all grades of life is further accentuated by the vast extent of our country and its political and social conditions for a thousand years before the final establishment of British supremacy. We cannot minimize the fact that India is in many respects a continent, and that to get a harmoniously-welded national life in it is a matter of considerable difficulty. But the events of the last generation are full of encouragement to those enthusiasts who are hoping and striving for social and political unity. The benign rule of the British Government for over a century has gone far to heal the wounds of the previous strife of creed against creed and of province against province; and contact with Western civilization has gone far to strengthen at any rate the political and social ideal of nationality. This awakening movement would, I doubt not, have come to us in the fulness of time; but I do mean to say that British methods of administration and British views of general

education have evidently strengthened and accelerated it. If therefore we strive with zeal and with tact the idea of social harmony and national unity, which we feel growing so strong in our minds at the end of this generation, will undoubtedly be left stronger in the minds of our countrymen at the end of the next generation.

As I have said the practice of social education through the direct agency of the pupil himself is a product of late growth, it has come into prominence only during the last twelve years or so, and is even now regarded with distrust by some eminent educationists. We should therefore not be too sanguine about the immediate results of such conferences; and, as a necessary corollary, not forget our goal and suspend our efforts from one year's end to another year's end waking up only for two or three days. Persevering and strenuous efforts will be required if the movement is to be carried up from the theoretical stage to a stage of practical fruition however meagre; and the organizers, on whom will be thrown the burden of making higher and more intelligent efforts year after year, will have to be careful that the movement flows in its proper channel and does not impede mental development. But the results promised are so vast and of such vital importance to our social unity and our national uplifting, that the efforts appear worthy the making. If even in England and France the movement is considered by many to be more the outcome of a dream than a reasoned reality, let us say in the rousing words of Prof. Findlay, that it is a dream which at any rate "provides a ground of faith; faith in a social reform which finds its surest and speediest harvest in caring for the young; faith in the coming race who will take up the burden of the ages at the point where teacher and parent lay it down." In the faith then, that this gathering will help ever so little towards the development in the mind of the younger generation of the social ideal on whose fruition depend the strength and beauty of national life, and that it is merely the precursor of stronger and more frequent efforts in the same direction, I beg to declare this Conference open.

EDUCATION IN THE MAGAZINES. (INDIAN).

Educational Progress in the United Provinces.

Between April 1, 1907 and March 31, 1912, the total number of educational institutions in the United Provinces increased by 921—from 15,642 to 16,563. Public institutions contributed only 61 to this increase. The number of scholars increased by over a lakh—from 6,06,174 to 7,12,000, the increase being shared by both public and private institutions. The Director of Public Instruction says that considering the lack of funds for primary education and the succession of calamities that have afflicted the Provinces, it is a matter of surprise that the numbers have risen as much as they have done. The percentage of scholars to the population of school-going age has risen from 8.47 to 10.06. For boys it has risen by nearly $2\frac{1}{2}$ per cent. from 15.33 to 17.79, and for girls by .51 per cent. from 1.16 to 1.67. Such enthusiasm, if the word be permissible, as these figures may generate in one is, however, immediately checked by what Mr. de la Fosse says in the very next sentence, viz., 'It should not be overlooked, however, that the real increase is not as great as it appears, for the population on which the percentage has been reckoned this year has declined.' Of all districts Benares has the largest percentage of attendance of boys of school-going age, the figure being 42.33. The highest percentage of girls at school is claimed by Agra with 5.16; Dehra Dun and Naini Tal, where the percentage is inflated by the number of European boarding schools, being excepted. In fourteen districts over 20 per cent. of boys of school-going age are at school, while in nineteen the percentage of girls is still less than one.

The total expenditure has risen from Rs. 74,89,580 to Rs. 1,07,92,838, or by 44 per cent., and the cost per head of population has increased from $2\frac{1}{2}$ annas to abut 4. Again, lest the unwary reader run away unduly elated, Mr. de la Fosse discloses the true fact by observing: 'But the figures are deceptive, since the expenditure was artificially inflated above the normal increase by a grant from the Government of India of 13 lakhs, a large part of which was actually spent before the close of the period.' Collegiate education absorbed nearly five lakhs more than in the previous five years.

XIX

Thirteen lakhs more was spent on 'general' schools, while the expenditure on special schools rose from Rs. 3,00,152 to Rs. 5,44,401. There were considerable increases under direction and inspection. Scholarships absorbed Rs. 80,000 more. 'But the most remarkable increases are shown under buildings and apparatus.' Expenditure from public funds rose from over Rs. 49 to over Rs. 67 lakhs, an increase of 37 per cent. 'Private expenditure is larger by more than a half,' and the income from fees grew from Rs. 13,51,184 to Rs. 20,50,005, representing about one-third of the total direct expenditure. Let this be noted by Anglo-Indian critics who in ignorance of facts talk of cheap Indian education and the necessity of making the parents pay more in the shape of fees, oblivious of the strain on their often meagre resources by the scale of fees now in force. The direct expenditure on collegiate, secondary and primary education last year was Rs. 13,94,901, Rs. 47,06,212 and Rs. 5,44,401 respectively. The comparative smallness of the last figure shows how much room there is for larger outlay on elementary education. While the expenditure on collegiate education is one-fifth and that on secondary education is so much as three-fourths of the whole, the outlay on primary education is a meagre one-twelfth of the whole. The recurring grants to aided colleges have increased from Rs. 85,157 to Rs. 1,44,460. The direct expenditure on Government high schools has risen nominally from Rs. 48,700 to Rs. 7,38,200, 'but this is chiefly owing to the provincialisation of District Board high schools and the resummptions made from District Boards to meet 'the charge' The recurring expenditure on European schools has risen from Rs. 1,91,258 to Rs. 2,96,167. The total annual grants-in-aid for English schools have increased in five years by the comparatively small sum of Rs. 50,000 odd, the respective figures being Rs. 156,000 and Rs. 2,06,514. Nearly four lakhs were paid to aided colleges during the five years as non-recurring grants. For vernacular education the following recurring subventions have been made to District Boards:—Rs. 10,000 for additional Sub-Deputy Inspectors; Rs. 6,000 for re-grading existing posts of Sub-Deputy Inspectors; Rs. 10,000 for re-grading vernacular secondary school teachers and Rs. 25,000 for improving the pay of primary school teachers. In addition the Boards received a non-recurring grant of Rs. 50,000 for buildings.

In 1911-12, Rs. 12,91,000, non-recurring, was given by the Government of India for education of all kinds; a recurring grant of Rs. 7 lakhs

has also been made; the Government of India have further given Rs. 60,000, recurring, for improving the pay of secondary aided English school teachers, and a non-recurring grant of Rs. 3½ lakhs for college and school hostels. Besides, the University has got Rs 3 lakhs, non-recurring, and Rs. 45,000, recurring, to enable it to equip itself for teaching and research.—*The Leader*.

The Poetry of Childhood.

The inaugural address of the Teachers' Association of the Teachers' College was delivered at the College, Saidapet, by Mr. P. Seshadri, M.A., on "The Poetry of Childhood." Mr. A. Maybaw, Principal of the College, occupied the chair.

The lecturer said that the study of a child's temperament and the atmosphere in which it had been reared, must have as much interest for the teacher at its psychology. It must be a great inspiration for him to know that the children entrusted to his care have roused the raptures of many a poet. Even a cursory examination of the world's poetry was enough to convince one of the education that childhood had received at the hands of poets. The theme was as old as Homer. There were some who had devoted special attention to the study of poetry and prominent among them were Blake, Wordsworth, Stevenson, Swinburn and Longfellow. The extent to which the love and worship of the child had been carried on in poetry might be indicated by Lowell's remarks which preached love, hope and peace. The innocence and beauty of childhood, their suggestions to poetry had been appreciated by Tennyson, Longfellow and Blake. Wordsworth and Stevenson gave an appreciation of the poetic nature of the child's mind itself. The lecturer then narrated the names of poets who referred in effective terms to the feeling, affection and friendship existing among children. The earlier poets, even Shakespeare among them, gave a gloomy picture of the school-boy, but with the introduction of new methods in school there was better appreciation of the pleasures of school life. Hood and Whittier were particularly eulogistic in their references. There was very often a pleasure expressed that they should get back to school and be boys again. Hood went so far as to say that he would do it on any terms, and that he would do kiss the rod raised to beat him. The lecturer concluded by referring to the following lines:—

Dreary place would be this earth
Were there no little people in it;
The song of life would lose its mirth
Were there no children to begin it.

The Reading of Novels, and Some Results.

The Wesleyan Lecture Hall was crowded to overflowing when Mr. F. W. Quinton-Anderson, B.A., Professor of His Highness the Maharaja's College, delivered an exceedingly chaste and instructive address on "The Reading of Novels, and Some Results." The gist of the discourse, however, was the speaker's powerful and convincing recommendation of the truly ideal novel, as a wonderful means of diffusing much learning and understanding which the ordinary prosaic methods of study often failed to accomplish. It was, of course, necessary to exercise a certain discrimination in the choice of the book, and in this connection he mentioned the names of George Eliot, George Meredith, and a few others whose names came to him as those writers who had largely contributed to the many triumphs of European literature. When one walked abroad for pleasure, it was usual to choose the open spaces in the country, in preference to the congested areas of the bazaars and lanes, and the same principles of judgment applied to the choice in literature, where, with those who sought to derive benefit thereby, the selection was devoted to the quality of the book which could be safely relied upon to impart purity and wisdom, than the vicious volume which contained much of material that was of a vapid and unworthy nature. There had, he said, been a great growth in Hindu literature, but its progress generally had been partial and inadequate. Reverting to his impressions of the really perfect novel as being an ideal medium for instilling true knowledge, the speaker added that he was convinced that it possessed far weightier and more reliable influence than many pieces of advice which were tendered from *insincere and ineffectual pulpits*, and sermons which were often preached to empty pews.

Lord Carmichael's Advice to Students.

His Excellency presided at the annual prize-giving of the Darjeeling Government High School. The Hon. Mr. P. C. Lyon, C.S.I., the Hon. Nawab Syed Shamsul-Huda, the Hon. Mr. Hornell, Director of Public Instruction, and a large number of ladies and gentlemen were present. The programme opened with recitations in Bengali, Lepcha, Tibetan, Sanskrit, Nepali, and Hindi. Babu Basanta Kumar Das Gupta, the Headmaster, then read the annual report. His Excellency in addressing the students said:—

This is not the first time that we have met: I look back with great pleasure on the day when

last year I came and saw you all busily at work in your classes. What struck me most then, and what strikes me most now, is the remarkable number of different races which you represent. I wonder whether any other school in Bengal can boast of as many—I doubt it. This great diversity of races and of manners—has been a constant sources of interest and joy to me ever since I came here.

So far as the school authorities are concerned however, this diversity of races must bring with it many difficulties, for each race has its own language.—Basanta Babu has told us in his report that no fewer than 8 languages are taught in this school. The excellent programme of recitation which you have just gone through has shown us how successfully you have overcome these difficulties. I never before listened to so many languages spoken in the short space of half an hour. I am told that there were other boys quite ready to go on reciting other pieces, but that for want of time their efforts have had to be kept for another occasion. I am sorry in some ways for this, I fear that they may be disappointed, and I am sure I should have liked listening to their recitations if there had been time.

Although I do not understand the different languages I am glad that your recitations were given for the most part in the mother tongue of those scholars who gave them, for this is evidence that in the school the vernaculars are not being forgotten. I am a strong supporter of the view that a sound knowledge of one's mother tongue is the best foundation for all true education. It is a great thing to be proud of your mother tongue, and to be able to speak it well and to stand up for it against all comers. It increases a man's pride in his race and country. I am proud that I am a Scotsman, and hope that each of you boys is likely proud of your nationalities whether you be Nepali or Bhutia or Bengali or Lepcha or Tibetan, whatever other race you belong to.

A Governor when speaking to boys at a prize-giving is always expected to give them good advice, so I must not leave this part out of my address to you. My advice to you is to make the fullest use you can of your time at school. School education is worth having for its own sake. It is not a mere stepping-stone to the Matriculation Examination, but something which will help you all through life. There was a great man in olden days who said "Cultivation of the mind is as necessary as food to the body."

You know what happens if you get nothing to eat. I will tell you what happens if you do not cultivate your mind.—Your powers of reasoning and your judgment go to ruin, just as your body goes to ruin without food; and a man who had natural cleverness, but has neither reasoning nor judgment, is a dangerous character in the world, and only too often comes to a bad end. I have no doubt you want to become powerful and to live. Remember, then, there is no knowledge which is not power.

Learn as much as you can about all sorts of things and the world will become to you a perpetual source of interest, surprise, and joy; and learn as much as you can about all sorts of men, so as to sympathise with others and to feel for others in their troubles. If you learn these things you will have a happy and useful life.

A liberal education is the greatest blessing which any man can have. I cannot end my remarks better perhaps than by quoting to you some words of the late Professor Huxley:—

"That man, I think, has had a liberal education who has been so trained in youth that his body is the ready servant of his will, and does with ease and pleasure all the work that as a mechanism, it is capable of; whose intellect is as a clear, cold, logical engine, with all its part of equal strength and in smooth working order; who like steam engine may be turned to any kind of work, and spin the gossamer as well as forge the anchors of the mind; whose mind is stored with a knowledge of the great and fundamental truth of Nature and of the laws of her operations: one who, no stunted ascetic, is full of life and fire, but whose passions are trained to come to heel by vigorous action with the servant of a tender conscience who has learned to love all beauty, whether of Nature or of heart, to hate all villainess, and to respect others as himself."

National Character and National Literature.

Under the auspices and at the Inaugural meeting of the St. Joseph's College Union, the Rev. Allan F. Gardiner, Principal of the S. P. G. College, delivered an informing and suggestive address on "National Character and National Literature." Mr. Gardiner commenced his address with a short reference to the common Aryan ancestry of the languages of Modern Europe and of the East as established by comparative Philological research. The two main European stocks within the scope of the selected subject are the Keltic and the Teutonic. The difference

in genius between the Keltic and the Teutonic races is envisaged in their respective literature. Some striking characteristics of each are discernible and may be summed up in the quickness of grasp and objectiveness of outlook displayed by the Keltic element and in the slowness of intellectual process (reflected even in the language) and tendency towards introspection evinced by the modern representative of the Teutonic race.

The English language, brought over the channel by bands of Teutons from North-Western Germany, is of the Teutonic—or more precisely, Low German-stock in the Aryan family of languages. In course of time and under diverse influences, the English language has lost its troublesome inflections, and attained its present degree of development. The assimilating capacity of the English language has been remarkable. The survival of Keltic terms, the influx of French words (Latin or Romanic in origin) during the Norman invasion enriched the essentially Teutonic language and increased its adaptability to a delicate turn of thought or dexterous manipulation of phrase. The intermingling of these elements has contributed to the vigour and vividness, imagination and humour associated with English Literature. Wealth of idiom, volume of vocabulary and capacity of assimilation—the true signs of growth, have rendered the English language admirably suited for the expression of subtle distinctions in thought.

The predominance of the Teutonic or the Keltic characteristics in the writings of certain great makers of English Literature furnishes an interesting subject for contemplation. The excellences of Chaucer, Spenser and Shakespeare arising from the knowledge of Nature, the delineation of character, and gift of humour are apt to cover their disregard for general effect and their lack of the sense of *wholeness*. Milton stands, like his own epic, in splendid isolation as an individual genius intent on the creation of general effect. Though not valuable as a study of character or store of humour, the poetry of Wordsworth reveals intense love of Nature and an almost prophetic fervour for the interpretation of her teachings. As to Spenser in merits and failings, Alfred Tennyson has wrought marvels in the language and his skilled art has chiselled sentiments into the flawless grace of harmonious numbers.

Keltic fire and passion has found sway in the sphere of eloquence and even to-day the speeches of Irish members on exciting topics serve to

enliven with many a flash of wit and epigram the proverbially long and dreary Parliamentary discussions. Unrivalled for eloquence, alert in speculation and comprehensive in perception, Edmund Burke represents in himself the excellences and achievements of the Irish temperament. The amiable Goldsmith with his versatile genius may also be mentioned for his essential contribution of the element of genuine "pathos" to English Literature. But the defects of these very qualities should not be overlooked; Superficiality and passionate enthusiasm are too often the besetting dangers of Keltic ardour. Thus national and racial characteristics find shape and expression in Literature through the centuries, although some allowance must be made for the marked individuality of rare genius. Of Literature in general it may be said that it should derive strength and sustenance from the realizations of Truth, Beauty, Purity and Faith.

(FOREIGN.)

Education and the Future.

"Chaotic, inefficient, and ill-suited to the temper of the times and of the country in which we live: out of joint with the industrial needs of the times"—such are the views of Dr. H. B. Gray, a scholar and educational authority whose knowledge extends from Winchester to Toronto.

If our schools were sound, a new public, a new nation would arise in a few years. If our universities continued the process and fitted men not only for certain professions, but also imbued them with real culture and a sound business training, we should once again lead the world—and this not only in a monetary sense, but as regards character and grit. But what happens. Our "public" and "grammar" schools are run not upon public, but on private lines. They link up with no system, intensify class distinctions without emphasising either personal or communal responsibility.

For instance, the seven great public schools embraced in the survey of the Public School Commission of 1861 are, without exception, organised on the system of separate boarding-houses kept by the masters on the staff; and the profits of the boarding fees, as distinct from the tutorial fees, pass into the pockets of those individuals who from time to time preside over such boarding-houses. These houses are either rented from their predecessors, or from the school governors, or from outsiders, or are owned by the boarding-house tutors themselves. Thus to all intents and purposes such masters are "quod

tenus" in the position of hotel-keepers, and derive most of their scholastic income from this source.

In view of this somewhat unpleasant commercial fact one objects the more to the idea that business education (in combination with literary education should be regarded contemptuously. No nation can despise its own means of subsistence—a nation of shopkeepers were better than a decadence of snobs.

One despairs of a condition of things such as this:—

The license with which (or in another sense of the word, without which) any charlatan can set up a brass plate to advertise his establishment as "a Preparatory School for Young Gentlemen," and actually carry on flourishing trade in boys' minds and bodies, would not be tolerated in any other profession or in almost any country in Europe. It is grave scandal, in English education.

One does not believe for a minute that the profession is dishonest. But what would one say of a fleet in which each ship was a privateer run for profit rather than a navy built for defence. Either boys are crammed in a manner that Squeers himself would have repudiated, or they follow in careless fashion the whims of a crank.

To sum up, an Empire whose component parts are disparate and so widely sundered in ethnological and geographical conditions a demand for its Government and citizenship type of men equipped with the utmost versatility, to robustness and originality—a combination which can only be secured by a period of slowly developed adolescence which has never been hurried or impaired by premature forcing process.

Our professions and trades need men, not spoiled boys and walking encyclopædias.

The public schools and now the Council Schools are to a great extent tied to the *erminelines* of a antiquated University system. In their zeal for classic learning the latter forget even ideas of Plato. Their curriculum proceeds on the lines that the world needs nothing but curates and school-masters. Admirable as these men may be, the world needs statesmen, bankers, merchants, and organisers imbued with good sense and originality so that they can lead the army of labour to the noble victories of peace. The idea that a course of business training (nay, technical training also) could prevent a man taking a cultured delight in letters is foolish as to be beyond belief. Are not our leading authors non-University men for the most part? The battle for culture itself

depends upon University reform. True, a long course involving classical culture is not required but a few doses of classical cram present a noxious and sinister bar.

We have not yet found a practical way of uniting book-learning and hand-learning:—

The chief defect, however in "Modern Side" education was the insufficient recognition of the scientific connection between mind and hand. Little attempt has been made, except in the last ten years, to include manual work in the orthodox curriculum. Carpenters' benches were no doubt fitted up in many schools for the relief of "practical" boys during the play hours, to secure them from the constant tyranny of non-productive games. But these were chiefly projected and encouraged in an amateur spirit.

One cannot ignore the need for practical training. Why, for instance, should a child learn from books, and only when he has finished that side of his education, turn to the training of the hand? It is as absurd as it would be to learn all history for two years, then spend two years on geography, and so on.

The Higher Learning.

Miss Margaret J. Take, M.A., Principal of Bedford College for Women, writes in the *Daily News and Leader*:—

Many movements in the last fifty years have helped forward the progress—or, as some think, marked the decline—of the English race. Of these, none have been more rapid than the spread of the higher forms of learning among classes to whom these were once denied. Fifty years ago a University man, or as it was more fashionably spoken, a "Varsity" man, was a man who had resided either at Oxford or Cambridge, and as such was hallmarked a member of the moneyed classes. Now the teaching a University affords is no longer confined to the few and the wealthy—it is within the reach of all.

Nor is it confined within the precincts of two mediæval towns. London has its great teaching University as well as its earlier system of granting external degrees. Each of the great English centres of industry, has, or is about to have, its University. And while these new seats of learning vie with or outrival the old foundation in the wealth of their endowments and the distinction of their teachers, they are, by the lowest of their fees and the value of the scholarships provided by local authorities, open to all the youth of the neighbourhood who are fitted to profit in them,

If this advance has been marked in the case of University education in general, it is so one-hundredfold more in so far as women are concerned. Or, rather, it is not a question of advance, but of the coming into being of that which was not. Fifty years ago a woman who desired to learn had to manage as best she could and depend upon herself or upon the knowledge, kindness, and leisure combined of her friends of the happier sex. Girton, Newnham, and Somerville were still an affair of dreams. Only in a humble way in London, at Queen's College, in Harley-Street and at Bedford College named from the Square in which it stood, there were classes for girls and women who wished to carry on their studies beyond the ring fence of mere accomplishments; while at Cheltenham Miss Beale had already started the college which was to set a standard for girls' schools over the country.

To-day all the Universities of England are for women who desire to study in them, though Oxford and Cambridge still guard, with jealous care, their degrees, their membership, and their Chairs from the invader. And if the women students of Oxford and Cambridge do not yet amount to as many as 1,000, this number is more than trebled in the Universities of London and the provinces.

As with men, so with women, the trend of this advance of the higher learning has been democratic; though never has it been in their case an affair of class. At first, within the reach of those only who could at least afford to reside at the college chosen; now, in the newer Universities, where the day students far outnumber the residents, where the County or Municipal Authorities provide a well thought-out series of scholarships from school to college, the poorest may share with the women of means all the good things which a college has to give. Nor are these few or wanting in value. Indeed, if happiness were a thing that could be computed I think the sum of it experienced by women students in their three college years would be found far to outweigh that of any other group of persons during the same space of time.

Kindly teachers whose learning they may share and strive to surpass friends of their own age to other choice, freedom from home restraints studies where their tastes can have full scope sunny lawns on which to play; river or lake on which to row: shady walks to pace in converse—all those things together with quiet for those who seek it have been for many years the portion of the happy dwellers at the Women's Colleges of Oxford and Cambridge, and at the Royal Hollo-

way and Westfield Colleges in the University of London.

Now in the heart of London itself Bedford College is able to grant to-day students as well as to residents these special pleasures of spacious grounds, of water, lawn, and tree.

But the college student does not only look back upon her undergraduate days as those in which she has been the most happy, but often also as those in which she has found the most good. She has waked to the realities of life. She has—for the first time, perhaps—learned in how many ways men and women may differ from one another in faith and thought and action and yet desire the same good. She has found out that it is more important to think rightly than to wear a smart hat. She has—in short—begun to put a true value on the things of life.

How to prepare a Speech.

Mr. Arthur Bouchier, M.A., the well-known actor-manager, has an article on 'How to Prepare and Deliver a Speech' in the second volume, just out, of Mr. Fox-Davies's 'The Book of Public Speaking.' It is in everyday life, according to this authority, that the foundations of success in the art of speaking must be laid:

Set your ideas, your impressions, your feelings in order. Think of certain facts, and weave them into a story. Imagine situations, and think how they can be told to an audience. Mental work is not enough. You must speak aloud when you are alone, in your house or in your garden. You must forge a mass of phrases for yourself, rehearse them, keep some, discard others, and always go on manufacturing new ones. Speak aloud, think aloud—these are two golden rules!

The would-be orator must, Mr. Bouchier adds, extend his vocabulary, and this can only be done by reading the works of the masters of literature.

Many would-be public speakers are afflicted with nervousness, but this can be cured:

Rehearse your speech aloud, to yourself first of all; then call in some good friend to hear you; thus you will get accustomed to the sound of your own voice. When you go on the platform look at your audience before your turn comes to speak—you will seldom be the first—and mentally fix upon some individual, whom you plainly see, as your special friend in the audience even if you do not know him. If it be possible, put a little joke in the opening sentences of your discourse and fire the joke at his head. If he responds he will quickly have the people round

him in good humour, and he will be eager to punctuate your points with burst of applause. Cultivation of the art of speaking distinctly is, in Mr. Bouchier's opinion, the very first principle of all oratory. Without it 'winged words' are of no avail.

Mr. Bouchier lays stress among other things on the value of the 'pause' and in this connexion quotes these words of Froude in illustrating Cardinal Newman's power as a preacher:

Newman, who was at that time Vicar of St. Mary's, Oxford, had been describing some of the incidents of Our Lord's Passion. 'At this point' Froude says 'he paused. For a few moments there was a breathless silence. Then in a low, clear voice of which the faintest vibration was heard in the farthest corner of St. Mary's came the words: "Now, I bid you to recollect that He to whom these things were done was Almighty God." It was as if an electric stroke had gone through the church... I suppose it was an epoch in the mental history of more than one of my Oxford contemporaries.' Among actors of our time none, we are told, understood the value of the pause more than the late Henry Irving, who never failed to give it extraordinary significance.

The Laureateship.

An interesting survey of the origin and history of the Laureateship appears in the Literary Supplement of the *Times*. Coming to modern times, the writer says:—'The Premier of the day as we know had not heard of Tennyson a few years before Wordsworth's death, when he was induced to read 'Ulysses,' and as a result conferred a civil list pension upon the poet in preference to Sheridan Knowles. This now forgotten dramatist was still the favourite of some of the profession, such as Lytton, when in 1850, upon the refusal of Rogers, the chaplet was conferred upon Tennyson, for so many years the god of the Golden Bow, if not the Zeus among gods and poets on his summit of Parnassus. The influence of Prince Albert as an admirer of 'In Memoriam' is said to have been paramount in the appointment. But the offer of the Court poet's place was made in the most delicate and flattering terms, the maintenance of the office being grounded, first, on ancient use and precedent and, secondly, upon the Queen's wish to retain a link between St. James's and Parnassus. There is something pleasing about the conception of the Court as a microcosm of human

society, with its jester, its satirist, its historian, its almoner, and the Court poet. As the jester has his cap and bells, so the poet had his paraphernalia, his butt of sack which enabled him to entertain Feste and other choice spirits if it seemed well to him within the precincts of the Court—of course, within hours not prescribed by the presiding Major Domo. For a poet to be a professional in those days patronage of some sort was indispensable and that of the Court took this somewhat indefinite form. Nothing was probably fixed definitely and unalterably in regard to the appointment except that the payment was in a chronic state of arrears. But the regular production of the scheduled odes postulated a certain amount of exhilaration which was duly provided for, while the public were adequately protected by the music and pageant in which the actual utterance of all this periodical poetry must have invariably been smothered. Queen Victoria who reverted in her ideals to the Stuarts, revived a personal and sentimental attachment to her Court poet. In the case of other sovereigns of her dynasty we may perhaps take it for granted that the relationship was for the most part purely nominal. It is well known that the late King was not very devoted student of poetry. At a banquet upon a semi-literary, semi-State, occasion, when the names of the guests had to be submitted for the King's personal inspection that of an extremely well-known poet was objected to on account, it is said, of its unfamiliar and plebeian sound. Explanation led to a frank admission of the King's unfamiliarity with some of the chief poetic reputations of the day. Yet the poet in question was one of the daintiest and most accomplished writers of *vers diocoasion* that the country has produced. . . The wisdom or unwisdom of doing away with the time-honoured conventions of the laureateship at the present juncture is a question on which we do not feel ourselves called upon to pronounce judgment. It must be admitted that the excessive purism of some of the critics of the ancient office and the sensitiveness of others on behalf of the sacred flame of poesy is not a little paradoxical at a time when the example of Tennyson in declining to regard the acceptance of an honorific title from the State as any degradation to the fair fame of 'Poetry and Polite Letters' is being so eagerly followed on every hand. Still more wasteful and paradoxical in our opinion would be the waste of skill and connoisseurship in the matter of making a choice among a most opulent field. The perplexity and utter bewilderment as to the canons which should rightly govern their choice might, in the case

of such Premiers as Palmerston and Salisbury, be very well accounted a valid reason for suspending any appointment. But in the case of our present Prime Minister as is well-known, the situation is entirely reversed. Mr. Asquith, since the days when he rehearsed beneath the stars of midsummer in their nocturnal pomp in the garden quad at Balliol, has been a regular devotee of the double-flute. He not only knows the young poets of the day, but he actually quotes their immortal works. Never, surely since the institution of the office have the auguries been so favourable.

Bacon and the English Language.

Sir Edwin Durning-Lawrence, *Bt.*, writes in his pamphlets on the Shakespeare Myth from which the following extract is taken by the *Wednesday Review* :—

We owe our mighty English tongue of to-day to Francis Bacon and to Francis Bacon alone. The time has now come when this stupendous fact should be taught in every school, and that the whole of the Anglo-Saxon speaking peoples should know that the most glorious birthright which they possess, their matchless language, was the result of the life and labour of one man, viz., Francis Bacon, who, when as little more than a boy, he was sent with our Ambassador, Sir Amyas Paulet, to Paris, found there that "La Pleiade" (the Seven) had just succeeded in creating the French language from what had before been as they declared "merely a barbarous jargon." Young Bacon at once seized the idea and resolved to create an English language capable of expressing the highest thoughts. All writers are agreed that at the commencement of the reign of Queen Elizabeth, English as a "literary" language did not exist. All writers are agreed that what is known as the Elizabethan Age was the most glorious period of English literature. All writers are agreed that our language of to-day is founded upon the English translation of the Bible and upon the Plays of Shakespeare. Every word of each of these was undoubtedly written by, or under the direction of, Francis Bacon.

Max Muller, in his "Science of Language," Vol. I, 1899, page 378 says: "A well educated person in England who has been at a public school and at the University . . . seldom uses more than about 3,000 or 4,000 words. . . . The Hebrew Testament says all that it has to say with 5,642 words, Milton's poetry is built up with 8,000, and Shakespeare, who probably displayed a greater variety of expression than any

writer in any language produced all his plays with about 15,000 words."

Does any one suppose that any master of the Stratford Grammar School, where Latin was the only language used, knew so many as 2,000 English words, or that the illiterate householder of Stratford, known as William Shakespeare, knew half or a quarter so many?

But to return to the Bible—we mean the Bible of 1611, known as the Authorised Version, which J. A. Weiss tells us contains about 15,000 different words (*i.e.* the same number as used in the Shakespeare plays). It was translated by 48 men, whose names are known, and then handed to King James I. It was printed about one and a half years later. In the Preface, which is evidently written by Bacon, we are told "we have not tied ourselves to an uniformity of phrasing, or to an identity of words." This question of variety of expression is discussed in the Preface at considerable length (compare with Max Muller's references to Shakespeare's extraordinary variety of expression) and then we read: "Wee might also be charged . . . with some unequall dealing towards a great number of good English words . . . if we should say, as it were, unto certain words, Stand up higher, have a place in the Bible alwaies, and to others of like qualitie, Get ye hence, be banished for ever." This means that an endeavour was made to insert all good English words into this new translation of the Bible, so that none might be deemed to be merely "secular."

Is it possible that any intelligent person can really read the Bible as a whole, not now a bit and now a scrap, but read it straight through like an ordinary book and fail to perceive that the majestic rhythm that runs through the whole cannot be the language of many writers, but must flow from the pen, or at least from the editorship, of one great master mind?

A confirmation of this statement that the Authorised Version of King James I. was edited by one masterhand is contained in the "Times" newspaper of March 22nd, 1912, where Archdeacon Westcott, writing about the Revised version of 1881, says, the revisers "were men of notable learning and singular industry . . . There were far too many of them; and successful literary results cannot be achieved by syndicates."

Yes, the Bible and Shakespeare embody the language of the great master, but before it could be so embodied, the English tongue had to be created, and it was for this great purpose that Bacon made his piteous appeals

for funds to Bodley, to Burleigh, and to Queen Elizabeth.

Observe the great mass of splendid translations of the Classics (often second-hand from the French, as Plutarch's "Lives" by North) with which England was positively flooded at that period. Hitherto no writer seems to have called attention to the fact that certain of these translations were made from the French instead of from the original Greek or Latin, not because it was easier to take them from the French, but because in that way the new French words and phrases were enabled to be introduced to enrich the English tongue. The sale of these translations could not possibly have paid any considerable portion of their cost.

Thus Bacon worked. Thus his books under all sorts of pseudonyms appeared. No book of the Elizabethan Age of any value proceeded from any source except from his workshop of those "good pens," over whom Ben Jonson was foreman.

In a very rare and curious little volume published anonymously in 1645, under the title of "The Grate Assises holden in Parnassus by Apollo and his Assessours," Ben Jonson is described as the "Keeper of the Trophonian Denne," and in Westminster Abbey his medallion bust appears clothed in a left-handed coat to show us that he was a servant of Bacon.

O, rare Ben Jonson—what a turncoat grown!
Thou ne'er wast such, till clad in stone;
Then let not this disturb thy sprite,
Another age shall set thy buttons right.
Stowe ii, p. 512-13.

In this same book, we see on the leaf following the title page the name of Apollo in large letters in an ornamental frame, and below it in the place of honour we find Francis Bacon placed as "*Lord VERULAN Chancellor of Parnassus.*"

This means that Bacon was the greatest of poets since the world began. This proud position is also claimed for him by Thomas Randolph in a Latin poem published in 1640, but believed to have been written immediately after Bacon's death in 1626. Thomas Randolph declares that Phœbus (*i.e.* Apollo) was accessory to Bacon's death because he was afraid that Bacon would some day come to be crowned king of poetry or the Muses. George Herbert, Bacon's friend, who had overlooked many of his works, repeats the same story, calling Bacon the colleague of Sol, *i.e.* Phœbus Apollo.

Instances might be multiplied, but I will only quote the words of John Davies, of Hereford,

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another friend of Bacon's, who addresses him in his "Scourge of Folly," published about 1610, as follows :—

As to her *Bellamour* the *Muse* is wont;
For, thou dost her embosom; and dost use,
Her company for sport twixt grave affaires.

Bacon was always recognised by his contemporaries as among the greatest of poets. Although nothing of any poetical importance bearing Bacon's name had been up to that time published, Stowe (in his *Annales*, printed in 1615) places Bacon seventh in his list of Elizabethan poets.

THE UNIVERSITIES.

MADRAS UNIVERSITY.

Medical Council and Languages.

The following circular letter has been addressed by the Registrar to the Principals of all affiliated Colleges and the Headmasters of all recognized High Schools :—

I have the honour, by the direction of the Syndicate, to inform you that the Regulations of the General Medical Council of Great Britain, regarding the examinations recognized as a sufficient test of preliminary education in the case of students entering upon medical courses of study, require that each such student shall have passed the qualifying examination in a classical language. The Council has under consideration the revision of its Regulations and is in correspondence on the subject with the Syndicate. The Council has expressed its intention of accepting the Intermediate Examination in Arts of this University as a qualifying examination in the case of students entering upon medical studies, provided that such students have taken a classical or classical oriental language either in Part II or Part III (Optional Group iii) and have satisfied the Examiners therein. In view of this proposal of the General Medical Council, Principals of Arts Colleges are advised to warn their students that those who wish to enter upon the medical career must take up the study of a classical or classical oriental language for the Intermediate Examination. It is improbable that the Council will grant any concessions on this point in the case of students commencing their Intermediate course of studies during and after the academic year 1913-14.

As it will be apparently impracticable for a Secondary School-Leaving Certificate Holder or a Matriculate to take up the study of a classical or classical oriental language either in Part II or Part

III of the Intermediate course unless he has studied the language during his school course also, I am directed to invite your attention to this matter and to request you to be so good as to give the necessary warning to the pupils in your school who may intend eventually to enter upon medical courses of study.

CALCUTTA UNIVERSITY.

New Professorships.

A meeting of the Senate of the Calcutta University was held at the Senate House, College Square, on the 19th instant. Sir Ashutosh Mookherjee, the Vice-Chancellor, presided. There was a fair attendance of Fellows.

The Vice-Chancellor moved that a Professorship of Comparative Philology be established and that Dr. Otto Strauss, Ph. D., be appointed Professor of Comparative Philology for a term of three years, on a salary of Rs. 600 a month. He said that the Syndicate after duly considering the qualifications of Dr. Otto Strauss considered him eminently fitted for the appointment and recommended to the Senate to confirm his appointment.

Dr. Thebaut seconded the motion which was put and carried.

Sir Ashutosh Mookerjee next moved that Dr. W. H. Young, M.A., D.Sc., F.R.S., Lecturer on Higher Analysis at the University of Liverpool and sometime Fellow of Petersborough, Cambridge, be appointed Hardinge Professor of Mathematics in place of Professor Freeshet on the following conditions:—(1) The class to be held for a term of three years, (2) the salary to be Rs. 12,000 plus house allowance Rs. 3,000 or Rs. 15,000 a year.

The Vice-Chancellor stated briefly the high qualifications of Dr. Young both as a teacher and writer. He said that Dr. Young was a real mathematical teacher and his books were well-known to every student of higher Mathematics. Dr. Young's papers were published in three languages, English, German and French. In the opinion of Sir Ashutosh Mookerjee such a popular mathematician was eminently fitted for holding the appointments.

The motion was put and carried.

BOMBAY UNIVERSITY.

Alleged Injustice in Matriculation.

A meeting of the Senate of the University of Bombay was held in the Sir Cowasji Jehangir Hall. The Hon. Sir Pherozshaw M. Mehta, senior Fellow present, presiding in the absence of the Vice-Chancellor, The Hon. Mr. Justice J. J. Heaton.

Mr. E. D. Talati moved:—That the following sentence be added at the end of Regulation No. 19 of the new Regulations in Arts and also at the end of the paragraph headed "Matriculation Examination (New Regulations)" pages 104 and 239 respectively of the Calendar for 1912-13:—

"Should a candidate, however, not obtain the minimum mentioned above in one subject only, he should be declared to have passed the examination, if on a review of the candidate's marks a majority of not less than two-thirds of the examiners present decide that the candidate should pass, provided always that no candidate shall so pass unless he obtains at least 45 per cent. of the total marks in all subjects."

Principal Covernton opposed the proposition which he considered would produce a fatal result.

Professor Welinkar said that Mr. Talati had laid his finger on the weak spot in the case of Matriculation examination for no doubt in respect to English, their candidates laboured under great disadvantages. He thought that the cases of those candidates who obtained 45 marks out of 150 in English should alone be considered.

Dr. Powell strongly opposed the motion. He said this rule had been grossly abused by examiners with regard to other examinations and it would be grossly abused in this case.

Mr. Bhabha said Mr. Talati's proposal would have been worth discussing if he had added the words suggested by Principal Covernton.

Dr. Mann thought that Mr. Talati's proposal would in no way lower the standard of English for that was in the hands of the examiners and he hoped that the standard would be raised. He advised Mr. Talati to withdraw the present motion in view of the imperfection in drafting and bring in another in the near future.

Mr. Talati in reply said he had succeeded in his object to a great extent by agitating the question. He, however, followed the advice of Dr. Mann and asked leave to withdraw his proposition.

The permission was granted.

ALLAHABAD UNIVERSITY.

M. A. Scholarships.

The following Government M. A. Scholarships of Rs. 20 per mensem have been awarded to the following candidates on the result of the B. A. examination. The scholarships are tenable for 22 months from July 1:—

Miss Maud Annie Keogh, Mussooree Woodstock College; Hafiz Mahomed Yasin, Aligarh M.A.O.

College; Miss Eileen O'Neill, Mussooree Woodstock College; Pearey Lal Chak, Lucknow Canning College.

D. Sc. Scholarships

Of the value of Rs. 20 per mensem tenable for 3 years on the result of the B. Sc. examination:—

Anand Swarup, Agra College; Syed Abul Hasan, Allahabad Muir Central College.

B. Sc. Scholarships:

Of Rs. 12 per mensem tenable for 2 years:—
Jagannath Tripathi, Benares C. H. College; Ram Gopal Vaish, Allahabad M. C. College; Sia Ram, Agra College; Joytish Chandra Chatterji, Allahabad M. C. College.

B. A. Scholarships

Of Rs. 12 tenable for 2 years:

Sheo Charan Satyawadi and Syed Wasi Hasan, Allahabad M. C. College; Manmohan Lal Mathur I. Bareilly College; Abid Husain Khan, Aligarh M. A. O. College; Balbhadr Sahay, Allahabad M. C. College; Syad Hasan Burney, Aligarh M. A. O. College; Mahomed Bashir-ul-Haq Haqqi, Meerut College; Abdul Ghanee, Aligarh M. A. O. College; Krishna Murari Lal Saksena, Benares C. H. College; Ram Chandra Singh, Meerut College.

Intermediate Scholarships

Of Rs. 8 tenable for 2 years:—

SPECIAL FOR GIRLS.

Misses Grace Joseph, Daisy Evina Phillips and Helen Rachel Smellie of Agra Queen Victoria School and Miss Isabella Merrill, Lucknow Isabella Thoburn School.

MATRICULATION.

Lalla Ram Tewari, Allahabad; Krishna Dayal, Lucknow; Nataichandra Shome, Lucknow; Bhaskar Nath Kaul Sharga, Agra; Hari Lal Mitra, Allahabad; Sehat Bahadur Lal, Allahabad; Bhupendranath Saba, Dehra Dun; Tombhat Umanath Rao, Benares; Mahomed Nasim, Benares; B. P. Datt, Lucknow; Miss Shuniti Chatterjee, Lucknow.

S. L. C.

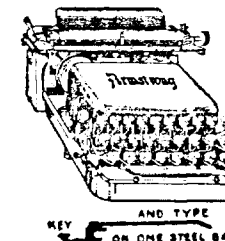
Kateshwar Prasad, Fyzabad; Raghubir Prasad Singhal, Aligarh; Raghunandan Saran, Moradabad; Yadu Nandan Prasad Misra, Sitapur; Syed Razi Ahmad, Sitapur; Ramanuj Das, Ghazipur; Ali Akhtar, Moradabad; Keshava Binayaka Tam-bay, Jhansi; Abdul Latif Khan, Sikandrabad; Kunwar Bahadur Saksena, Etawah; Ram Sahay Sharma, Aligarh; Abdul Rahman Ali, Allahabad; Pitambar Pandey, Naini Tal.

TECHNICAL EDUCATION.

TYPEWRITER TOPICS.

[The Editor invites contributions on Topics regarding Typewriters.]

ARMSTRONG TYPEWRITER.



Scarcely a year passes without some form of typewriting machine being placed on the market and everyone of such machines is highly spoken of by the inventors. Under the circumstances prospective purchasers are naturally somewhat at a loss to differentiate one from the other. Generally two things are aimed at in making a choice of typewriters, viz., efficiency and moderated cost. When these two things are no sooner stated than any one acquainted with the relative merits of writing machines would immediately think of the *Armstrong*. This wonderful machine has set a new standard in high efficiency while others are making numerous additions to their machines, thereby making them more and more complicated and bulky without considering whether the same end cannot be attained with less complexity in construction. The inventor of the *Armstrong* hit upon a plan of constructing a typewriter on entirely new lines which would be mechanically simple and yet embody all the best points in modern typewriter construction. The peculiarity in the *Armstrong* typewriter lies in the single piece type-bars having the key on one end and the type on the other. This novel feature in its construction has eliminated many parts which are inseparable in the construction of other machines. This simplicity in construction was no doubt aimed at by all inventors but the inventor of the *Armstrong* who had more than 25 years' experience behind him and with all the best known improvements of high speed typewriters to his credit was alone able to put it into practice. This delightful simplicity in construction not only rendered the machine less weighty and less costly but also made it highly durable and least liable to disorder. In addition to the above peculiarity the machine is provided with all the necessary equipments such as indicator, or pointer, frictionless ball bearing movements,

double colour ribbon device, perfect action of the escapement wheel, automatic movement of the ribbon, rigid carriage with instantaneous response, automatic line spacer, type guide, etc., etc., all these points combine to make it a *perfectly simple machine* and a *simply perfect machine*. By virtue of its having a single piece type-bar its manifold-ing power has become greater and the stencil cutting easy.

THE MADRAS HEALTH DEPARTMENT LABORATORY.

Messrs. Murch and Semour, Opticians, etc., Mount Road, Madras, very recently equipped the Madras Health Department with a complete Outfit for Bacteriological and Hematological research work, and they have received a communication, with regard to the efficiency of the instruments and apparatus supplied saying that they have been well tested and found to be of the highest order. The microscope supplied, of English manufacture, known as a "Public Health" Model, is of the very latest and most complete construction, affording magnification up to 1,260 diameters, and is similar to those in use at the Tropical School of Medicine, The Royal Microscopical Society, and scientific institutions in various parts of the world. We believe that this is the first instrument of its kind to be introduced into this Presidency for public work. The completion of this outfit was under the personal charge of Mr. W.H. Murch, B. Sc., Optician and Scientific Adviser, who will be pleased to furnish details of the microscope, and other apparatus to any one interested. We learn that a similar outfit is being supplied to a Government institution in the North of India.

STATE TECHNICAL SCHOLARSHIPS.

The Government of India have this year sanctioned the award of ten State technical scholarships to the following candidates for a course of training in Europe in the subject noted against each:—

1. Mr. P. K. Rajamanikam—Leather goods industry.
2. Mr. Chunilal Purshotamdas Shah—Pottery.
3. Mr. Ramash Chandra Roy, at present at Manchester Mechanical and Electrical Engineering, subject to the production of a medical certificate as to his physical fitness to undergo the course of study proposed.
4. Mr. Abdul Rahim Khan, Sugar Engineering.
5. Mr. Krishna Lal, Sugar Engineering.
6. Mr. Lahouri Mai Khosla, Flour milling.

7. Mr. Abdul Hakim, Chemistry as applied to minerals and metals.

8. Vidyananda Dowera, Mechanical and Electrical Engineering.

9. C. C. J. Brancion, Architecture.

10. Mr. Row Lal, Mechanical and Electrical Engineering.

KALABHAVAN TECHNICAL INSTITUTE, BARODA.

The work of the Kalabhavan, Baroda, is conducted in six departments known as the schools of mechanical engineering, civil engineering, commerce, art, chemical, technology and weaving respectively.

Students are prepared for the London City and Guilds examinations, which are held in Bombay. The courses of instruction in dyeing and weaving are of three years each. They are systematically graduated, and those who pass are given diplomas from the Institute. It is possible for one who has graduated in either weaving or dyeing to qualify for the other diploma, by one year's additional study.

The Secretary of State has approved the proposals that have been made in regard to the Sydenham College of Commerce, Bombay, 'as being a practical scheme well calculated to meet the demand which may be expected to make itself felt in India for the services of trained actuaries and auditors.' The teaching staff which it is proposed to engage for the College at its commencement will be a Principal on £900 per annum or Rs. 1,125 per mensem, a Professor on £700 per annum or Rs. 875 per mensem, and two lecturers on Rs. 300—25—500 per mensem each. The Principal and the Professor will be appointed in England and the lecturers will be qualified Indians. The Secretary of State assisted by Lord Sydenham, will soon select the Principal. The College has been rendered possible by the 'satisfactory promises of financial support from wealthy private citizens'; but, it 'will be entirely under Government control'. In order, however, 'that the courses of study may be kept in full harmony with the practical requirements of commerce and industry,' an Advisory Board will be appointed. It will consist of 13 members representing the Government, the private donors and the commercial bodies which have promised to contribute towards the cost of the College. The Director of Public Instruction (who generally does not happen to know much or take real interest in commercial education) will be the Chairman of

Reviews and Notices.

A GENERAL HISTORY OF THE WORLD, BY OSCAR BROWNING, M.A. (LONGMANS, GREEN & CO.)
5s. net.

Few will question the essential soundness of the principle enunciated by Mr. Oscar Browning in his Preface to this book, that a study of History should begin with a knowledge of the outlines of the General History of the World. There cannot be a better means of introducing the student to the subject, for it is only thus that it is possible to guarantee a proper sense of historical perspective. There has till now been the want of a suitable College manual for such a purpose and it has been supplied by Mr. Oscar Browning, whose name carries with it considerable authority and reputation. The confinement of the History of the World to a single volume of eight hundred pages is no ordinary task, and nothing but Mr. Browning's wide experience in the writing of such manuals could have helped him to accomplish it. Quite an interesting aspect of the book is its recognition of all aspects of national life. It is no sombre record of political and constitutional facts, but a lively picture of the world's civilisation and progress, taken country by country. We wonder if it did not strike Mr. Browning that there should be a general introductory chapter, reviewing the world's history, and dwelling on the origin and wandering of the primitive peoples of the earth. The book should certainly have had a better beginning than "The land of Egypt is the creation of the Nile, made and unmade every year by the inundation of the river." We do not dispute the statement, but it is not a proper introduction for a general history of the world. We hope the defect will be remedied when the next edition is called for.

THE LAST CENTURY IN EUROPE, BY C. E. M. HAWKESWORTH, M.A. (EDWARD ARNOLD).
5s.

The author mentions a friend of his who is said to have declared that the nineteenth century would provide in the future the most interesting and instructive period for historical study. There have been pages of European History, more full of romance and excitement, but there is none of them which surpasses the nineteenth century as a record of human progress. There is also the additional circumstance that its proximity to us lends it a special interest, and many of the

the Board, and the members will include the Principal and the Professor, representatives nominated by the donors (Sir Jugmohandas Varjeevandas, the trustees of the Wadia Charities, Sir Chinubhai Madhavlal, the Bombay Chamber of Commerce, the Bombay Millowners' Association, the Indian Merchants' Chamber and Bureau, the Native Piece-goods Merchants' Association, the Ahmedabad Millowners' Association), and Sir James Begbie, Secretary and Treasurer of the Bank of Bombay. The Chamber of Commerce has not promised to give more than Sir Jugmohandas or Sir Chinubhai, but it will have two representatives, while other bodies and the individual donors will have one representative each. The Sydenham College of Commerce will be affiliated to the University of Bombay, which has instituted a new degree of Bachelor of Commerce and framed a scheme of studies in connection therewith.

TECHNICAL INSTRUCTION.

A beginning has now been made in the allotment of the Imperial Grant of Rs. 21,000 allotted for the current year towards the payment of special grants for Industrial, Technical and Special Schools, and a Government order issued to-day states that a total sum of Rs. 10,250 has been apportioned. For carpenter tools Rs. 181 are granted to each of the following schools:—St. Joseph's Industrial School, Coimbatore; W. M. Industrial School, Karur; Chengalvaroya Naicker's Technical Institute, Madras; Arcot A. M. Industrial School, Arni; Art Industrial School for boys, Nazareth; St. Francis Xavier's Industrial School, Tanjore; and H. G. L. M. Industrial School, Nayadupet; Rs. 271, to A. A. M. Industrial School, Velacheri, and the Anjuman-i-Isha-athul-Hasanath, Vellore. Rs. 379 to St. Joseph's Orphan Industrial Schools, Tindivanam, and Rs. 361 to the Anjuman-i-Mufid-i-Ahli-Islam, Madras. Rs. 2,250 are granted to Chengalvaroya Naicker's Technical Institute, Madras for a milling machine and cutters; Rs. 3,000 to the Agricultural School, Kavali, for an engine and pump for irrigation purposes; Rs. 400 to the A. B. M. Secondary School, Kavali, for tools for aluminium work and weaving; and a sum of Rs. 2,051 is allotted in petty grants to various schools for minor appliances such as pillow lace, etc. It is proposed to pay the amounts specified above as free grants to the schools to improve equipment and proposals for the utilization of the balance of Rs. 10,750 have been called for.

triumphs of the century are to be traced to obscure beginnings in the nineteenth. Mr. Hawkesworth has written a comprehensive manual, full of details, and has also managed to sustain interest through the entire length of the book. The book is eminently readable and ought to prove useful to laymen as well as professional students.

STORIES FROM HISTORY AND LITERATURE, BY GERTRUDE CATON. (MACMILLAN & CO. LTD.) 1s. 3d.

Miss Gertrude Caton has been successful in writing a very interesting volume of stories for children. The subjects range over an extensive area of the world's history and literature and the value of the book is considerably enhanced by the large number of fine illustrations. Miss Caton is above all eminently a narrator for children. The tales are presented with an expert knowledge of the psychology of the child. It must find great popularity as a text-book in our schools.

AN INTRODUCTION TO THE STUDY OF INDIAN MUSIC, BY MR. CLEMENTS, I. C. S. (LONGMANS, GREEN & CO.) 6s. net.

Indian music has baffled the earnest enquiry of several students of the subject. The difficulty of representing Indian songs in English notation have been responsible for the prevailing ignorance about it. Mr. Clements of the Bombay Civil Service has long been known as an enthusiastic and sympathetic student of Indian Music. He is quite an authority on the subject and those interested in the study of Indian Music have now before them a very valuable exposition from his pen. The book is a very successful attempt at the explanation of the characteristics of Indian Music, and it has also the additional advantage of representing numerous specimens of Indian song in English music. Mr. Clements is almost a pioneer in this field, and we trust the book will receive the success which it so richly deserves.

THE PHYSICAL AND POLITICAL SCHOOL ATLAS, BY J. G. BARTHOLOMEW. (OXFORD UNIVERSITY PRESS). 1s. net.

Of all the cheap atlases that are now on the market this is undoubtedly the best.

The cheapness of it must enable every school-boy to possess one. Every Geography teacher should welcome it as an aid to his teaching the subject in the class room. Some of the notable features of this Atlas may be stated as follows :

- (1) The physical maps are bathy-orographical.
- (2) They are beautifully and intelligently coloured.
- (3) There is a very careful selection of names without overcrowding.
- (4) The diagrams to illustrate Physical and Astronomical Geography and Map Projections are neat and clear, and Explanatory notes on these and Map-Reading are characterised by simplicity and clearness.
- (5) Diagrams showing comparative sizes of the chief cities, lakes, mountains, rivers and oceans of the world, and also small maps of different countries of the British Empire side by side with those of other Colonial powers drawn on uniform scale on pages 12 and 13, must be found very useful for purposes of constant reference.
- (6) The physical maps are placed opposite to the political maps in most cases.
- (7) The Atlas is handy and the get-up is, as is characteristic of all Oxford University Press publications, excellent.

The omission of an Index and the maps having been drawn to different scales seem to be the two chief defects of this atlas. It is hoped these defects will be removed from a subsequent edition.

It must be said that on the whole this is a magnificent Atlas.

AN INTRODUCTION TO ZOOLOGY (INVERTEBRATES), BY ROSALIE LULHAM, B. SC., LECTURER IN NATURAL HISTORY AT THE FROEBEL EDUCATIONAL INSTITUTE, pp. xv + 457, WITH 328 ILLUSTRATIONS. (MACMILLAN & CO., LTD., LONDON). 7s. 6d.

This book deals with the habits and external structure of the common Invertebrate animals of Britain, and in a few cases the internal anatomy and the microscopic structure are also given. The easy and best understood method of type description is adopted, accompanied by a comparative account of each class of animals. The subject has been treated in a scientific spirit and at the same time so clearly and well as to be within the comprehension of the school-going children of the higher standards. The directions

PUBLICATIONS RECEIVED.

- Introduction to the Study of Indian Music, by E. Clements. London: Longmans. 6s. net.
- The Britannic Question: A Survey of Alternatives, by Richard Jebb. London: Longmans. 1s. 6d.
- Mechanics and Heat, by Duncan. London: Macmillan. 3s. 6d.
- Stories from History and Literature, by A. Gertrude Caton. London: Macmillan. 1s. 3d.
- Siepmann's Primary French Series: Little French Plays for Little English Children, by Mrs. A. G. Latham. London: Macmillan. 1s. 3d.
- The Mundak-Opanishad, translated into English Verse, by Mohit Chandra Sen, M.A.: Published by The Brotherhood, Calcutta. Free.
- The Mysore Economic Conference Birthday Session, 1913.
- The Last Century in Europe, by G. S. M. Hawkesworth. London: Edward Arnold. 5s. net.
- Philosophic Thoughts Revealed through Pranayama and Higher Concentration with Practical Hints, by V. Nagalingaiah Devara, B.A. Madras: G. A. Natesan. 12 As.
- Child Mind, An Introduction to Psychology for Teachers, by Benjamin Dumville, M.A. London: W. B. Clive. 2s. 6d.
- Geometry for Schools, Vols. I to VI, by W. G. Borchardt, M.A. and the Rev. A. D. Perrot, M. A., London: G. Bell & Sons. 4s. 6d.
- Bell's Continuous Readers: Alice's Adventures in Wonderland. 9d. A Tale of Two Cities. 9d. London: G. Bell & Sons.
- Mediæval England, a Frame-work of English History, 1066—1485, by S. M. Toyne, M.A. London: G. Bell & Sons. 1s. net.
- Special Notes to the Oxford edition of the Coverly Papers, by J. W. Holme and T. S. Sterling. Bombay: Oxford University Press. 8 As.
- Chambers's Effective Readers, Book IV. London: W. R. Chambers.
- Commercial Geography, Parts I & II. by T. S. Viraraghavachari, B.A., L.T. Trichinopoly: Sri Krishna Vilasa Press. Re. 1.
- Simple French Stories, by Marc Ceppi. London: G. Bell & Sons. 1s. 6d.
- A French Dramatic Reader, by Marc Ceppi. London: G. Bell & Sons.
- The Reformation and the Renaissance, 1485—1547, by Fred. W. Bewsher, B. A. London: G. Bell & Sons. 1s. net.

for practical work at the end of each chapter, as to how to get at and examine the several specimens, especially the hints about how to prepare fresh water and sea water tanks and rear aquatic animals in them will be found highly useful to beginners of Nature Study. The portion of the book dealing with the Insecta, which covers over 240 pages,—more than half the bulk of the book—will be a source of great instruction to insect hunters as every entomological detail is given in conjunction with good illustrations. All the Invertebrate Phyla of animals find a place in the work, but a few classes of animals, the Sporozoa among the Protozoa, the Ctenophora among the Coelenterata and the Cephalopoda among the Mollusca are conspicuous by their absence. The chapter on the Platyhelminthes could have been enlarged, with a description of the life-history of the Liver-fluke or the Tape-worm. A chapter on the Microscope as to how to use it, how to prepare slides for examination and how to stain the most transparent animalcules could have been advantageously introduced. A few more remarks. The time honoured mode of spelling of Rhyne(b)ota, Dyti(s)cus and Anodon(ta) could have been stuck up to and such terms as Brachyura, Macrura, adductor and retractormuscles could have been safely introduced without frightening students. A few statements want looking into, viz., p. 12, Bodo has a pair of cilia (for flagella); p. 23, the term *body cavity* (for coelenteron); p. 118, in Pond snails the operculum is a *horny* plate (I believe it is both horny and calcareous); p. 141, the (adductor) muscles which connect the valves of the shell to the body (they run transversely across the body from one valve to another); p. 157, the limbs of the crustacea with the exception of the antennæ are typically two branched (it should be with the exception of the antennules known also as the 1st antennæ). Does *pous* = a leg? p. 155.

The types described in the book are said to cover the syllabuses of certain Educational Institutions in England, but, I fear, owing to the want of some well-known Indian types, and of the whole of the Vertebrate portion of the Animal kingdom the book is not sufficient for the teaching of Nature Study in our Secondary Schools, nor does it cover the whole of the Intermediate Course of Studies of the Madras University, but students of the B.A. classes here, will find in it a fund of useful information. The get-up of the book is excellent.

Imperialism and Mr. Gladstone, 1876—1887, by R. H. Gretton. London: G. Bell & Sons. 1s. net.

A Junior Course of Arithmetic, by H. Sydney Jones, M.A. London: Macmillan. 1s. 6d.

Outlines of Victorian Literature, by Hugh Walker and Mrs. Hugh Walker. Cambridge University Press. 3s. net.

Selections from English Poetry with Introduction, Notes, etc., by three English Professors. Trichinopoly: The Publishing Agency. 5 As.

Text-Book of Zoology, by H. G. Wells, B.Sc., F.Z.S., F.C.P. and A. M. Davies, D.Sc. London: W. B. Clive. 6s. 6d.

The Wanderings of Animals, by Hans Gadow. F.R.S. Cambridge University Press. 1s. net.

The Children's Classics—Junior No. 23, 2½d. Intermediate No. 44, 3½d. Senior No. 54, 4d. London: Macmillan.

Indian Educational Notes.

MADRAS.

Shorthand and S. S. L. C. Scheme.—Government have issued the following order:—The Director of Public Instruction submits for consideration suggestions for the further recognition of the public examination in shorthand and typewriting under the scheme of Secondary School-Leaving Certificates. The Government have given the question their careful consideration and will proceed to pass orders on the various points raised. The Director proposes to modify the Public Service Notification so as to put shorthand and typewriting on an equal footing with other optional subjects in the Secondary School-Leaving Certificate scheme and further to treat shorthand and typewriting as separate subjects under that scheme. The Government while agreeing that shorthand and typewriting may be placed on the same footing as other optional C group subjects, are not prepared to give them separate recognition. Shorthand and typewriting combined will accordingly continue to be regarded as a single C group subject in the Secondary School-Leaving Certificate scheme, but will be counted as one of the two optional subjects sufficient knowledge in which is a necessary qualification in the case of applicants for admission to the public service under clause (2) of article I of the Public Service Notification. The Government are further pleased to accept the Director's suggestion that approved Secondary School-leaving Certificates containing satisfactory entries under shorthand and typewriting should also be recognized as an alternative qualification for posts in the public service for which at present a pass in the elementary grade at the Government technical

examinations in typewriting is alone prescribed. The higher technical qualifications will, however, still be essential in the case of the higher appointments or scales of pay for which they are at present prescribed. The Government also agree with the Director that in order to ensure a reasonable standard of technical proficiency in applicants for such posts who hold Secondary School-Leaving Certificates the standard of the examination in shorthand and typewriting under that scheme should be the same as that of the Government technical examination in those subjects in the elementary grade. The Director of Public Instruction will be requested to submit, for the approval of Government, draft notifications embodying the alterations required in (1) the Secondary School-Leaving Certificate Notification, (2) the Public Service Notification, and (3) the Government technical examination syllabuses to give effect to the above orders.

New Training Schools.—In December of last year orders were passed by Government giving effect to the reorganization of elementary training schools in pursuance of the sanction accorded by the Secretary of State in his despatch No. 140, Public, dated 16th August 1912. The case of secondary training institutions was temporarily held over in consequence of His Lordship's intimation that his general approval of the proposals submitted in that regard must be read as subject to the qualification that it should in no way prejudice his decision on the proposed establishment of model high schools. The Government have now given the necessary further consideration to this matter and in view of the urgent need to create additional facilities for the training of secondary grade teachers, they have resolved at once to revise present arrangements so far as the necessary reform can be carried out independently of the creation of model high schools by the temporary expedient of utilizing existing secondary or elementary schools as practising sections. The six stations at which it was originally proposed to open secondary training classes were Rajahmundry, Mangalore, Chittoor, Coimbatore, Palghat and Tiruvalur. At Rajahmundry and Mangalore there are already secondary schools capable of furnishing the requisite practising material of the higher grade, and the selection of Saidapet in lieu of Chittoor will provide similar facilities for a third secondary training school. At Coimbatore an elementary school is available and the substitution of Calicut and Tanjore for Palghat and Tiruvalur will conveniently furnish the same material in the districts of Malabar and Tanjore. The Government approve the proposals now submitted by the Director of Public Instruction for the purpose of giving effect to this modification of his original scheme. Government accordingly sanction the staff proposed for the secondary training classes and the practising schools which in pursuance of this decision will be temporarily located at Rajahmundry, Mangalore, Saidapet, Coimbatore, Calicut and Tanjore. The training sections will be per-

manently sanctioned and the headmasterships will be constituted into a new grade, consisting of six appointments on Rs. 200 and forming part of the cadre of Sub-Assistant Inspectors, while a further addition of four appointments on Rs. 100 will be made to the same cadre in order to provide for Assistant Masters. The staff of the practising sections of the schools at Coimbatore, Calicut and Tanjore will be sanctioned temporarily for a period of one year or pending orders on the scheme for the establishment of model high schools. The Director of Public Instruction has been requested to submit a reappropriation statement for the extra charge in 1913-14 on account of the re-organisation to be introduced under this order of Government.

Building Grants.—The Government have sanctioned the following building grants:—Rs. 22,450 towards the cost of the construction of a building for the National High School, Negapatam; Rs. 9,800 towards the cost of the improvements and additions to Pachaiyappa's High School at Conjeeveram; Rs. 7,300 towards the cost of the construction of a building for the G. L. M. Secondary School, Tanjore; and an increase from Rs. 10,000 to Rs. 20,000 in the grant for the construction of a building for the Sylvanus Stall Memorial School for Girls, Guntur.

Teachers' College, Saidapet.—The report on the working of the Teachers' College, Saidapet, for the year 1912-13 quite appropriately begins with an expression of regret for the sudden and untimely death, whilst on leave in England, of Mr. A. A. Hall, the Principal, to whose efforts, in the words of Sir Alfred Bourne, the successful development of the College during the long period of over a quarter of a century, during which he was in charge of it, was due. Mr. H. S. Duncan was confirmed in Mr. Hall's place. Government strengthened the staff of the College Department by converting the post of Assistant, Secondary Training Section, on Rs. 150-5-200 grade, into a lectureship on Rs. 200 per mensem, outside the cadre of the Provincial Educational Service, and an Assistant in the Secondary Training Section was appointed to the new post of Lecturer in Geography with effect from 1st January of this year. The staff of the model school was increased by the appointment of eight additional temporary assistants and the appointment of eight temporary assistants sanctioned till 31st March of this year were allowed by Government to continue till the 31st March next year. The Government also sanctioned the employment for a period of sixteen months from 1st January last of a Hindustani Munshi on Rs. 30 per mensem for the model school attached to the Teachers' College, in order that arrangements might be made for the teaching of Hindustani and for the formation of Mohammedan sections in the lower classes with a view to the use of Hindustani as the medium of instruction. During the year, Government sanctioned the extension

of the hostel buildings, and thirty rooms were built at a cost of Rs. 8,850. The detailed plans and estimates for the alteration and fitting up of the Physical Science Laboratory are being prepared by the P. W. D. The College and model school were equipped with furniture to the extent of Rs. 3,340. The average cost of boarding and lodging in the three College hostels was Rs. 11-8-0 per mensem. All the graduates and secondary grade students who were relieved in April, 1912, are reported to have secured employment as teachers, and of the present set of students most have appointments to join after leaving the College. The cost of the institution during the year increased owing to the appointment of additional temporary assistants for the model school, the equipment of the College and school laboratories, and the extension of the hostel. While the receipts of the College amounted to Rs. 8401-11-3, the charges were Rs. 94,514-13-1, so that the net cost to Government of maintaining the College was Rs. 86,113-1-10, and the cost of educating each student was Rs. 730 as against Rs. 415 in the previous year. The Director of Public Instruction observes that the administration of the College was creditable to the Principal, the Vice-Principal, and the staff.

School Hygiene.—One of the most important reforms to which the recent educational resolution of the Government of India drew attention was the inauguration in this country of a system of medical inspection of schools, on the lines of that in vogue in England, Scotland and other European countries. The Imperial Government have not been content with a mere expression of their sense of the importance of the subject, but have directed local Governments to take steps to make a survey of the hygienic conditions under which thousands of the rising generation receive their education in schools and colleges.

In accordance with the desire of the Imperial Government, the Government of Madras have taken steps to inaugurate this inquiry, though for the present they have limited its scope to the institutions in the city of Madras. A small committee, consisting of Mr. J. H. Stone, C.I.E., Colonel G. G. Giffard, C.I.E., the Hon'ble Mr. V. S. Srinivasa Sastriar, the Hon. Dr. T. M. Nair, Rao Bahadur A. C. Pranatharthi Iyer, I.S.O., and Mr. Yakub Hasan, has been appointed by Government to draw up the heads of inquiry and suggest names for a larger committee, which is to conduct the inspection. This preliminary committee met for the first time at the Senate House, and has tentatively drawn up the terms of reference. It is expected that when the larger committee is appointed by Government, no time will be lost in starting the inquiry; and the labours of this body ought to produce far-reaching results.

St. Aloysius' College.—An extremely interesting lecture on Carlyle was delivered to a large audience consisting of the members of the St. Aloysius'

College Literary and Debating Society by Mr. S. V. Rangiswamy Iyengar, B.A. With a remarkable insight into the character and a thorough grasp of the various writings of the great Scotchman, the learned lecturer combined much recreative information of his subject with as much valuable instruction in the course of his lecture, varied by the capping of many an anecdote in the long life of the author of Frederick the Great. His whole-hearted sincerity, his utter truthfulness, and downright enunciation of "cant and humbug" and above all his striking originality were touched upon each in its turn by the lecturer who would however be far from placing Carlyle's style of writing as a model for his youthful hearers to follow. Mr. Iyengar drew particular attention of the audience to the great and noble traits of Carlyle's character, laying special stress on his supremely filial treatment of his father. He also took occasion to refer to his kindness, gentleness, earnestness and devotion which were, at times, apparently marred by the eccentricities and angularities of the man who had a whole nation of admirers and devotees. In short, the lecturer succeeded admirably in making the grand figure of Carlyle, the *genius loci* of Great Britain during nearly half a century and more, live once more in his works, to point a moral and adorn a tale conspicuous in the pages of the literary history of England.

BOMBAY.

Education in Baroda.—It appears from the annual Administration Report of Baroda for 1911-12, which has just been published, that the number of the pupils in the vernacular schools rose from 178,571 in the preceding year to 180,654, the increase being entirely in the girls' schools, there being an actual decrease in the attendance of boys, which is attributed to the fact that a larger number of the boys than of the girls left their homes for the relief works which had to be instituted, owing to the famine which prevailed in various parts of the State. The compulsory age limit for boys is 12 and for girls 11, and they are both required to study up to the Fourth Standard. It is in contemplation to raise both the limits and the standard, and the report remarks that to make the system of compulsory primary education a success it is necessary that the teachers should co-operate zealously in the efforts of the Government.

School Final Examination.—The following extracts appear in the report just issued by the Director of Public Instruction in Bombay on the School Final Examination in 1912. He quotes a remark by the examiners in history at Poona that all, attempted to write in general terms without reference to the facts which were avoided as if they were stumbling blocks and not real landmarks to guide a student. Mr. Sharp says this remark goes far towards hitting the right nail on the head. He says the difficulty is that out of the huge mass of

historical and geographical facts many teachers have not the least idea of what is essential and what is not, consequently they try to make their pupils learn all the facts with the result that is sometimes worse than as if they had not learnt anything at all. The remedies are more teaching in the vernacular and legislation on the subject of what is and what is not essential to remember. The difficulty is to find a legislative authority whose rulings will be accepted. It is all very well for the French Academy to tell people how they are to spell, but if the Director of Public Instruction told the people what they were to remember and what to forget there would be no end of criticism. If the examiner is entitled to ask anything in the world the teacher will naturally endeavour to teach his pupils everything in the wide world in order to be able to meet him. The Local Government in the resolution on the report agrees that steps should be taken through the medium of text-books and special pamphlets.

Moral Instruction.—The Bombay Government in a long resolution lay down a definite programme for moral instruction in schools. They first recapitulate all that has been done in the past three years since the Conference of all the Committees met in Bombay, and expressed the strong opinion that something ought to be done to give systematic teaching, directed to the formation of character and the cultivation of the knowledge of moral truths. The chief incident of the three years was the engagement of Mr. F. A. Gould, of the Moral Education League, to give lectures on the subject. Mr. Gould has presented a report containing a number of recommendations. Government say that the standard he recommends is an ideal one to be worked up to gradually, and that as usually instruction in this country is in the nature of an experiment it is necessary to proceed cautiously. In extending operations, a beginning should be made only in those schools, primary and secondary, where conditions are clearly favourable to success and where teachers have particular qualifications for the task. The Director of Public Instruction will make arrangements accordingly. Government think it desirable to wait for the further development of the movement before adopting the suggestion to appoint a non-official Consultative Committee, but meanwhile the Director is instructed to consult certain representative public men, whose names are mentioned. Government say, there should always be kept in view in the course of instruction the necessity of willing and intelligent co-operation on the part of the citizens with the State.

Manual Training.—The following Government Resolution No. 1610, dated the 5th June 1913, regarding manual training at training institutions and high schools, is published for general information:—

On the 14th May 1912, Government, after review, ing the provision made in the codes of the various

training colleges for imparting manual training, remarked that *prima facie* there was a case for the extension of facilities for manual training at the other colleges on the lines of the course laid down at the Dharwar College and expressed the opinion that, if a complete course leading up to the issue of teaching certificates could be arranged at those colleges, there would ensue a corresponding multiplication of manual training classes in connection with the larger primary schools, and a general impetus would be given to the spread of this form of instruction. It was added that Government considered it desirable that means should be devised for correlating (though not necessarily rendering uniform) the methods and objects pursued in imparting manual instruction in the several schools. The Director of Public Instruction was accordingly requested to submit, after consulting the Principal of the Victoria Jubilee Technical Institute, a report on the possibility of taking action on the above lines. Subsequently, at the instance of the Hon. Rao Bahadur Srinivas Konher Rodda, the Director of Public Instruction was asked to report whether he considered it desirable and practicable to establish manual training classes at Bijapur and other Government high schools and, if so, to submit detailed proposals together with an estimate of the cost. In September 1912, the Government of India, while forwarding the report of the Committee appointed by them to inquire into the question of bringing technical institutions into closer contact with employers of labour, emphasized the need of making education in primary and secondary schools more practical, and the Director of Public Instruction was asked to report on this point. The several reports called for have now been received, and the Governor-in-Council is pleased to issue the following orders on them.

2. With regard to manual training in training colleges the conclusions arrived at by the Director are:—

(a) that it is both desirable and practicable to institute a manual training class at each of the training colleges for men;

(b) that the subject should be compulsory in the first year and optional during the rest of the course, when it should form an alternative with such subjects as agriculture and drawing;

(c) that the course should be based upon the system known as 'Sloyd,' the ultimate object being to attach woodwork classes to primary schools, not for industrial purposes but for the betterment of general education.

As regards secondary schools, manual training, consisting of drawing and practical carpentry, is prescribed as an optional subject for the School Final Examination, and under rule 25 of the Grant-in-Aid Code the subject is included among the optional subjects, one of which at least is required to be taught in the middle stage, and two in the higher stage, of the curriculum of Anglo-Vernacular schools. The only Government secondary school where provision for any kind of manual training at

present exists is the Belgaum High School, and the Director of Public Instruction considers that a beginning might be made by the institution of manual training classes at Satara, Dhulia, Solapur, Bijapur, Ahmedabad and at a centre in Sind. These conclusions of the Director are accepted subject to the remarks made below.

3. The Governor-in-Council is of opinion that the manual training to be given in the training colleges and high schools should not be of the kind which is now being given at the Dharwar Training College and the Belgaum High School, but that the system of handwork known as 'Sloyd' which possesses educational advantages not associated with the ordinary forms of manual training, should be adopted. For this purpose it will first be necessary to establish a special class at which instruction will be given to—

(a) persons who will become teachers of 'Sloyd' in the high schools at which classes in that subject will in due course be established;

(b) persons who will teach 'Sloyd' at the vernacular training colleges where henceforth every student will have to undergo a 'Sloyd' course in his first year, it being thereafter optional for him to continue with this subject or to take up drawing or nature study.

4. The Director of Public Instruction should accordingly be requested to enquire and report on what terms a competent teacher of 'Sloyd' can be obtained from Mysore, where the system has been successfully taught for some time, and to submit definite proposals for opening a special 'Sloyd' class at Dharwar together with an estimate of the cost involved. He should also be asked to report what the cost (both recurring and non-recurring) would be of introducing the system in each Government high school and training college. From the Government of India's recurring and non-recurring grants allotments of Rs. 15,000 recurring and Rs. 1,00,000 non-recurring have been made for manual instruction.

5. As agriculture has been omitted from the curriculum of primary schools under the orders contained in paragraph 7 of Government Resolution No. 1402, dated the 5th June 1912, there is no need to continue it as a compulsory subject in the first year, or as an optional subject in the second and third years, of the training college course, and the Director of Public Instruction should be asked to submit definite proposals for the teaching of such subjects as advanced drawing, clay-modelling, nature study and school gardening as subjects alternative to manual training in the second and third years of the course.

6. For the present, manual training on the lines above indicated will be introduced in such Government schools only as possess the requisite facilities, and it must, therefore, continue to be an optional subject, but in any Government secondary school where provision for imparting manual training

exists all pupils up to and including the fifth standard will be required to take it up.

CALCUTTA.

Ananda Mohan College.—The Government of India's letter giving the reasons for rejecting the application for the affiliation of the Ananda Mohan College of Mymensing to the B. A. standard has been published. The main reasons for rejection are:—

The application reached the Government of India very late:

The present staff is insufficient and accommodation not ample; and the acquired amount of Rs. 50,000 has not yet been realised

The Government intimate that if the necessary conditions are fulfilled they may reconsider the matter.

Recognition of High Schools: India Government's Proposals.—The Government of Bengal has addressed a letter to the Registrar, Calcutta University, regarding the recognition of High Schools for the purpose of presenting candidates for the Matriculation Examination of Universities. In Madras, the Director of Public Instruction and Durbars of Feudatory States are recognised authorities and in other provinces recognition is the act of Syndicates of Universities. The Indian Universities Commission of 1902 recommended that the University should recognise only schools within its local limits recognised by the Educational Department in accordance with department rules, for the time being in force. The situation was again referred to in the Government of India Resolution of 21st February last. The Government of India have addressed this Government on the subject drawing attention to certain considerations which appear to indicate the desirability of such a change and enquiring whether the changes suggested are desirable, whether they could best be effected by a modification of Section 25 of the Act so as to provide that no school should be recognised by a University unless first recognised by the local Government and also whether the local Government should be absolute authority in recognition or whether a University should be permitted to select among schools recognised by Educational Department. Considerations to which the Government of India refer, are first, there is a demand for teaching University such as that which has been proposed at Aligarh on a basis other than territorial. Should these institutions materialise, or should it be found desirable to break up any of the existing Universities in smaller units, lines of cleavage will become complicated. Secondly, the growing popularity of School Final Examination is giving to some local Government's a larger interest in High Schools. Finally, there is reason to hope that all Universities will more and more assume the function of teaching bodies. Functions which Universities now exercise

in respect to affiliated Colleges are already, it is understood, straining their whole energies and it becomes increasingly important that they should not be restrained in their higher work by detailed work in connection with schools.

The Governor-in-Council is unwilling to express any opinion before ascertaining the views of the Calcutta University.

ALLAHABAD.

Registered Graduates.—We understand that a notice has been served on a number of registered graduates of the Allahabad University that, for non-payment of their annual renewal fee by the prescribed date (June 20), their names have been removed from the register of graduates maintained in the office of the Registrar under Regulation 5 of Chapter XXVII of the University Regulations. We are told that if those registered graduates pay their renewal fee now, they stand disenfranchised till next year. This is rather hard. In view of the fact that this is the first year after the registration was effected, some grace of time may yet be allowed to them. If intimation had been given a few days before the fateful June 30, and if still some registered graduates had failed to pay the renewal fee, there would have been no occasion for complaint. Even life insurance companies, though under no obligation to remind policy-holders of the due date for the payment of premium, not only do so but give them a month's grace, or more or less as the case may be, for the payment. Regard being had to the fact that the total number of graduates' names on the register is not large, the number struck out now appears to have been considerable. We do not question the technical right of the Registrar to have acted as he did. But the world cannot be governed always by technicalities. In view of all the circumstances we make a suggestion and an appeal that the names of the graduates which have been struck out should again be brought on the register on their payment of the prescribed fee within a specified time. If the regulation as it stands does not permit such a concession, there will not surely be an insuperable difficulty in the way of its modification. The graduates should really be encouraged to exercise the privilege given to them.—*The Leader*.

MYSORE.

The Maharani's College.—At the last Birthday Session of the Mysore Economic Conference, the following arguments were put forward on behalf of the Maharani's College for the betterment of existing conditions:—(1) That to help the advancement of Higher Female Education a Boarding House be attached to the Maharani's College. . . . suitable facilities being provided, as far as possible, for the admission into the Boarding House of all castes. (2) That one or two Boarding Schools for Girls of the Middle School Standard be established in other

places; that the day scholars be admitted to these schools, but the school-building, the Boarding House and the Superintendent's quarters be all located in the same compound. . . and that (3) special encouragement in the shape of scholarships of Rs. 2 and Rs. 3 in the fourth and fifth classes of girls' schools be given to those students who undertake to become teachers. The resolutions were put to the Conference and carried by a vote of 27 with none against. There is absolutely no question of doubt about the desirability of the foregoing introductions. The school hostel, it is felt, has long been necessary for the convenience of out-station students, and the provision of scholarships for prospective teachers, though small, will in its own particular way be of inestimable value in promoting encouragement among the pupils. Arrangements are already on foot for the erection of the hostel, which is to be established on the plot of ground situated between the College and Marimallappa's School.

Libraries and Reading Rooms.—Among the prescribed agenda of discussions at the last Session of the Mysore Economic Conference was the argument in favour of the establishment of Public Libraries and Free Reading Rooms in the State, with any of the existing state Libraries as nucleus. The argument received the unqualified support of the Conference, and incidentally of Government, who, have considered the Conference initiative, and granted an additional budget provision of Rs. 50,000 during the first year, and Rs. 25,000 in subsequent years for the supply of books and periodicals to public Libraries and Reading Rooms; and have further decided that grants not exceeding Rs. 100 and not exceeding subscriptions otherwise raised, be made to village Libraries and Reading Rooms. Similarly, such financial aid as may be extended by Government to the scheme will, in the case of those proposed institutions, which conform to the rules framed, be given irrespective of village, locality, or town.

Foreign Notes.

GREAT BRITAIN.

Scientific Education.—'A scientific system of national education' has been devised by the British Science Guild and published by *Nature*. The first requisite of such a system, according to the Guild, is 'for local authorities to provide for healthy growth during infancy and throughout school life.' The second is 'the absolute necessity of manual work and related practical exercises throughout the whole course of school instruction.' The third is 'efficient public elementary schools within the reach of all children and attendance at school compulsory until the age of 14. The fourth is 'attendance at continuation schools for all young persons not receiving suitable instruction.' The fifth is 'suitable secondary schools available for all

who can profit by them.' The sixth is 'the institution of school certificates as passports for universities.' The seventh is 'to give a secondary place to examinations as against school records.' The eighth is 'the co-ordination of technological work with university work.' The ninth is 'increased grants to universities and other places of higher education for purposes of ensuring the reduction of fees for all courses.' The tenth is 'the improvement of the position and conditions of service of teachers.' The eleventh and last is 'the readjustment of the shares of the cost of education borne by the national exchequer and by local authorities, so that educational progress may be made a national responsibility.'

Poet Laureateship.—The appointment of Dr. Robert Bridges as poet laureate is a surprise in its way, as was that of the late Mr. Alfred Austin by Lord Salisbury. While Mr. William Watson is alive, nobody would have thought that Mr. Asquith would exercise his patronage in favour of Dr. Robert Bridges. It could not be expected that a Liberal Government would choose Mr. Rudyard Kipling, the bard of jingoism, and we are glad for the dignity of the office that he has not been selected. But if Mr. Swinburne was ignored in 1896, Mr. Watson need not have been passed over now. Then there is Mr. Thomas Hardy, but he too has had to take a back seat by the side of the favoured doctor. The new poet laureate was born in October 1884 and is nearly 69 years of age. He received his education at Eton and Corpus Christi College, Oxford, of which he is an honorary fellow. He travelled for some time after leaving Oxford and then took to the study of medicine at St. Bartholomew's, London, where he became casually physician, afterwards transferring himself to the children's hospital. He retired from practice over thirty years ago. Dr. Bridges has written various plays and poems. Among his publications are an essay on Milton's prosody, a critical essay on Keats and a number of shorter poems and plays: among the last being 'the Growth of Love,' 'Prometheus the Firegiver,' 'Eros and Psyche,' 'Nero,' 'Humours of the Court,' 'Feast of Bacchus,' 'Christian Captives,' and 'Ulysses.'

LITERARY NOTES.

'Early Wars of Wessex' is the title of a series of historical studies by Albany F. Major which the Cambridge University Press has nearly ready, dealing with England's first school of arms in the West Country, dating back to the pre-Norman period.

Messrs. Routledge are extending their series of dictionaries of famous authors with a 'Dictionary of Romance,' by Lewis Spence, and the same firm have at press a book entitled 'All About the Boston,' dealing with the variations in the Waltz movement, by Mr. Edward Scott.

Professor W. Fitzjohn Trench, of the National University of Ireland, has written a new commentary on Shakespeare's 'Hamlet,' which Messrs. Smith, Elder have ready for sale. The author refrains from much criticism of a textual character, but he considers at some length the divisions of the acts, the accepted division being, in his opinion, wrong. The same publishers will also issue shortly a volume of sketches, chiefly of peasant life, translated from the works of various Russian authors, by Mrs. Lionel Tollemache.

The Syndics of the Cambridge University Press have decided to issue a series of books dealing with the various subjects which fall within the field of psychology. "The Cambridge Psychological Library," as the series will be called, will be under the general editorship of Dr. Charles F. Myers, University Lecturer in Experimental Psychology, and Director of the Psychological Library.

Personal memories of Charles Dickens are happily not even yet at an end, and it is pleasant to have the promise of a new volume of such reminiscences from the pen of that industrious and versatile veteran, Mr. Percy Fitzgerald, who can claim the distinction of having been among the original contributors to *Household Words* and *All the Year Round* under the editorship of their illustrious Founder. Mr. Fitzgerald's undying devotion to the memory of Dickens has been amply proved, for he it was who founded the Boz Club, and became the first president of the Dickens Fellowship. His book, which will be published by Arrowsmith, is also to include personal recollections of other famous writers of the great literary period, with which its author, who only lacks a year to the completion of his eighth decade, is, alas! one of the very few remaining links.

Rao Sahib G. V. Ramamurti, formerly lecturer, Rajah's College, Parlakimidi, has translated and adapted into Telugu a short grammar in Danish by Professor Otto Jespersen. Mr. J. A. Yates writes an introduction to the book explaining how the book came to be translated and adapted and what purpose it is intended to serve. The translator hopes that this little publication may be of some use to Telugu children who are learning English whether they follow the new or the old method. There are in it a good many points which are not mentioned in the ordinary English Grammars.

Messrs. Macmillan & Co. will publish shortly a volume of addresses, by Mr. James Bryce, under the title, "University and Historical Addresses;" "Economic Liberalism," by Professor Hermann Levy; and "Indian Currency and Finance," by Mr. J. M. Keynes.

The Manchester University Press will shortly publish a new edition of the "Poetical Works of William Drummond of Hawthornden," edited by Professor Kastner, of the University. The book, which will contain about 850 pages, will be in two volumes with twenty-seven reduced facsimile reproductions of original Title Pages, and seven portraits of the author, one of which latter has not been reproduced before. Practically all these illustrations have been reproduced by collotype.

Oxford University Press. The biggest enterprise of all is in the form of a history of the language. This, the 'New English Dictionary' attempts to trace every word to its source, going as far back as the year 1200, the varying usage of each period being given. It is under the editorship of Sir J. A. H. Murray. The work began in 1882 and nears completion. The total cost will be about £250,000.

Home University Library of Modern Knowledge. Cloth 1s. net, Leather 2s. 6d. net. The Eighth Batch ready in July consists of Germany of To-day by Charles Tower; Plant Life by Prof. J. B. Farmer, F.R.S.; The Writing of English by Prof. W. T. Brewster (Editor); a History of Freedom of Thought by Prof. J. B. Bury, LL.D. The Ocean (With Coloured Maps), by Sir John Murray, K.C.B., F.R.S., LL.D.

Cassell's New Books Illustrated. The Air King's Treasure by Claude Grahame White and H. Harper, 3s. 6d.; The Gragsman by W. Bourne Cooke, 3s. 6d.; The Boy's Book of Battles by Eric Wood, 3s. 6d.; Enter Patricia by E. E. Cowper, 3s. 6d.; The Lely or the Lady by Katharine Newlin, 3s. 6d.; The Adventures of Phyllis by Bessie Marchant, 3s. 6d.; Three Girls on a Yacht by E. E. Cowper, 3s. 6d.; Do-well and Do-little, a Fairy Story Book, by Dora Singerson, 3s. 6d. net. Grimm's Fairy Tales by J. R. Monsell, 5s.; Alice's Adventures in Wonderland by Lewis Carroll, 3s. 6d. net.

Mr. Heinemann has just published the Collected Essays of Edmund Gosse, C.B., LL.D. in 5 Volumes. Crown 8vo. 6s. each. (1) Seventeenth Century Studies. (2) Gossip in a Library. (3) Critical Kit-Kats. (4) French Profiles. (5) Portraits and Sketches.

William Morris. A study in Personality, by Arthur Compton-Bickett, London, Herbert Jenkins, 7s. 6d. net.

By George Sampson. Let us add in general conclusion that the book is really a capital performance, well-planned and well-executed. It has the right note. As commentary, criticism, and chronicle it is equally useful. It contains much interesting

matter not to be found elsewhere, and its concluding 60 page synopsis of contemporary history is a unique and valuable feature.

In response to a number of requests received from teachers The University Tutorial Press will publish shortly, under the title *School French Grammar*, the grammatical part of Professor Werkley's *Matriculation French Course*, without the exercises and passages for translation into French. This separate issue of the Grammar is intended to meet the views of schoolmasters who like the Grammar and wish to use it for free composition in conjunction with the *Matriculation French Essays*.

The new syllabus on the Principles of Teaching recently issued by the Board of Education for the Acting Teachers' Certificate Examination in 1914 has considerably reduced the knowledge of Hygiene required. The optional subject, Hygiene and Physical Training (Section L.) requires a very considerable knowledge of Hygiene, such as can be obtained only from a book of the standard of the *Text-Book of Hygiene for Teachers*. For the sake of those, however, who wish to take only the minimum course prescribed in the syllabus for Principles of Teaching a smaller volume has been issued under the title of *Certificate Hygiene*. This deals concisely with the main principles of School Hygiene, and gives all the necessary information on matters with which the teacher is called upon to deal in the ordinary course of his work.

Junior Geometry is now in the Press. This is a geometry on modern lines suitable for Junior Classes. It commences with an introductory course of practical work and contains a simple treatment of elementary geometry up to and including similar triangles. The book is well provided with exercises of all types. The book is based upon the well-known *Geometry, Theoretical and Practical*.

Macmillan and Co.'s Announcements of New Books:—

Macaulay's History of England, Edited by Charles Harding Firth, M.A., Professor of Modern History in the University of Oxford. With 900 illustrations, including 43 in colour. Uniform with the Illustrated Edition of Green's "Short History of the English People." In 6 vols. Super Royal 8 vo. 10s. 6d. net each; the *Idea of Property: its Duties and Rights*. A Series of Essays by various writers. With Introduction by the Bishop of Oxford. 8vo. 7s. 6d. net.

- I. The Historical Evolution of Property in Fact and in Idea. By Professor L.T. Hobhouse.
- II. The Philosophical Theory of Property.
 - A. Historical Survey and Criticism. By Canon Rashdall.
 - B. Constructive Statement. By A. D. Lindsay, Tutor of Balliol College, Oxon.
- III. The Religious Idea of Property.
 - A. Biblical and Early Christian. By Dr. Vernon Bartlett.

B. Mediaeval. By Dr. A. J. Carlyle, author of "Mediaeval Political Philosophy."

C. In Post-Reformation England. By H. G. Wood, M.A.

IV. The Present Situation and its Appeal. By Canon Scott Holland, D.D.

The Shorter Poems of Frederick Tennyson, Edited, with an Introduction, by Charles Tennyson. With Portrait. Crown 8vo. 5s. net.

Poems of Arthur Hugh Clough, sometime Fellow of Oriel College, Oxford. With an Introduction by Charles Whibley, and a Portrait. Crown 8vo. 7s. 6d.

A Treatise on Chemistry. By Sir H. E. Roscoe and C. Schorlemmer, F.R.S. Vol. II. *The Metals*. New edition completely revised by Sir H. E. Roscoe, assisted by Sir Henry Miers, F.R.S., James C. Philip, D.Sc., Frederick M. Perkin, Ph.D., and others 8vo. 30s. net.

The Encyclopedia of the Philosophical Sciences, Edited by Wilhelm Windelband and Arnold Ruge. English Edition under the Editorship of Sir Henry Jones. 8vo. Vol. I. *Logic*: containing the following articles—"The Principles of Logic," by Wilhelm Windelband, Josiah Royce, and Louis Couturat; "The Aims of Logic," by Benedetto Croce "The New Conception of Consciousness in Modern Epistemology and its significance for logic," by N. Losskij.

SCHOOL AND COLLEGE SPORTING NEWS.

Cricket at Bangalore.

ST. JOSEPH'S COLLEGE'S TWO MATCHES

Two matches were played by the St. Joseph's College Cricket teams, one with the Bangalore players at the St. Joseph's College New Cricket Field and the other with the Royal Artillery on the School ground. The St. Joseph's College won the first event by 7 wickets and 43 runs, the scores being St. Joseph's College 148 for 3 wickets and Bangalore players 105. For the College J. Frost, C. Tremenhare and A. Reuben were the best players, scoring 46, 46 and 31 runs respectively. C. Tremenhare also bowled taking 3 wickets for 26 runs. J. Frost also did well with the ball, getting 3 wickets for 29 runs. For the Bangalore players D. Varada Rao was the highest scorer with 33 runs. The bowling of the Bangalore players was particularly weak, Mr. Hayes being their best bowler with 2 wickets for 60 runs.

In the match against the Royal Artillery, the St. Joseph's College lost by 15 runs, the scores being St. Joseph's 118 and Royal Artillery 133. Carter and Viney were the best bowlers for the Artillery, obtaining 4 wickets for 17 runs and 3 for 15 runs respectively, while their best batsmen were Shearburn with 45 and Carter with 23 runs respectively. For St. Joseph's Sexton proved the highest scorer with 35 runs, Rule, who took 3 wickets for 21 runs being their best bowler. This game was very close and proved a most interesting contest.

The Educational Review.

We have great pleasure in recording in these columns that four Masters of Art of the Madras University have joined the staff of the Hindu College, Tinnevely, and undertaken to serve the College for 20 years, the salary of each being Rs. 100—10—150. They are Mr. N. Sankara Iyer, M.A. (Mathematics) and L.T.; Mr. K. C. Viraraghava Iyer, M.A. (Chemistry) and L.T.; Mr. A. Nilakanta Iyer, M.A. (History); and Mr. P. Yagnesvara Sarma, M.A. (Physics). We congratulate the Tinnevely Hindu College on this accession of strength to its staff and it is a good omen that a student of the same College should stand first in the list of candidates that passed the recent Intermediate Examination. These four young M.A.'s have set a good example to young men still at College, in having turned aside from lucrative professions. For so bad is the organization of public life in India that men who catch thieves and those who send them to jails can rise to very high salaries, that men who help thieves to escape punishment, who cause property to change hands by practising the game of hair-splitting, but whose labour does not add to the wealth of the land by one grain, can pile their thousands, but the poor educationist who trains the rising generation and who is really responsible for the making of the immediate future history of the land, who spreads knowledge and thus contributes to the growth of the country's wealth, who trains the faculties of the young and makes possible the development of the country is a despised creature and can never be above want.

It is characteristic of the highly enlightened nature of the Mysore Government that in the forefront of the activities of the Mysore Economical Conference is placed the question of Education and that Agriculture and Industries and Commerce come after, thus recognizing the great truth that Education is the first source of the growth of the wealth of nations. In the words of the President, Mr. H. V. Nanjundayya, (kindly supplied to us by its Secretary), "if the intelligence of our people is kept undeveloped, their skill untrained, their activities unstimulated, the average standards of working and living will remain low, and the country will continue to be populated, as at present, by ignorant, unskilled and indolent masses who, in times of scarcity or stress, will be unable to help themselves. Safety therefore lies in *educating the people and equipping them with skill and science and keeping them active* (the italics are ours). This is what His Highness' Government have in view in introducing the various measures for improving the economic efficiency of our people." In accordance with this ideal, we find that the first portion of the Report contains papers on educational questions of the greatest import and the first resolutions deal with the same subject. Medical inspection of school children, religious and moral education, the Mysore University, compulsory education, female education, Normal Schools, continuation classes, public libraries, physical culture, curricula of studies, encouragement of Canarese literature and practical education were either discussed or recommended to be investigated. Of these, the question of religious education was debated on and we are glad to report that

it was dropped. Religion should, in the present circumstances of the country, be the last thing that should be permitted to enter the school room. Our children have plenty of it (and not always of the right sort) as it is outside the school room.

This question, so thoroughly ignored in the Madras Presidency, was the one on which the Mysore Economical Conference passed its first resolution. This resolution requires among other things all medical officers to regard it as their duty to inspect all pupils in all the schools in their station. The great need for the periodical medical inspection of pupils in this country is too patent to require any argument. The troubles of school children are due to the utter ignorance of modern hygiene among the people. We are aware that so far as cleanliness depends upon ablution, the classes from whom the average school child is drawn are fairly clean, especially if they happen to live in places where there is a large water-supply. But the average parent is hopelessly ignorant of the part played by bacterial germs in causing disease and so overridden by a superstitious addiction to so-called sacramental cleanliness but real, visible dirt as to spread a paste of cowdung under his leaf-platter (or as Alberuni cleverly put it, use a table cloth of dung), to swallow the excreta of cows in the name of holiness and to do a thousand other acts that help to spread disease. This appalling ignorance leads to the spread of disease which becomes accentuated by the congregation of children in over-warm, ill-ventilated school-houses. Hence the need of a periodical medical inspection of schools and school-children is imperative. Moreover in most

schools, the furniture used is of antiquated, absolutely unhygienic patterns; children sit on them in cramped postures, such as would check the free circulation of blood and prevent the lungs having full play. Class-rooms are frequently arranged without any regard to glare falling on black boards or what is worse right against the eyes of pupils. Defects of vision, disease due to the alarmingly fast spread of cigarette-smoking and other unnameable vices, which the average school teacher can scarcely detect, abound in boys at school. None but a trained medical man can detect and remedy these numerous evils. As doctors cure the present generation of fully developed diseases, it is their duty also to nip evil in the bud in the case of our schoolboys who will form the next generation. In our view, the latter duty is much more important than the former.

We wish to place before the people who, at the bidding of a small minority of Fellows of the Madras University, desire to shatter to pieces the, as yet not extensive enough, organization of science teaching in our Colleges by demanding that an unwilling, hopelessly inefficient and too soon forgotten study of our ancient vernacular literature should be made compulsory in Colleges *at whatever cost*, the aims of the British Science Guild which was presided over last year by Lord Haldane and is presided over this year by Sir William Mather. The British Science Guild exists for teaching the vital importance of using scientific methods in the common things of life. Sir David Gill, speaking at the banquet of the Guild, after describing the various steps in the progress of science, said, "All these are steps in the progress of mankind, in the betterment of

the conditions of life, which we owe to science and science alone. I am aware that there is still a school of men who contend that we are no happier or better for this progress. [These words exactly hit off the position of our reactionaries who, so persistently, fight in our Senate against the progress of scientific study in our University]. I need scarcely say that I do not agree with them; but I do not propose to bore you with arguments on so trite a subject; the simple fact remains that if we, in these little islands of ours, do not progress with the times by the aid of science, we shall be left behind in the race of progress." If this is so in the case of England, what will it be in the case of our country where the science that is learnt in Colleges is that fit for a good High School and where the science that is pretended to be taught in High Schools is less than that which ought to be learnt in a well-organized Elementary School, and where the people that study are lamentably few, those that allow science to influence habits of life are fewer and those that use science for improving their daily work can be counted on one's fingers! Even this little science, misguided enthusiasm wants to stifle out, in the name of Eastern culture! That educated gentlemen should fight against the spread of national education, that liberals in politics should fight against progress in education, almost unsettles one's faith in human nature.

The Royal Commission on University Education in London has among other things recommended the adoption of some form of the S. L. C. "The normal qualification for admission to the University will be a school examination based on

the curriculum of the school. There should be two such examinations. A lower school-examination planned for pupils of about the age of sixteen, which should be a test of general education, and a higher school examination planned for pupils of about the age of eighteen, which should be suitable as a test for pupils whose course has to some extent specialized." Either certificate will qualify for admission to Colleges, but the higher certificate will entitle the student to be excused the Intermediate Examination in the subjects in which he has secured the higher school certificate. This peculiar system of double certificates has been necessitated by the fact that English Schools and Colleges have evolved independently of each other and therefore school curricula and college curricula, in many cases, overlap. Moreover, in England the average school-leaving age is eighteen or nineteen and not fifteen as in India where every parent desires to see his son in College as early as possible.

Sometime ago, we advocated the introduction of a double S. L. C. of a Lower School in Madras. Leaving Certificate in our Presidency. The recommendations of the Royal Commission referred to above gives us an opportunity for discussion again. Our present S. L. C. Scheme has given us a special unity to the work of the IV, V and VI Forms of our High Schools which it had not before. This work is "to some extent specialized," like that which pertains to the higher certificate proposed in London. We, too, want a lower certificate relating the "general education" which is given in our what were once called Lower Secondary Schools. Recently our Educational Department has unsuccessfully tried to wipe out the individuality of these schools; it

has tried to induce people to conceive the High School as one indivisible unit and in the promulgation of this idea, tried to "affiliate" incomplete Secondary Schools to complete ones. But among other things, the S. S. L. C. scheme by endowing the work of the three higher forms with a special individuality has contributed to separate sharply the special work covered by the scheme with the general education given up to Form III. The former is conducted in English and the latter in the vernacular and up to Form III, English is taught as a (foreign) language and is not used as the medium of instruction. It is high time, therefore, that the separation of school-work into the Lower Secondary and Upper Secondary be reintroduced. This will give room for the introduction of a Lower Secondary School Leaving Certificate scheme. For want of such a scheme, the work of the higher forms is still hampered by the retention of subjects which really belong to the lower school. The B subjects of our S. S. L. C. ought really be done in the Lower School in the vernacular and the time devoted to them in the higher forms used for more work in English and in the special subjects. Some such scheme will relieve the immense strain now felt in the higher forms and also make the work of our High Schools much more satisfactory than now. But to make some such scheme possible school life must be made longer than now by at least three years, provision being made for exceptions, who might like to push on early for going to England to complete their education.

What we call composition is called "free" composition in English schools, for they call composition what we call

translation. The marking of free composition in many schools is done very indifferently. A writer in *Modern Language Teaching* describes his own method of marking which we commend to the attention of our English (and may we add) Vernacular masters. Mr. W. G. Jameson, writing of English schoolboys learning French, expects them to write 100 words in 20 minutes on a subject based directly on the text read during the term. For an "unseen" subject he would allow 30 minutes for 100 words, but English composition on "unseens" has been practically abolished from our schools, we shall discuss only the marking of composition on subjects selected from the books read. Mr. Jameson would expect 600 words in two hours. Now 600 words of ordinary handwriting would cover four folio pages. If we compare these figures with what the Madras University Matriculation Examiner expects of his examinees, we are bound to infer that the Madras Examiner has been, so far, as extortionate as Shylock. English, to Indian boys, is more foreign than French to English boys, the difference of idiom and structure between English and a South Indian vernacular being much wider than that between English and French. Yet the first paper in English in the Matriculation Examination, as things go now, cannot be answered in less than sixteen pages, four times what Mr. Jameson would expect, and the candidate, who has been badly trained, writes twenty to thirty pages. As this is a question which has a vital bearing on school-work we will return to it in our next issue. Meanwhile we will return 'to our muttons.' Mr. Jameson would allow ten marks for every hundred words required and "take one mark off for every three mistakes, so that if a composition of 100 words has thirty mistakes

in it (or more) it receives no marks at all. I do not find it, as a rule, necessary to discriminate between slight and very bad mistakes, the one kind balancing the other on the whole; where, however, blunders of a very gross kind are repeatedly made—e.g., in the use of imperfect and past definite [the corresponding thing in the composition of Indian boys would be the systematic violation of the sequence of tenses]—the composition is expressly penalized. No blanks are, of course, allowed in a free composition, each blank left, being as a rule, counted as three mistakes." Another vexed question in marking free composition has been very satisfactorily solved by Mr. Jameson. "In counting the number of words written, the continual repetition of the same words and expressions—'padding,' that is—is watched for and discounted. This does not, however, apply to the 'spinning out' of one poor idea, so long as variety of expression is secured. On the other hand, a particularly well-knit and well-thought out composition, say, 85 or 90 words, fairly covering the subject, will be reckoned as equal to a mere rambling one of 100 words." So far the method of marking looks terribly statistical and mechanical. This is moderated by Mr. Jameson by general impression. "Before this mechanical marking begins at all, I read through each composition, recording it mentally as an 80 per cent., 70 per cent., 55 per cent., 30 per cent., composition as the case may be; the result given by the mechanical marking usually corresponds; in any case, the balance is finally struck on further consideration." We recommend this system of marking to be tried by our readers and request them to write to us how it works. We will take up this subject again when our public examinations are being held.

Mr. Alfred Austin died in June last, rendering vacant the poet-laureateship which has been "virtually vacant since the death of Tennyson. Mr. Austin was a writer of powerful leading articles in the conservative interests in the *Standard*. The award of the poet-laureateship as a reward for excellence in political polemics was one of the grim jokes which amused the soul of the master-statesman, Lord Salisbury. Mr. Austin's 'poet's eye' was totally blind to the polish of Tennyson and the condensed tabloid locution (if we may be excused the phrase suggestive of bitter drugs) and dramatic genius of Browning; Mr. Austin's Pandit soul revolted against the vigorous vernacular of Mr. Kipling and the great manner of Francis Thompson. He swore till the end of his days that none of these were great poets and believed that the whole critical world which had adjudged him a minor poet was "saturated with prejudice and steeped in party spirit." One of the most eminent of living singers of English song, Mr. Robert Bridges has been appointed in his place. Mr. Robert Bridges has besides his poetical work, devoted much time and energy to the question of conserving all that is musical in English speech and securing it from degeneration. We wish that his artistic soul will not be compelled to do indifferent work in justification of his laureateship, for even Tennyson when he wrote poetry to order, could not give of his best. The poet's eagle soul can float only in an atmosphere of perfect freedom; compulsion can but produce Pandit-poetry of which we have reams in this land, as our schoolboys know to their cost.

The only use of sugar most people are acquainted with is its use in eating. Some people know that it is used for hardening mortar. This hardening action of sugar on mortar was known in India more than 2,000 years ago. The ancient Romans imported sugar from India for this purpose and they called it "Indian Salt." Some ancient masonry treated with sugar still stands in good condition. In our own days, the Museum of Natural History in Berlin has been rebuilt with mortar containing one part of lime, one part of sand and two parts of sugar. Modern industry uses sugar in innumerable other ways. Copying ink is made by adding one part of sugar to three parts of writing ink. Sugar is used in the silvering of glass mirrors. It is used in several chrome-tanning processes, as well as in dyeing. Some aniline dyes contain as much as 90 per cent. of sugar. Over thirty kinds of explosives contain sugar. Moreover sugar is used in the manufacture of transparent soap, in which industry many tons of sugar are consumed

every year. The shoe-blackening industry is another that consumes sugar.

Col. Burrard, Surveyor-General of India, has in a communication to Nature completely upset the old theories about the origin of mountains. He disposes of the theory of the fluid core of the earth shrinking away from the outer crust by pointing that when heated rock or glass shrinks this phenomenon does not take place, but on the contrary, it is the surface that cracks. Col. Burrard suggests that under the clay of the Indus and the Ganges, there is concealed a huge crack of the earth's crust, which crack provided the force which thrust the Himalayas up. According to the old theory, mountains float in the dense liquid core of the earth as ice floats in water; if so the 4-mile height of the Himalayan range is supported by a 38-mile depth of rock below. But pendulum observations at Himalayan stations disprove this and therefore the floating-crust theory of which it is the sequence. Col. Burrard's views are also in a line with recent American opinion of the subject.

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INDIAN EDUCATIONAL PROBLEMS.

BY THE HON. T. V. SESHAGIRI Aiyar, B.A., B.L.

IT is hardly recognised in this country that there is any educational problem at all. It is considered more as a rule of three where, given a certain sum of money, the question will be how many schools shall be started and where they shall be located. If there are other questions coming up for discussion they relate to the affiliation or disaffiliation of institutions and they have no connection with the fundamentals of the educational problems. I do not think the Government of the country recognize that there are pressing and momentous educational problems to be considered and solved. Certainly they would not admit that

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a non-official like myself is capable of dealing with the educational problems of the country. None the less, in my opinion, there are very serious questions connected with education to be discussed, and although it is not possible to exhaust the various aspects of the questions and the various subjects connected with education at one meeting, I want to draw your attention this evening, to a few fundamental propositions; I shall discuss the question of education from three standpoints, namely, education as it affects the people of this country, education as it affects the country itself, and education as it affects the services in this country. I do not claim that these divisions are logically exact, but they serve the purpose of enabling me to state what I have to say from these three standpoints. There is one matter for congratulation which I shall bring to your notice at the outset and it is this. Ten years ago it was considered that every departmental difficulty experienced and every unrest the country suffered from was attributable to education. That was the policy and view of the Government ten years ago. Fortunately for us all a new view of the purpose of education has been instilled into our minds by the advent of our Gracious Sovereign. King George in reply to the address presented to him by the Calcutta Convocation said that it

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is by the spread of education that unrest can be removed, that it is by the spread of education that ignorance can be removed, and that sanitation and a healthier life can be given to the people only by the spread of education. Therefore, the view taken by our Gracious Sovereign was fundamentally opposed to the view which prevailed ten years ago. As a result of this new state of affairs larger grants are being given to education than ever before. Ten years ago educational grants were made only after having financed all the other departments. To-day, the needs of education are considered before making grants to various departments. The question is how shall this awakening, this new spirit in education be utilized for the furtherance of the cause of the country.

Ten years ago, as I told you, an attempt was made to check the spread of higher education in the belief that it is by the spread of higher education that unrest was being engendered in the minds of the people. Then a further idea took root that elementary education should be more largely given and that higher education should be made self-supporting. The idea then was that elementary education, secondary education and University education should be regarded as three different branches with no connection with each other. The idea was that there were certain persons who were entitled to receive elementary education, that others should be given secondary education and should stop there and that a third class which was able to pay its own way should be given higher education. That idea should be completely changed. The move in this direction comes from England. About a fortnight ago Mr. Joseph Pease, Member for Education in England, in presenting the educational budget, stated

that elementary education should be a part of University education. We have not got a verbatim report of his speech now, but we know what he meant because four months ago he spoke upon this subject. Not only he, but Lord Haldane and Lord Crewe spoke on the subject at a complimentary dinner to which they had been invited. At that dinner Lord Haldane said that the object of the Liberal Cabinet is to give education to the people in such a way that the best intellects shall be brought to the top. The Lord Chancellor explained it by saying that elementary education is the birth-right of all and that it should be given to every one. If a boy shows capacity and more than average intelligence, but is poor, it should be the duty of the State to enable him to pass from the stage of elementary education to the stage of secondary education. Then again, if in giving secondary education it is found he is a remarkably clever young man and that he is unable to pay his school fees for pursuing studies in a College, the State should come to his aid for the purposes of giving him higher education. The Lord Chancellor said that it is in the interest of the country that the best intellects should be brought to the top. It is not in the interest of the individual alone that the State should work up in this direction, whether the individual entered any department of the State or any independent profession. The Lord Chancellor said that in the course of a year a Bill would be brought which would give expression to these ideas which were working in his mind. He used a metaphor which is very significant. He was, you will remember, War Minister before becoming Chancellor and he said there must be one single army corps and that every soldier must aspire to become the Commander-in-Chief, a

General, Captain and so on. He said that it would depend upon the endurance of a man whether he is Captain or a General or a Commander-in-Chief, but that there should be no restrictions placed in the way of a soldier attaining the highest possible position. He said that the education scheme must be so framed that it would bring out the best that is in man so that every one who shows exceptional capacity would be able in the end to come out at the top and be of service to his country. If that is the view which Lord Haldane is going to press upon the British Government, I think that view is more necessary in this country than in England. In this country for a long time only certain classes have been in the habit of giving themselves education and other classes have been neglected. There are talents which are not brought to the top and as the Lord Chancellor would say it is the duty of the Government to frame the educational policy in such a way that the best intellects and talents wherever found, in whatever community, shall be brought to the top so that every exceptional intellect and talent may be of service to the Government and the country. In this connection I desire to quote to you a very pregnant utterance by President Wilson of the United States. The language which he employed has taken my fancy so much that this is not the first occasion that I quote his utterance. I quoted it at another place in referring to the elevation of the depressed classes. What he said was that nations are made from the bottom and not from the top, that genius springs up from the ranks of the unknown and that the real wisdom of human life is compounded out of the experiences of ordinary men. The utility, the vitality and the fruitage of life does

not come from top to the bottom. It comes like the natural growth of a tree from the soil up through the trunk to the branches and the foliage. The idea underlying this utterance is that you should educate the classes which have not hitherto received the benefit of education and try to find out and bring up the best intellect in whatever community it might exist so that it might be of service to humanity. You cannot always depend on intellect which has guided the destinies of world. The endeavour of the Government of any country should be to educate the lowest classes in such a way that the dormant talents in that class should be brought up to the top and made available to the Government and to the country. The educational policy of this country must be so shaped as to make elementary education compulsory on all; it should also be a part of the University education and that secondary education should be the intermediate step, and these three different branches of knowledge should not be kept apart from one another. That is the problem which you should press upon Government and which I hope the Government will in the fulness of time recognize.

The second problem is, what is the nature of education which ought to be given to the people. In this country for a long series of years before the advent of the British rule we were in the habit of receiving literary education and if I am not mistaken in my reading of history, that has been the ruin of this country. It has enabled us to survive certain attacks and it has saved us from total extinction whereas other nations have died. But unfortunately it has not made us a nation able to stand against other nations in competition, and consequently the first question that has to be considered is whether the apostolic sug-

cession by which the British Government have followed up this literary education in this country has been rightly done and whether the time has not come for a change in the nature of education. In the course of a lecture on the education of the citizens given by the Bishop of Southwark about four months ago, he pointed out, speaking of England, that the education given by the Universities of Oxford and Cambridge was not the sort of education that Englishmen wanted and he said that the education that was required by the people of England was that kind of education that would make them use their eyes and hands, education which would enable them to earn their livelihood and to supplement the resources of the country. It is curious that in the "Review of Reviews" received a week ago there are three articles upon this subject written by three different experts. They all referred to the same question and all expressed disappointment and dissatisfaction with the existing state of affairs and they all say that the time has come for a complete change in the curriculum of studies in England. One of them, Dr. Grey, says that the education given in England is fit only to produce schoolmasters and curates and that is not what the country wants. I doubt very much whether we can say as much of the education given in this country. Certainly education given in our Universities, I do not mean any offence to the schoolmasters here, is not believed to be capable of producing good schoolmasters. We are told that Indian schoolmasters should not go beyond a particular step, they are to teach only up to a particular standard and after that somebody else should look after the students. The authorities are not satisfied that our Universities and Colleges really

produce first-rate schoolmasters. Are we producing curates in very large numbers? Seeing the curriculum of studies enforced in our Colleges I doubt whether it is possible for any one to have still something of religion left in him after the College course. We cannot therefore say of our education that it either produces good schoolmasters or good curates. Therefore even the recommendation which the English system of education has is wanting here. Mr. Morgan in the "Review of Reviews" says: that a remedy can be found for this by making Universities give business diplomas. That will only go some way towards remedying this evil. In England there are Commercial Colleges and Universities. Still disappointment is felt at the nature of education given in Oxford and Cambridge. If it is so in England where commerce had gained such a strong footing and where there are Commercial Colleges and Universities, what shall we say of the education that is being given under the auspices of the Government in this country. There is no doubt that Government will have to change its policy altogether.

So far as the Madras Government is concerned an attempt was made seriously and strongly to supply this defect at the Conference held in Ootacamund in September, 1908. It was recommended that Commercial Colleges should be established all over the country and that there should be experimental factories established in which education in industries should be given and that that alone would satisfy the requirements of the country. The proposal of the Madras Government went up to the Secretary of State and it was a Liberal Secretary of State who brought up the old formulas that the State should not be in competition with private enterprise, by pioneering industries

and subsidising industries. The Secretary of State sent out a Despatch which, so far as its English goes, is one of the best Despatches sent out from England. But it left a good deal to be desired. The result has been that this aspiration of the Madras Government to help the people of this Presidency in the matter of industrial progress has been nipped in the bud. I believe that the time has come for the Government of this country to stop any direct attention being paid to Arts Colleges for fifty years and more. There have been model Colleges all over the country. These model Colleges have enabled other bodies, Indian, Missionaries and others to start Colleges of their own. So far as pure literary education is concerned in my humble opinion that must be left entirely to private bodies and those sums of money which the Government are spending upon the maintenance of model Colleges and which they propose to increase also by the establishment of model schools, should be utilized for the purpose of establishing Commercial Colleges and experimental factories for imparting industrial education. I will examine the statements made by Lord Morley in that Despatch that the State should not encourage competition with private enterprise and should not subsidize and pioneer industries. If you have been reading the debates in Parliament you will find that about five years ago the present Chancellor of the Exchequer asked from the Government for a large sum of money for the purpose of subsidizing agriculture. You see that in England where there is a good deal of commercial enterprise the State does not want to subsidize industries. It is a country in which sufficient attention is not paid to agriculture. So, a fund called a Development Fund was

sanctioned by Parliament for the purpose of enabling people to clear forests and to bring large tracts of land under cultivation and otherwise help agricultural pursuits. Is that not subsidizing? Again large sums of money are to be given to cotton growers to push on cotton trade. Is that not subsidizing industry? Take the Railways in India. Is not Government competing with private enterprise in spending large sums of money in pushing on Railways? What about the funds which have been given for starting tea and coffee industries in Assam and elsewhere? I can multiply instances. The truth is the interests of Manchester are paramount and no Government in England will dare to go against the wishes of Lancashire and Manchester. That is why they are not willing to have experimental factories started in this country and to give industrial education more largely than has been given hitherto. I must sound a note of warning although I know I am too insignificant to be taken note of by Government. If you are to spend money required for education, if you are to improve sanitation, if you are to make the condition of the people better than ever before, and if you are to put down epidemics, you will require large sums of money for all these purposes and you can no longer tax the land. You must get this money from the industrial development of the country, and unless you are prepared to give the go-bye to the old maxims with regard to subsidizing, etc., and unless you are prepared to come to the rescue of the people by starting Commercial Colleges and factories, you will find yourself in a position of bankruptcy. Until the people are awakened to a sense of responsibility, the Government may not heed this warning and I sincerely hope my feeble voice will find

echoes throughout the length and breadth of this land.

The third subject of my lecture raises the question whether the curriculum of studies which the University is now enforcing is calculated to give to the services, whether Government service or independent service, that amount of knowledge and education which those services do require. I am particularly referring to what I cannot help calling as a craze for specialization. What happens to-day is this, a boy in the fourth form is required to specialize and is asked to choose what particular branch of study he should take up. Our boys are no doubt precocious, but I should think that it is too much for Government to expect even them to have that extraordinary knowledge at that stage of studies to make up their minds about their future. Many a young student finds that he is utterly mistaken in choosing a particular course of study and that he is a ruined man. From the point of view of the services is it right that these boys should specialize from the fourth form? Twenty-five years ago the state of affairs was quite different. Before one was asked to specialise, one had to study something of Physiology, European History, Indian History, Mental Philosophy and the Vernacular. That general education enabled him to think for himself and to make his choice. Further that amount of general knowledge is absolutely necessary to enable a specialising student to understand his subject fully. To my mind above all things an attempt should be made to reverse this policy of specialization and to go back to what existed twenty-five years ago. Otherwise our boys would be ruined and the services would be ruined.

The Bombay University has resolved upon asking Sir Alfred Hopkins to be expert

adviser to the University. Madras may soon ask for an expert adviser. What is this expert adviser to do? Does he know the nature of the country, and the requirements of the people? Unless a man is competent to speak on all these matters no expert adviser would be of any use to us. I hope we shall not follow in the footsteps of Bombay in this matter. We should prefer to have some committee of enquiry to ascertain what is best for the country and for the services.

THE CORRELATION OF HISTORY AND GEOGRAPHY.*

(Continued from the last issue.)

GEOGRAPHICAL INFLUENCES IN INDIAN HISTORY.

1. Situation in the middle of peninsular system of South Asia. Access to the Iranian and Central Asian uplands—Arabia and the lands watered by the Euphrates and the Nile. The sites of some of the great empires of ancient and mediæval times.

2. The physical isolation of India from the rest of the world. The sea; the impassable barrier of the North. Absence of trade or communication with Tibet and China, and the small proportion of the Tibetan and Mongoloid elements in the population. The gates of the North-West, the spread of conquest and civilisation along the Indus and the Ganges—The Aryans and the mixed Scythians—Rajaputana, Malwa, Western coast. The importance of Delhi as an im-

* I am glad of this opportunity of making grateful acknowledgments to Mr. J. A. Yates, M.A., and Mr. C. K. Govindarao, B.A., L.T., for reading the syllabuses and giving me the benefit of their valuable criticism.

perial capital and of Simla as the summer residence of the Imperial Government. The battles of Kurukshetra (one), Thalawari (two), Paniput (three). The Vindhyan system, a barrier damming back the flood of Aryan civilisation, and keeping back the Muhammadan conqueror for four centuries. The inability of the Delhi Emperors to keep a firm hold on their provinces in the Deccan. The Western Ghats; the customs of the Malabar Coast; the Bhore Ghat, the Thal Ghat, keys of the Deccan against the West Coast; railway routes. Moghuls and the Travancore coast strip. The mountains and hills, refuge ground of the aboriginal tribes. Hardy mountaineers, Pathan tribes, Ghurkha militia. Want of common ties among races living in mountains, Chin hills in Burma. The importance of the Bolan Pass, its disadvantages. The railway. The importance of the railway system of the Punjab. The forward school and the school of masterly inactivity. Hill stations.

3. The Himalayan Passes: Mulla Pass. Alexander the Great's march from India. The strategical position of Delhi. The ancient Indian capital, its disadvantages. The Thal Pass. The importance of Multan as a trading centre. Nader Shah back with his hosts to Persia. Gomal Pass. An important trade route from Kabul to Bokhara into the Punjab. The Kurram Pass. The site of ancient towns. The Tochi Pass, shortest route from Ghazni into the Punjab. Muhammad of Ghazni lead his army for the plunder of Multan in Sind. The Khyber Pass. Aryans, Scythians, Greeks, Moghuls, Persians, Turks, Pathans, its importance in deciding the destinies of the yellow race. Swat, Panjkora, Chitral and Gilgit Passes; later tribes of the Aryans; Alexander's march into the Punjab.

4. The Patkai hills. Mongoloid tribes in Burma, Assam and Bengal. Difficulties in the conquest of Burma. The Western Ghats and differences in the development of the early Eastern and Western English settlements.

The N. W. Frontier Province difficulties in conducting military campaigns. Comparison with the first stages of the Boer War. The Buffer State of Afghanistan.

5. The Deccan plateau: dry and comparatively cool climate. The Military vigour and enterprise of the inhabitants, Hindu and Muhammadan Kingdoms in the Deccan—Mysore, Vizianagar, Bhamini, Hyderabad. The descent from the highlands of Mysore to the plains more abrupt towards the West than towards the South or East. Mysore dominated historically eastern and southern plains rather than the adjoining narrow strip of the West Coast.

6. Malabar Coast nearer the centre of the great empires of ancient and mediæval times than the East Coast. Foreign invasions naturally to be expected on the Western Coast, but historically rare or not happening.

7. Fertility of Baluchistan. The Saraswati. The original direction of the lower course of the Indus. Communication with Ceylon by Adam's Bridge and with Burma by the Arakan Coast.

8. The great mountain ranges enclosing the Deccan plateau on two sides. The minor ranges breaking out from these. The dry and bracing climate. The sterile soil ruggedness and unevenness; the hill forts. The position on the high road between Northern and Southern India, a commanding advantage denied to the other tablelands of Mysore and Malwa. The Maharatta Confederacy. The guerilla warfare, comparison with similar physical features in the centre of Ceylon,

North-West Frontier Province, Transvaal, the Grampians, Wales. Difficulties in the colonisation of India by the ruling race, use of hill stations; frequent furloughs. The Aryan and Muhammadan conquests from the N. W. The British acquisitions in South India and in the extreme east of N. India. Reason for the difference. The most essential need for India's physical welfare, the timely arrival and beneficent violence of S. W. Monsoon winds breaking against the strong breast of the Himalayas and thus discharging their torrents of rain. Indra the thunderer; Maruts, the storm winds, his helpers and friends; cloudland, the middle reigon; clouds, the cows; and rain, the descending milk.

9. The seats of early civilisation and trade. The course of tribal migration. Mother Ganges, Kaveri delta and falls. Krishna and Godavery, Narbada and Tapati. Sandy deltas, marshy swamps and bars together with the straight unbroken coastline and want of good harbours. Absence of the requisites for training a race of sailors—exception S. W. and S. E. coasts—settled life in the plains. Less warlike.

10. The history of the countries along the lower course of the Ganges; the modern province of Bengal distinct from those along the upper course of the same river, mostly included in the United Provinces of Agra and Oudh. South Bihar and Tirhut (ancient Magadha and Mithila) associated historically more with the upper than with the lower provinces.

11. The Lost river; the Hakra or Vahind in Rajaputana. During the Muhammadan period boundary between Sind and India. The disappearance of the river in the 18th century, and the consequent desolation of the land.

12. The arid plains of Tinnevely and Madura in the south-east of the peninsula; a well-marked natural feature becoming the seat of a separate kingdom, that of the Pandyas at a very early date—(also accounted for by ethnic differences).

13. The shallow sea-bed of Aryalur and Utatter in the Tanjore district; the boundary between the northern and the southern empire.

14. The plains of the south-east hot and fertile inhabited by industrious people skilled in agriculture and commerce but with little leisure or energy for war and enterprise. Flourishing kingdoms and empires of the Carnatic. Infinite variety of races and languages, strong jealousies. Part played by the gorgeous display of the French. The French and the Lowlanders, the English and the hardy Highlanders. The Tapti and the Narbada valleys; great kingdoms and civilised nations. Arab element in the population; the coast route from Baluchistan into Sind. Early conquest of Sind; route taken by some of the Aryan and Scythian tribes, the Medes, Chaldeans and Persians.

15. The riches of Tamil lands especially pearls and spices sought by foreigners by sea, not over land. The eagerness of merchants of European Naval States to secure the trade in these precious commodities; the cause of the conquest of all India by the subjects of an island kingdom in the far West. The *price of pepper*, the origin of British Government of India.

16. Joint family and rapid increase in population. Forty heirs to a single cocoanut tree. The civil war on minor scale in courts, murders. India, a temptation to outsiders. Emigration from India generally unknown. (The Tavanese emigration from Guzerat;

Dravidian Settlements in Malaysia—Ancient Indian and Buddhistic relics in the East Indian Archipelago, Dravidian trade and shipping.) Nature an indulgent mistress. Want of incentive to exertion, invention and enterprise; superstition the keynote, spirit of resignation. The mighty forms and forces of surrounding nature. Nature worship and profound philosophy tinged with the melancholy of future oblivion. The steamy fertile rice plains and the lassitude and effeminate character of the people. The sweet pure air of the desert. The sharp extremes of temperature and the Rajputs. The Punjab. The forests, the water-logged and swampy plains, the scanty rainfall, the hot and dry climate, want of irrigation, the brackish water of the wells, the bitter cold of the nights—the warlike character of the Sikhs.

GEOGRAPHICAL INFLUENCES IN ENGLISH HISTORY.

1. The insular position of England and its connection with (a) the independence with which more than one Roman ruler acted in Britain, (b) the claims put forward by the Anglo-Saxon kings to rule their own little separate world independently of the representatives of Cæsar, (c) the practical isolation of the Church of England from the Church of Rome, (d) the interest evinced by her Norman kings, more in their island realm, (e) the attempts of Edward I, who was English to the backbone, to unite Britain, (f) the establishment of the system of scutage by Henry II, which exalted the power of the Crown, the representative of centralised national existence, (g) the national spirit which extorted from John the "Magna Charta." The "Silver streak" as affording freedom from sudden attack. Freedom from continent-

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alsquabbles. The Norman conquest the last real invasion of England. The *ditch* that Napoleon in the height of his power could not cross.

2. Roman roads, instruments of Roman civilisation, illustrate forcibly the geographical conditions, connexion between the modern railways, in particular, London and N.-W. Railway, and London, Chatham and Dover Railway, variation of the route taken by the Midland. The imperfect occupation of the country between the walls of Hadrian and Antoninus. The extent of Roman civilisation and the thinning of it to the west. The possible need of co-operation between land and sea forces as influencing the choice of Roman stations in Britain, e. g. Colchester and Lincoln (Lindum). The consideration given by the Romans to the Iceni and Trinobantes who were defended by natural obstacles of forests, marshes and fens in the Roman stations at London, St. Albans, Norwich (Cariannonum) and Colchester. Caractacus and Caledonians and the respect due to the defence afforded by mountains told in their stations at Gloucester, Caerleon-on-Usk, Uriconium (Wroxeter) Chester and the line of forts between the mouths of the Forth and the Clyde.

3. Anglo-Saxon conquest governed by geographical conditions; line from the mouth of the Tees to the mouth of the Severn and then continued to the south coast roughly divides the island into plain and hill regions. Expulsion to a large extent of the Celts into the hill regions of the west and the north. Intermixture of the Celtic and Saxon elements in Somerset and in the Severn basin. The Teutonic immigration almost entirely determined by geographical facts—Kent, Romney Marsh and Forest of Andredesweald; Sussex

and forest between the north and south downs, survival of heathenism in Sussex when extinct everywhere else. Norfolk and Suffolk, the deep inlets of the fens, absorption of Essex. West Saxony, the slowness of its expansion. Northumbria, its rapid expansion. The delay in the establishment of the kingdom of Mercia.

4. The Danish incursions, the access given by the fens for their vessels of light draught to the very heart of the island. The disposition of the Danish towns with the geographical reason for it. The fusion of the Angles and the Danes. The two-fold part played by the fens in English History. Hereward and the Ely Fens—Alfred and the island of Athelney.

5. The conversion of England to Christianity. The landing of Augustine in Kent, and the spread of Christianity from Kent as the centre to Essex, East Anglia and Northumbria governed by geographical conditions of England. The seats of the original Episcopal sees, namely, Canterbury, Rochester, Winchester and Salisbury, etc., located on a consideration of the geographical and political importance of the places mentioned.

6. The geographical differences originally quite natural, but artificially prolonged, between Mercia and Wessex and their influence in deciding the issue of one of the most important battles in all history, the battle of Hastings. The dissolution of Cnut's earldoms an important factor in unifying the country. The creation of Palatine earldoms. The geographical bearings of the creation of Feudal lords with large landed interests. Castle-building, the strongest position formed by eminences near streams. Many of these on sites of Roman fortresses. The tower of London, Windsor, Wallingford, Oxford,

Entrance to eastern counties barred by castles at Colchester, Ipswich, Norwich and Lincoln. The basin of the Trent by castles at Newark and Nottingham. The branches of the Yorkshire Ouse and the strategic importance of York. The Aire gap, the Tees gap and Tyne gap guarded by the castles at Clitheroe, Bernard, Carlisle, Newcastle; Arundel castle in the valley of the Arun; Winchester in the valley of the Avon; Dorchester in the valley of the Frome. Exeter and Tiverton in the valley of the Exe. Taunton in the valley of Tone, Bristol and Devizes along the course of the Avon. Great entrance to the Midland plain along the Severn defended by castles at Berkely, Gloucester, Warwick and Kenilworth. The distribution of the lands of the great marcher families with the geographical and strategic importance of their castles, namely, Chester (N. Wales), Hereford (S. Wales) and Shrewsbury (Mid. Wales), Chepstow, Strongbow's fortress at the mouth of Wye.

The long period between the Norman conquest and the close of the middle ages shows but few changes in England which bear on geography.

7. The Wars of Roses, and the Great Rebellion. The line roughly dividing the plain from the hill region; also the same between the parties. The preponderance of London and the south-east. Wales an element to be reckoned with. Wales and Lancaster, Gloucester and York in determining the last campaign.

8. The position of London as the centre of land hemisphere; nearer to the greatest seaports in existence than any other city. The advantages of Amsterdam plus the invaluable security of being insular. Insular isolation, responsible for constitutional unity

and freedom. The new type of men produced by Elizabethan age. Devonshire worthies.

9. The division of parties in the Civil War fundamentally one of principles. Possibility of attempting a geographical division. Teutonic England as against Celtic. Victory with the populous and progressive half. The guiding influence which topography had in the great campaigns of the civil wars. Cromwell's skilful use of a geographical fact, the gap in the Pennines at the head of Aire Dale. Departure for political reasons from ordinary military rules, e.g. the siege of Gloucester by Charles I in 1643.

10. The Industrial Revolution. Shifting of the centre of gravity of England from London towards Manchester, Leeds and Liverpool. The construction of Railways. Direction in fairly close accord with geographical conditions as they are and not as they were. How they emphasise the importance of the capital. All roads lead to London. The possibility of a redistribution of the industrial population in the near future, consequent on the introduction of Electricity as a motive power. The formation of the House of Commons originally based entirely on Geography. Before the thirteenth century, the various administrative divisions became organic units. The industrial changes brought about a shifting of the geographical distribution. Bills are passed in Lancashire not in London.

11. The existence of the Isle of Wight, the length and depth of the Thames estuary, the deep inlet of the Severn making land communication between Wales and Devon very long and circuitous. The permanent importance of Gloucester (the lowest point at which the Severn can be bridged) in the military history of England; the Cheviots, Carlisle

and Berwick. The coast strip east of Lothian-Dunbar. The Pennine Hills a barrier between Angle and Celt. Four Scottish invasions of England on behalf of the Stuarts along the route between the Pennines and the Irish Sea. Preston and Worcester.

12. The Great Northern Railway; many places along the route mark the disastrous termination of Scottish invasions of England. Northallerton, Alnwick, Halidon Hill (cf. Crecy) Nevill's Cross, Flodden, York, Marston-moor.

13. The proximity of Ireland to the south-west of Scotland. The conversion of Scotland by the Irish monks of Iona.

14. The two deep inlets of the Forth and the Clyde very nearly cut Scotland in half; all military movements tended to centre round Stirling which commands the Isthmus—Dunbar, Stirling, Falkirk, Cambuskenneth. The Battle of Bannockburn.

15. The policy of Edward to unite England and Scotland under one king determined by the fact that both countries formed one homogeneous whole. The turbulence of the Scottish nobles under the Stuart kings and the consequent unrest and disorder to a certain extent attributable to geographical conditions. Montrose's brilliant exploits. Union of England and Scotland; the exclusive character of the Highlands, troubles apprehended to be caused by them to the body politic of Great Britain overcome by the construction of roads. The peace policy of James I, the increase in population for want of war, the only check. Colonial expansion.

16. The position of Ireland. Its resources render it a dependency. The Irish Sea and the Irish question, facilities afforded by the central plain to invaders. Mountains no

effective natural boundaries. The effects of climate, disastrous potato famine, antagonism between a small minority of one race and a peasant majority of another race, the lack of mineral wealth. Trade with England determined by obvious geographical reasons and the policy adopted by English statesmen.

17. British occupation of Egypt and Eastern Sudan; Railway from Port Sudan to Berber, and a second railway from Mombasa to the Great Lake Victoria Nyanza; Uganda Railway from East African Protectorate to command access to the Sudan by alternative routes. The military tactics adopted by the British in the last two campaigns in Egypt.

18. Canada, conditions favourable to the development of nations on the largest scale, political frontiers conventional; want of geographical insight of the British Ambassador in settling the boundary between Maine and New Brunswick.

19. The geographical formation of the lake region counted for much in determining the method of French advance.

20. The discontinuous character of the Appalachian system, the key to the conflict between the English and the French in the New World.

21. Dixon's line between Northern and Southern States of the United States of America. The importance to a fugitive slave of a knowledge of this piece of political geography.

22. Australia and "coloured labour."

23. New Zealand and the "Maori question."

24. The geography of South Africa instrumental in favouring the apparently instinctive inclination of the Dutch to isolate themselves.

25. First stage of the Boer War determined by the peculiar geographical conditions.

26. The opposition of East and West from Roman times to the present day in its various aspects—topographical, climatic, political and economic.

27. The distribution of monastic lands in Britain from the Conquest to Henry VIII's time.

28. The political influence of Wales and Scotland as geographical units of character on mediæval and early modern history.

29. The distribution of Lollardy and the extent of the survival of antiquated thought and doctrine with the geographical basis thereof and its influence on immigration.

30. The extent of enclosures in the middle ages and early modern times and their influence.

31. The parts of the British Isles, the coast lines of which are such as to attract the people to sea-faring.

32. The changes that might have taken place in the history of the English conquest had the Angles and Saxons landed on the west coast of England.

33. The parts of the west coast on which the Angles and the Saxons probably had formed small kingdoms and the belt of the country along which these kingdoms could have afterwards united.

34. The characteristics of the Irish, Scottish and Welsh that are not found in the average Englishman.

35. The geographical reasons why English soldiers were unequal to the task of attacking the Snowdon mountains during the conquest of Wales in the reign of Edward I.

36. The part of England in which Edward might have found soldiers able to fight in Wales.

37. The important towns in the Danelagh that stood in the Trent basin and the bay and rivers by which the Danes could have reached the other ruling centres of the Danelagh and whether an invading army is likely to enter this bay now.

38. The lands from which the earliest invaders of Great Britain could reasonably be expected to have come, from Roman or Teutonic lands.

39. The geographical circumstances that ensured to Ireland the peace for a time in which to develop her ancient civilisation.

40. The foreign peoples that invaded the British Isles from the time of the Romans to that of the Norman Conquest and the names of such of them as reached Ireland. Whether the civilising influences came from Roman or Teutonic lands.

41. The historical reasons for the complete absence among the national emblems of the British Isles of any symbol connected with the sea. The design which is more truly national than that of *St. George and the Dragon*.

42. The geographical reasons for the positions of different frontiers that existed at different times between northern and southern Britain.

43. The difficulties due to the geographical features that the English met with in conquering the south and east of Britain.

44. The position of the mixed Gaels and Invernians before the Roman Conquest with the position of the Britons in the map of A. D. 650. Explanation of the general similarity of the positions of these races.

45. Supposing that Scotland were divided up into little kingdoms, the region in which the strongest states might reasonably be expected to exist.

46. The parts of Britain south of the Tweed, the inhabitants of which most vigorously resisted the Romans, held out longest against the English, disliked the reformation; the similarity that exists in the positions of these districts.

47. Why Gloucester took a different side from that taken by the county districts of the west both in the Wars of the Roses and the Civil War.

48. The reasons for the fact that the largest memorials of pre-historic Britain are found in the chalk downs of the south.

49. The advantages which York as capital of Great Britain south of the Forth has over London. The largest modern town which has the most central position in British Isles.

50. Reasons for the substitution of London and Dublin for Winchester and Tars as capitals. Advantage of Edinburgh as a modern capital and that feature of its position which was an advantage in ancient times but is now worthless.

51. The similarities in the position of the following pairs of towns—Scone and Forth, Westminster and London, Worcester and Shrewsbury, Clonmacnois and Athlone.

52. Reasons for Iona being an excellent position for a mission station.

53. Fisheries and their influence on the development of England. Fishing rights and complications in Anglo-French relations.

LIST OF BOOKS.

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|--------------------------|--------------------------------------|
| *1. The Dawn of History. | } Home University Library. 1s. each. |
| *2. Modern Geography. | |
| *3. Anthropology. | |

* Books marked with an asterisk are specially recommended.

- *4. Man in Many Lands. }
 *5. Man and His Work. } Messrs. A. & C. Black.
 *6. Historical Geography of the } 1s. 6d. each.
 British Isles. }
 *7. The Relations of Geography and History: }
 H. B. George; Oxford University Press. }
 4s. 6d.
 8. Historical Geography of the British }
 Empire: H. B. George; Messrs. }
 Methuen & Co. 3s. 6d.
 9. Geographical Influences in American }
 History: A. P. Brigham; Messrs. Ginn }
 & Co. 6s.
 10. Influence of Geographic Environment: }
 Miss E. C. Semple. Rs. 15-12-0.
 11. Historical Geography on a Regional }
 Basis—The Br. Isles: E. W. Dann; }
 Messrs. J. M. Dent & Co.
 12. Jenk's History of Politics—Temple }
 Primers.
 13. Payne's History of the New World, }
 called America, Rs. 24. Oxford Uni- }
 versity Press.

K. S. PARABRAHMAM.

SOME EDUCATIONAL IDEALS AND METHODS.

A SPIRIT of reform is in the air. Whether it be true or not that India is generally passing through a transition stage, it is certainly true that the Madras Educational system is. On the one hand, the University is putting the new regulations into force and anxiously watching the results. They hope that the regulations will justify themselves in

* Books marked with an asterisk are specially recommended.

the event. But I must, of course, except from this category those gloomy prophets who foresee nothing but disaster from the existing educational arrangements in this province. On the other hand, the Government are busy about the re-organization of their schools and colleges and the working of the School-Leaving Certificate Scheme. Fortunately for this Government, even the opponents of this scheme in the Senate of the Calcutta University grant that it has been a success in Madras. But that is by the way. Again, the non-official educational reformers are generally waging war against every existing arrangement and advocating changes in the system which will approximate it to the system of their days—of course the best one that can be imagined. But I shall be unfair to them if I do not add that they also advocate reforms which do not have even the sanction of experience.

It were a vain attempt to examine all their patent remedies for the ills which Madras student flesh is heir to. But I propose to examine a few of them and show that those remedies are more often than not the expression of individual idiosyncrasies and not genuine educational reforms which will benefit either the country or the students.

The first charge that is brought against the present system is that the education provided is purely literary and that it does not take account of the industrial and commercial needs of the country. Put in this form, the charge is probably unanswerable. But they go further and say that there is too much of literary education. Now this must mean either that in the country too many people are being given this sort of literary education or that those students, whatever their numbers be, who do receive education

under the auspices of the University, are given only a literary education. Considering the comparatively small number of students at school or college in this country, the former interpretation is evidently untenable. If it then means that our students, such as they are, do not receive industrial or commercial education, I contend that this argument fails to take note of the history, the traditions, and the purpose of the few existing Universities in India: they are fulfilling the very legitimate purpose, outlined long ago by Lord Macaulay of giving us education and culture on the lines of the older Universities in England. And it cannot be seriously disputed that they have discharged that duty nobly by us, though we may quarrel with the means employed now and then or may be impatient with the slow rate of progress. If these Universities are to go on discharging their duties, and improving their methods, so that they may soon become teaching and residential Universities in a more complete sense than they are now, they will have enough to do without being asked to provide for the industrial and commercial education of the youth of the land.

Nor does this argument take stock of the class of students who enter the portals of the University now. Most of them, it will be readily conceded, are not fit, nor are they anxious to receive any but literary education. It will be disastrous if these students who are mostly drawn from classes who have never known the A. B. C. of commerce or industry are forced to study them either compulsorily or even optionally.

But I do grant that some provision ought to be made for giving industrial and commercial education to our young men. But if

it is to be, the agencies are not the existing Universities. Nor, I venture to express the opinion, any *Universities*. I hold—it may be put down to a feeling of intellectual aristocracy—that University distinctions ought to be reserved only for men of letters.

Again, as I have said in another place, every unit of energy available in this country ought to be used for the spread of Western ideas and culture which can be done only through the wide study of Western literatures. Almost the only agencies which now ensure the realisation of this very desirable object are the existing Universities and it would be a disastrous day for India if they are burdened with other tasks than this.

Another charge which is brought and very legitimately brought against the recent innovations in our educational arrangements is that it tends to too much and to too early specialisation. To understand this charge properly, a brief outline must be given of the state of things which immediately preceded the new regulations. A student, while at school, must have studied English, a classical or a vernacular language, Mathematics including Arithmetic, Algebra, and Geometry, History of India, History of England, Geography and Elementary Science and must have got in these subjects a good percentage of marks before he matriculated at the University. Again he had to study English, a classical or a vernacular language, Mathematics including Algebra, Geometry, and Trigonometry, History of Greece, History of Rome and Physiology or Physiography for the First-in-Arts examination. And for the B.A. degree examination, the student studied English and a vernacular or a classical language compulsorily, and one of the five optional branches. A glance at this syllabus will convince any-

body that the degree holders of the University under the old regulations must possess some knowledge of various subjects. They knew something of mathematics which ensures, according to many educational experts, accurate thinking, something of the history of their own country—a study of great value,—and of Ancient Greece and Rome and of mighty England, something of Physiology, something of their vernacular or of a classical language, and I am not at all willing to concede for one moment that their knowledge of English language and literature is in any way inferior to that of the graduates of the University under the new regulations.

I am not advocating a return to the old state of things for I hold that it is both unnecessary and undesirable—unnecessary because the object I have in view can be attained by other means and undesirable because the old system had some very obvious defects whose recurrence I certainly do not wish. But I do hold that some improvement ought to be made on the present system. Otherwise, our students will grow up in water-tight compartments and will lack that general knowledge of things which any man of true culture must be anxious to possess. What can you expect of a student who never studies a book on history—either of his country or others—at school or at College, but who may be a Master of Arts of the University? I will explain how this happens: A boy when he gets into the Fourth Form has to choose the studies of his life. That were an evil by itself, but its consequences are accentuated by the fact that the syllabus is so arranged that, when the student chooses any subject as he has to do, there is no provision made for giving him that general culture which will, in some measure, counteract the evil effects

of this too early specialisation. For the only subjects he has to study compulsorily are English, Vernacular Composition, and Elementary Mathematics and his optional group. Let us assume that the student chooses a Mathematics Group. Then he has to study only these subjects. Of course, he has also to study the subjects under Group B, which comprise Indian History, Geography, Elementary Science, Drawing and Gymnastics. But—and this is important—the student is not examined in these subjects at the public examination. The consequence of this provision is that sufficient attention is not paid at school to these subjects. I make this statement very deliberately after some experience of how things are done at various schools. Hence it happens that the student may practically matriculate, i.e., be admitted into the Intermediate class, without ever having learnt anything seriously of the history or the geography of his own country or of England or of ordinary scientific facts which any curious student must be anxious to learn. When in the Intermediate class, the student is no better, is perhaps worse. He studies English, Vernacular Composition, or Sanskrit translation, and one of the optional groups. Let us assume again that our student chooses the Mathematics group. Then the same phenomenon will be repeated. So that the student will enter on his studies for the B.A. or the M.A. Degree examination of the University without any historical or scientific knowledge—a state of things which could never have happened under the old regulations.

Thus we shall soon have graduates of the University holding the highest distinctions it can offer, not knowing where Delhi, the Capital of India is, or what part it played

in the history of India, gravely doubting whether Harshavardhana is the name of a king or of a province, whether Aurangzeb reigned before or after Akber, whether Clive was an English or a French general, or why the great Proclamation of 1858, if ever they hear about it, is called Magna Carta, and not by a more elegant name. Nor will they know even such elementary facts as what water is composed of or what the difference between a mechanical mixture and a chemical compound is. They will never know the causes of lightning and thunder and perforce attribute them to the wrath of the gods and they will seriously doubt whether the earth, solid as it is, moves round its axle and round the sun. They will also not know where the liver is whether in the head or in the abdomen, whether there are two lungs and if so where they are. And if you talk of intestines, they will absolutely be at sea. I do not deny that they may know some of these facts; but, if they do, they will not owe it to the training which they receive at school or at college.

I grant that, theoretically, there is provision in the school curriculum for the teaching of Indian History, Geography and Elementary Science under Group B. But since these subjects are not prescribed for the public examination, sufficient attention is not paid to them at all in many a school. If this state of things is to be rectified at all, a more eligible position ought to be given to these subjects in the school curriculum.

There is one curious feature of the new regulations which, I think, is worth while pointing out. I refer to the position of Indian History in the curricula of studies. It will be readily conceded on all hands that the study of the history of our country must

form an integral part of the education of our students. And yet what do we see? In the school curriculum, as has been pointed out above, Indian History is made to rub shoulders with Drawing and Gymnastics under the neglected Group B. Further, there is absolutely no provision made for the study at school of Indian History as an optional group. Hence there is no opportunity for a student, however desirous he may be of studying Indian History as a special subject, to do so. Again in the Intermediate classes, there is no room for the study of Indian History for it finds no place even in the optional groups. Again, while fortunately for the ordinary B.A. Degree examination, Indian History is not thrown overboard, Indian History is only an optional subject in the curriculum of studies for the Honours B.A. Degree examination. Of course no one subject is compulsory in the History group for that examination. But that is no argument. Surely we cannot contemplate with equanimity the phenomenon of the graduates of our University going out with their M.A. Degrees in History and never having seriously studied Indian History at school or at college. This was not possible under the much abused old regulations. Nor is it one to be tolerated any longer.

But this is only one of the evils of this craze for specialisation. Specialisation is very valuable, especially in India where the atmosphere of true culture is yet to be created. But each has its own place and nothing but disaster will result if this hobby of specialisation is ridden to death as apparently it is, under the new regulations. I contend that, while at school, a boy ought to receive general culture in a fairly large number of subjects, so that his outlook may

be widened and he may have the very necessary, though cheaply ridiculed, equipment of knowing something of everything. It will be time enough when he goes to college to choose his subjects. This is advocated also because the boy at school cannot really choose well at such an early age.

Another charge which is brought against the present system is that, whether under the old or the new regulations, it does not give any religious education. A distinguished citizen of Madras said the other day that he must be a hardened man who came out of our schools and colleges with any spark of religion left in him. It may be so but the question is whether the ideal of true education is to make our students religious while at school or at college.

The only rational ground on which the teaching of religion directly by means of lessons can be advocated is that thereby our students will be trained to lead honest and pure lives. We are all very anxious that our students should lead such lives. But I am very doubtful about the wisdom or the efficacy of the means suggested. It is much more likely that a student will be trained in the practice of moral virtues by becoming acquainted with heroic examples of men and women who, under trial and temptation, have never swerved from the path of virtue and honour. I will go further and say that they can profit only by the examples of men, like themselves, having the same failings and weaknesses, who were able to transcend them with efforts which, however difficult, are only human. Can the same be said of demigods and gods incarnate who are always able to press other than human agencies into service? Our students may read of them with awe but they will always put them on a separate

pedestal, when it comes to action. I say it with great regret, because I am a Hindu and proud to be one, but the interests of of truth demand that it must be said that most of our Rishis and some of our gods are not paragons of virtue.

It is again urged that our students must get to know something of their religion while at school or at college. It may be expedient, but certainly the place to learn it is not the school or the college. But I question whether it is even expedient, for our students are of too tender an age for them to judge correctly on abstruse questions of religion and philosophy. And it will be time enough for them to study and judge of these questions when they enter life. If it is feared that, unless they are introduced to religion early, they will not care for it afterwards, then something is wrong somewhere else and not with the students. The analogy of politics will illustrate my point. It is fairly evident that most, if not all, of our students will have to take some share in the politics of the country (I use this phrase in a very general sense). And yet we know the scrupulous care with which the study or the discussion of politics is kept away from students. And the ground alleged is that our students are too immature to judge of political questions. If we are to be logical, a portion of this argument applies to religious questions also.

It is regrettable that, in this craze for religious instruction, no attempt is being made to attend to other more important subjects concerning the formation and development of the character of our young men which is after all the best equipment they can have in life. To secure this, it is necessary we must get as teachers of our young

men—men who by their lives will show what it is to live honestly, honourably and usefully. One such good teacher will do more to the improvement of the character of our students than hours of lessons on any religious textbook. And if we all spoke the truth, we must say that a particular teacher or professor has had more to do with our ideas and ideals than any other influence. After all, young men all over the world are hero-worshippers and if only they are brought into contact with good and high-souled men, they can wish for no better fortune.

There is one other subject on which I should like to say a word here. No attention is paid to the culture of the heart as such in our schools or colleges. It must be conceded that our young men are very impulsive and that their hearts are quick to respond. Youth is the period of generous enthusiasms. And we are letting a great source of national enrichment untapped when we allow our students to go into the world and merge in the crowd without having made any attempt to bring them into sympathy with hopes and fears they do not heed. I attach much importance to this culture of the heart. But I cannot elaborate it here.

Finally, there is one very strong argument against introducing direct religious instruction into our schools and colleges. Our country is perhaps the greatest museum of religious curiosities in the world. And if we are to cater to the needs of students belonging to different religious communities, there will have to be a considerable multiplication of agency. Besides that, I am afraid it may spoil the true educational atmosphere of an avowedly secular school or college. I expect from this category the proposed Hindus and Mussalman Universities. I

welcome them because I am sadly conscious that my country wants more Universities which will not come except through these agencies. Again they are avowedly confined to special communities and there is no room for conflict in them. There is an element of danger there too, but I look confidently to the broadening influence of true culture to smooth the asperities of too much religious instruction.

I have now examined three fairly typical charges against the new regulations of the University. And I venture to think that the conclusion is that, though they stand in need of improvement in details, on the whole they point in the right direction. After all they have not had a sufficiently long lease of life for us to judge fairly of their results. And, in criticising them or suggesting improvements therein, we ought to be sure in our minds that those suggestions or criticisms are based on certain ideals we have of education. There has been so much of drifting in this country in various directions that it is time we regulate our activities by certain accepted standards.

And I venture to express the hope that not many will dispute the soundness of the following ideals which ought to govern our immediate activities in educational matters:—

- (1) The education which our *existing Universities* must go on giving must be purely literary.
- (2) Industrial and Commercial education must be in the charge of other educational agencies.
- (3) Specialisation in studies ought not to begin too early.
- (4) Education, in its higher stages, must be specialised.

(5) Education, so far as direct teaching is concerned, must be purely secular.

(6) The development of the character of and the culture of the hearts of our students must be attended to.

After all these are only means to attain the end which we all have in view, i.e. to see that the youth of the land is able to hold his own as against youths of other civilised countries. And this very desirable object can be achieved if all our educationists would bear in mind the words of His Imperial Majesty in reply to the address of the Senate of the Calcutta University, viz., that we should send out of our schools and colleges "honest, manly, and useful citizens."

S. SATYAMURTI.

THE TEACHER.

IT is a common belief that teachers lead a slothful and by no means a happy life. I am sometimes inclined to consider that even such a belief is not without its reasons, seeing how most of us have chosen this profession but as the ultimate one—having got our projects defeated in trying to secure places elsewhere. We either think that it is as easy to be a school-master as to lie down in our beds and go to sleep, or compared with that of others, the pay of a teacher is poor, not proportionate to the difficulty undergone. In certain instances, we are of sincere opinion that no regard is paid to us by the public, since they think we are harmless and we think it is not fashion to be called what we are, viz., teachers. The cause of this negligence on the part of the public seems to me to be this: People at large respect, nay, worship wealth and power. A beggar with infinite musical attainments is reviled, is

curled for 'his hoarse noise.' A rich man with no iota of taste for music may bawl out, may utter incoherent sounds with the result "see, how exquisitely he sings! So and so, (the so and so may be one of the best musicians for aught we know) is nothing to him." And power, yes, who doesn't prostrate before it? Who doesn't sacrifice his everything for it? But the teacher hasn't the power to condemn the actions of the public directed against him. He is, if possible, more docile than the boys under him; so that whatever is framed or passed in a way detrimental to his interests and the interests of his boys remains uncontradicted and is accepted as certain. In short, the profession suffers from a state of paralysis caused by the blows of public opinion and misunderstood self-regard!

"A teacher is born, not made." A vast gulf there is between a man who becomes a teacher because he cannot help it and another whose natural inclinations lead him on to this end in spite of deadly disapprobations of his friends and others, whose words he is forced to respect and whose words fit him for anything but a teacher. In the days when the natural teacher attends school as a boy, his desire is in a state of infancy and with his own growth grows the inborn, the keen love for the post; no matter what comes between, no matter who sets the trap, his aims still lead him to progress on and on, nothing daunted in resolution till he reaches the goal, the long wished-for goal of a teacher. Some divinity there is about this and this divinity the born teacher realises within himself and feels pleasure in that realisation. A sort of godly purity is infused into his soul and he at times fancies himself to be in that elysium of happiness which induces him more and more to increase his enviable glads

ness. The work of many in this direction proves futile, more often fails, because they do things for money, because they do things for compulsion, because they have no disinterested motive in the training of young minds. A superficial survey of the preceptors of olden days shows us how they taught not for money, how they taught not for others' esteem, but for the purely unselfish motive of training up the young for the training's own dear sake, readily, willingly.

The responsibilities imposed upon a master are perhaps heavy. In the most accepted sense of the word, a parent is responsible for the bringing up of his child, for feeding him and for clothing him till the child becomes a big boy. Thereafter the boy or the father cannot be much blamed for each other's misunderstanding. The case is different with a boy and his teacher. The boy thrives well or fares ill in life according as the education he has received from his master is solid and substantial or useless and not worth the sum expended over. In life the recommendation of a man must be, not a bundle of letters got a bit from this official, another bit from a superior, a third bit from a still superior and so on, but the recommendation of his own worth which must speak for him. This, we see in experience, is with very few men. The child's character is formed and modelled at school and the first impression the child gets there is capable of development as his brains are at that stage easily susceptible to outward influences. The teacher is to be held therefore, responsible for the first good impression of the boys. A true teacher is a blessing to humanity inasmuch as thousands take golden lessons from him; whereas a parent but instructs his own two or three and that too

imperfectly. The root of the tree is to absorb the food materials and distribute them to its several branches. If the root is bad and the food-materials worse, we need not doubt that the tree will rot to its core and the branches will not grow but wither away. On the other hand, if the root is good and the materials tasted better, then the tree will be one of the most flourishing ones and the branches will flower, smile and look cheerful. Similar to this is the position of a teacher. If he gives bad instruction, the child is spoiled. If good, the child is a brilliant success.

In all walks of life there is this fact to be considered, that there is a relation between the doer of a thing and the thing done; and the quality of the agent to a great extent determines the character and the effects of the work turned out. In the work a schoolmaster has to do, nothing influences character like character. It is no use sitting idle and preaching industry, coming late and preaching punctuality, being vicious and preaching virtue. 'An ounce of practice is worth a ton of theory.' "And all teachers will do well to bear in mind that there are no critics so keen and sharp-eyed, no assessors of character so mercilessly just and no observers of the ways of others so undeceivable as children. No man can be so astute a humbug as to hoodwink boys into a wrong belief and hence no bad man can be a good teacher." He should teach things not so much by what he says and does as by what he is.

The teacher, immediately he gets convinced that he is personally fit for undertaking it, must throw his heart and soul and might into the service; and sympathy with the boys' psychological working is perhaps one of his

best qualifications. He must feel with the boys a pleasure when their tender brains try to express the latent powers within. Nothing is more delightful than this to a man who likes the profession; nothing more delightful to him than to see the instruction imparted by him received almost mysteriously.

It is obvious that any rupture between two masters of whatever rank would interfere seriously with efficient work. Without harmony in the staff, school work must, of a necessity, suffer. Even boys may catch the infection and engage in far more serious quarrels in defence of masters who happen to take their classes.

And a scholar is to be trained so that his dormant resources, whatever they be, intellectual, moral or scientific, shall be roused, and kindled to his best advantage, so that his selfishness which may be called the spring of all vices is lessened; so that his abilities, his love of perseverance and truth shall be fit examples for emulation and so that like Longfellow he may say,

And departing leave behind us
Foot prints in the sands of time.

The schoolmaster's position is a very trying one indeed. Very often boys are prone to be mischievous, insolent and revolting. In such cases it is not good to have sullen or irritable tempers. "Boys will be boys" our Principal used to remark "and it is in their nature to be mischievous." For, detect their crimes in a thousand ways, they have one more way of committing them. A charitable construction must be put upon their motives of wrong-doing and kindness must play its part much oftener than severity. The moral standard of the boys is only so little formed that we should not with justice decide any annoyance done to us or the school, as a

crime. And when it comes to whether we are to put a boy to actual physical pain or to deprive him of some privilege or pleasure, it is only when the latter positively fails that we should have recourse to the former. In most cases, the crimes are not of a nature to deserve corporal punishment. It is quite possible and desirable that a pedagogue has the book without the birch and is a pedagogue still. Under any circumstances we shouldn't punish boys with a glow of satisfaction on our faces. If we do, the boys may resent having us for masters and cherish some stern feeling of animosity towards us which may lead to disagreeable consequences. If they are punished constantly, a mechanical obedience, that savours of no affection within, will be the result. The value of punishment is lost upon them and they take it as an every day affair. The relation between the teacher and taught becomes strained; and then—it becomes the case of a buffalo and bull yoked to the same plough, the one pulling towards the sun, the other towards the shade. Such must be the nature of the punishment as boys may realise that atonement is possible and that the memory of the one mischievous act may be lost sight of in doing righteous ones hereafter. Common sense dictates terms to us which many of us are fond of superseding. Even legal justice, they say, is tempered with generosity.

Ananta Raman, a boy, used to come to school, two miles from his house, daily late. The master had established that the boy should place down his books and get up on the bench almost automatically. One day, by some strange fortune, Ananta Raman had his meals earlier and came running to school, his heart fast beating. And just when he was entering the school-gate, the bell rang and

he went into the class two minutes too late. He placed down his books and stood in his place.

Master : Ananta Rama

Boy : Yes, sir.

Master : Im—(signifying, 'on the bench as usual').

Boy : Oh, sir, not to-day please. I am dogtired.

Master : Fool ! You defy me ? Up.

Boy : No, sir, I cannot do it to-day.

Immediately the master writes a chit to the headmaster telling him that Ananta Raman comes late and refuses to stand on the bench. The headmaster comes with the cane and makes his enquiry. If he sides with the master, there is utter injustice done to the boy. If with the boy, the master puts on a long face. He is now in a predicament. A clever and kind master would have said : "Ananta Raman, I am sorry for you. You have managed to come earlier this day and if you try somewhat more you can come in time. This day I am pleased to excuse you." Here is an actual case. Let my brethren comment upon it as they choose.

In conclusion, I may add, grumble as much we may to the manager of an institution for the poorness of the pay, let not the displeasure caused herein enter in any way into the regions of efficient work; and let not physical weaknesses and the several worries which a school master is put to as any other in life interfere with the smooth and onward progress of the children in the path of right knowledge and right education. "Such worries," says one learned, capable and greatly experienced headmaster, "are to be borne as lightly as the modern appurtenances of a schoolmaster, for instance,

a jacket and a turban." What a fund of patience it meant!

A conscientious discharge of duty coupled with an earnest enthusiasm in the sacred office of forming and training young minds, and a sincere wish and prayer for the welfare of children entrusted to our charge must make us true teachers worthy the name.

T. S. RAJAGOPALAN.

A COURSE OF STUDY IN ENGLISH HISTORY FOR THE HIGH SCHOOL CLASSES.

(Continued from page 405.)

BEFORE proceeding to complete the scheme, a part of which I set forth in the last issue of this journal, I take this opportunity of making my ground clear on a certain point, in the method of teaching History, which, I very much doubt to think, is likely to be misunderstood by some of my readers. Whatever may be said of the virtues of any method in the teaching of any subject, it needs no mention that, even that method done to excess is, besides defeating its own purpose, also at times mischievous. In a tentative scheme of studies covering the Anglo-Saxon and the Norman periods, prepared by me, which appeared in this journal last month, though the scheme itself was drawn to suit the topical method of teaching in History, every attempt was made not to make that method entirely exclusive in its character and application. It may be remembered that, side by side, with the topics suggested, there were also names of persons and localities, as Dunstan, Edgar, Alfred and Hastings, etc., shown in the scheme, without which important names, any scheme, prepared to suit even the best method, is bound to be defective,

It is hoped that it will not be out of place to examine in this connection the merits of a method, of which so much has been said in these columns and with which the present educational atmosphere is surcharged. In the *first* place, the topical method of teaching History creates interest and a spirit of investigation. As this end is achieved, the causal relationship in History is brought out and the subject can thus be scientifically treated. Failure to give a scientific turn to the treatment of the subject entails a culpable and a baneful neglect of one of the most important uses of a proper study of History, namely, its disciplinary value. Thus want of adherence to a good method is as bad as, if not worse than, following no method at all and only tends to set at nought the disciplinary value of it, besides curbing the analytical, the thinking and the discriminative faculties of students.

Secondly, the topical method tends to familiarise the pupils with the proper use of books and libraries, as the information required under a certain topic has to be culled from several sources and from the several

chapters of a book. The one unconscious but yet sure result of all this is that every time the students exercise their thinking faculties, there is a vigorous check placed on forming hasty opinions of historical facts and personages. The beneficial results of this method can be multiplied to any extent and it acts as a wholesome or a baneful weapon according to the way in which it is understood and made use of. In fine it may be said that the topical method is to History what the regional method is to Geography and an *exclusive* use of it would be preposterous in the Elementary schools, absurd in the Secondary and a mistake in the College.

I may, in passing, suggest with advantage that, of all the recent publications in English History that accord a scientific treatment to the subject, Arthur D. Innes' arrangement and treatment are of the best.

Without taking any more of your valuable time and space, I shall continue from where I left last time and draw a scheme to cover at present the Plantaganet, the Yorkist, the Lancastrian and the Tudor periods.

*An Outline Scheme of Studies in English History on the Plantaganet,
the Yorkist, the Lancastrian and the Tudor periods.*

TOPICS HEADINGS.	PERIODS TO BE DEVOTED.	PRACTICAL WORK.			
I. <i>The Early Angevins. 1154—1272.</i>					
(1) Henry II's position at his accession— England, an appendage of a continental Empire—His reign marked by					
<table border="0"> <tr> <td>Period of Settlement.</td><td>Period of struggle with Church and Barons.</td><td>Period of triumph at home and of administrative reforms.</td></tr> </table>	Period of Settlement.	Period of struggle with Church and Barons.	Period of triumph at home and of administrative reforms.		
Period of Settlement.	Period of struggle with Church and Barons.	Period of triumph at home and of administrative reforms.			
Foreign policy of the reign—Last great of Feudalism—Jury system.					
	3	A map of Henry II's continental pos- sessions.			

TOPICS HEADINGS.	PERIODS TO BE DEVOTED.	PRACTICAL WORK.			
2. The Third Crusade—Richard I's absence from England helping constitutional progress—The foreign policy of the reign.	2				
3. The loss of Normandy, its causes and effects—The Barons' triumph—The rising against John, not <i>Baronial</i> but <i>National</i> —The great charter, its results and importance.	3				
4. The weak rule of Henry III—The causes of Barons' hostility ending in a Baronial scheme of Government—The Oligarchic nature of it—The Baron's war—The story of Simon De Montfort and his legacy to England.	3				
5. Monarchy under Edward I. His reforms—His attempts at consolidation—The Beginning of Parliament—His wars—The troubles in Scotland—The battle of Bannockburn.	3	Genealogy to show the Scottish succe- sion question. Plan of the battle of Bannockburn.			
6. The Social and Economic changes of the time ...	2				
II. <i>The Later Plantaganets.</i>					
7. The beginnings of the English hostility to France due to personal as well as to national discontent—Edward III's part in the Hundred Years' War—His relations with Parliament—Crecy and its historical importance.	3	Genealogy to show Edward III's claims to the French throne. Division of France after the peace of Bretigny. Plan of the battle of Crecy.			
8. Richard II's autocracy and its results. The beginnings of the Reformation—Wycliffite movement	2				
9. England—a constitutional monarchy under Henry IV. The continuation of the Hundred Years' War.	3	Plan of the battle of Agincourt.			
10. The wars of the Roses and their effects—The State of the Baronage.	3	Map of England showing the various battle-fields.			
11. The fourteenth century, a century of social, religious and political conflicts.					
<table border="0"> <tr> <td>Rise of tenant farmers and craft guilds.</td><td>Anti-Papal and Anti-church feeling. Wycliffite movement.</td><td>Advance towards constitutionalism.</td></tr> </table>	Rise of tenant farmers and craft guilds.	Anti-Papal and Anti-church feeling. Wycliffite movement.	Advance towards constitutionalism.	3	
Rise of tenant farmers and craft guilds.	Anti-Papal and Anti-church feeling. Wycliffite movement.	Advance towards constitutionalism.			
III. <i>The Tudor Period.</i>					
12. The popular despotism of the Tudors—The beginning of modern times. Henry VII's masterly foreign policy.	2				
13. The Reformation—its origin and results—contrast with Continental Reformation—its progress during the reigns of Henry VIII, and his children—Cardinal Wolsey.	5				
14. The Catholic reaction under Mary—Loss of Calais, ...	2				
15. Relation between England and Spain under Elizabeth—The Spanish Armada—England, the mistress of the Seas	3				
16. Religion, and civilisation of the period.	2				
17. The story of England's intellectual and maritime awakening.	3				

In the above scheme under the Tudor period, care has been taken to show how during that period, religion for the first time prevails over politics.

As usual, I have appended a line of time covering the important historical events coming under the periods for which the scheme has been prepared. The line is divided into 9 parts of 50 years each, making up a period of 450 years from Henry II to Elizabeth.

A.D.	
1154	- Henry II's succession to the throne, 1154.
	- Constitutions of Clarendon, 1164.
	- The last Feudal Rising, 1173-74.
1204	- The Third Crusade, 1190.
	- Loss of Normandy, 1204
	- Magna Carta, 1215.
1254	- The Provisions of Oxford, 1258.
	- The Model Parliament, 1295.
1304	- Confirmation of the Charters, 1297.
	- Battle of Baunockburn, 1314.
	- Battle of Crecy, 1346.
1354	- Black Death, 1349.
	- Battle of Poitiers, 1356.
	- Peace of Bretigny, 1360.
1404	- The Peasants' Revolt, 1381.
	- Battle of Agincourt, 1415.
	- Peace of Troyes, 1420.
1454	- Battle of Bosworth, 1485.
	- Poyning's Law, 1494.
1504	- The Malus Intercursus, 1506
1554	- The First Poor Law, 1552.
	- Loss of Calais, 1558.
	- Birth of Shakespeare, 1564.
	- Defeat of the Armada, 1588.
1604	- Foundation of the East India Company, 1600

(To be continued.)

S. G. SUBRAMANIAN.

EDUCATION IN THE MAGAZINES.

(INDIAN)

Poetry of the last 25 years.

Under the auspices of the Presidency College Literary Society, a lecture on "Poetry of the last 25 years" was delivered recently in the College Hall by Mr. C. P. Ramasawmi Iyer, with the Hon'ble Mr. Justice Tyabjee in the chair.

The lecturer delivered a short but interesting lecture on the subject of poetry and said that they had yet to learn a great deal of the literature of the West. They had outlived the days when the literature of their country could proceed on old lines. He therefore held that they should assimilate in their own literature all the elements of the literature of the West in order to make their own literature living. The literature of the last twenty-five years in England in the region of poetry was all miscellaneous literature. Up to the death of Tennyson, there had been a main current of literature, and they had great masters like Tennyson, Browning, Matthew Arnold and the rest. After the death of Tennyson there was a set back in the current of literature and there were various developments. The method of Swinburne was facile and was based on word forms and alliterations, his followers merely copying his mannerisms and alliterations. An examination of Tennyson's works showed that in them there was an attempt to preach and he thought that his mission was to preach and to import into literature the discoveries of new science and of new psychology. An artificial age which had ceased to be satisfied with a simple straightforward narration had come into existence and for expression of their ideas they had resort to new fangled expressions. Austin Dobson represented the back water of literature. The next school of poets was represented by William Watson who was what might be called a reflective poet and his was criticism and not creative poetry. It was what might be called glorified prose. Another class of poets was represented by Francis Thompson whose works were characterised by pessimism and revolt. There were different schools of English poetry and different modes in which they wanted to express themselves, but not one of them had established a new poetic creed or a new poetic language. They were all trying to create modes of expression and that was the state of poetry till fifteen years ago. The question was whether there had been a change afterwards. There had always been in England certain persons who wrote in the old lyrical

strain. Robert Bridges, the present poet laureate could not be said to belong to any particular class of poets and he had written in a manner which was purely lyric. The motive of poetry of the last few years seemed to be that man ought not to look so much to outward as inward and that problems of existence ought to be solved by some strenuous psychology. That was one of the signs of the recent scientific development in the West. They were now in a transitional and somewhat unsettled mood and did not decide what the function of true poetry was. But signs were not wanting to show that the result would be in favour of resuscitation of old lyrical impulse, and most recent poems were merely lyrical in the outlook.

The Teaching Grant.

The first meeting of the Assistant Masters' Association, Trichinopoly, for the year 1913-14 was recently held in the Hindu Secondary School under the presidency of Mr. Venkatasubrahmaniam Iyer, B.A., L.T. in the chair.

Mr. M. M. Balakrishna Iyer, Assistant Master, Hindu Secondary School, was called upon to speak on *The Teaching Grant* and in the course of a short address, he traced the history of the Grants-in-Aid system and outlined his proposals for their modification and extension in the future. The liberal policy adopted by Government and the increasing attention that is paid to the status, pay and prospects of the teacher, was the only apology for a detailed discussion of this question. Government instituted the Teaching Grant system for a triennium from June 1912, and under this system lump sums were awarded to institutions for the benefit of Masters and, though there has been evidence of complaints and dissatisfaction here and there, yet it must be taken that the system on the whole has worked fairly well. How to improve it was the question. Instead of small sums Government should allot larger amounts which they can now do, as they can now give the improvement of the teachers' salaries their first considerations, schools having been sufficiently equipped by successive special grants and as sufficient sums can be set apart from Provincial and Imperial sources. Secondly, the Incomplete Secondary Schools, which have been left out of consideration last year should be admitted to the benefit of this system of salary grant as these schools need attention and encouragement, as much as, if not more than, the other complete Secondary Schools. Thirdly, all schools should be brought within the pale of this system without the consideration of surplus or deficit. There are institutions which are well-

conducted and efficient and which have yearly surpluses and yet the scale of salary in these institutions was no better than the one obtaining in others. Teachers in the employ thereof should not be denied the small encouragement Government do magnanimously give in other quarters. Proposals have been submitted by the Provincial Conference and one also made time after time by some of our non-official members of the Legislative Council and by leading educationists to alter the provisions in the Grant-in-Aid Code, by which Government is asked to bear the whole of the *net cost* to the management. This system will not amply meet the requirements of the situation. Teachers employed in a large number of institutions will not be benefited and further, if institutions become self-supporting Government will have to withdraw from the field of Secondary Education in the matter of aid. Government can fix the minimum salary of teachers in all grades and can make the teaching grant a fixed and a regular contribution which can be calculated either on the salary, service, or the strength of the institution. No school need be omitted on financial considerations and Government should become a co-partner with the Manager in the matter of payment to the teacher wherever he may be employed. Some such system of Salary Grant, if enlarged and extended as aforesaid, will benefit all teachers in all schools and this system of improving the pay and prospects of the teacher so dear to Government and Managers alike will be quite in keeping with the demand made for a cognition of teachers in aided institutions as public servants. The Teaching-Grant system promulgated and adopted, tentatively, by Government, requires to be made a permanent charge on the revenues of the State; it should be the first charge in future; it should be liberalised with greater allotments; it should be made universal in its application irrespective of schools and their finance; and above all it should be administered with greater supervision and control to ensure its proper utilisation and distribution. The adoption of a system like this will give wider and greater satisfaction than the proposed modifications of the Grant-in-Aid Code.

Famous Characters and their Creators.

Under the auspices of the Pechaiyappa's College Literary Society, Professor K. B. Ramasawmi delivered an interesting lecture recently at the College Hall, on "Some Famous Characters and their Creators" with Mr. S. J. Crawford of the Christian College, in the chair.

The lecturer began by saying that the College Literary Societies might be supposed to be an extension of the College work. There was this difference between the College and the High School work: there was greater sense of freedom as well as greater sense of responsibility on the part of students in College work. If Literary Society work should be made to be a mere extension of College work, that sense of freedom and that sense of responsibility would be diminished and so the Society should take care that it did not get emerged in College work. In the choice of subjects there must be occasional topics that might not be quite acceptable to College lecturers. But all the same such topics might have to be taken up. With experience the Society must be able to hit at a proper kind of topics and subjects. Then by occasionally inviting outsiders the Society had the advantage of people giving discourses to them, people who have had experience of life and people who would therefore impart into Society the larger air of public life. In this special case the lecturer was not so much of an outsider and possibly also the subject was not so much an outside subject. But he would make it as little of the College lecture as he would.

Beginning with the earliest writer he would speak of Chaucer. Chaucer was not such a difficult writer as he supposed to be. He would refer to two or three characters in Chaucer. There is Knight, his favourite character. He distinguished himself in the European campaigns of the day, he was a model knight, and he was supposed to be never indulging in any kind of vulgar or abusive language. The story he narrated was the praise of Canterbury Tales and if a prize was to be awarded he was to get one. Scholar is another favourite character. The story he narrated was a tender and a pathetic one. Parson is another famous character in Chaucer and the trace of Parson's character was found in Goldsmith's *Vicar*.

The lecturer then dwelt upon Chaucer having been a man of affairs and he distinguished himself in various capacities and that his knowledge of affairs was visible in his writings.

Proceeding to Spencer, the lecturer said that he was a man conversant with affairs. He was Secretary to Lord Grey.

He would refer particularly to the 5th canto of the *Fairy Queen*, where they had the idealised picture of this Lord Grey. He was no doubt unsuccessful in pacifying Ireland and to arrange the Irish affairs. The portrait was much more

individualised than Spencer's characters were generally.

Then the next writer must be Shakespeare and in Shakespeare he would mention Henry V. He won't repeat what he might have been saying in the College classes, but he would only refer to the business capacity of Shakespeare and his conversant with life, and also the fact that Henry was pre-eminently a man of action, and a man of resolute will. Proceeding next to Milton, the lecturer said, he would emphasise some points, i.e., he was the Latin Secretary to Cromwell, he was one who took active interest in the affairs of the Commonwealth and it was this Milton who was the author of *Paradise Lost*.

There was not very much to say in this connection with regard to Satan and Adam and though even here they might adopt the French critics' view, that Satan and his fellow devils represented a Parliamentary opposition and Adam was perhaps the Milton himself idealised. But the work of Milton, that would call special notice is *Sampson Agonistes*, which might be supposed to be an idealised kind of Milton's life.

The similarities between Milton and Sampson were many and striking. Both lived dedicated lives and both fell on evil days latterly and they suffered very much for the causes they worked for, and ultimately these causes triumphed and they showed themselves God's chosen instruments for the well-being of that country. Perhaps the minor writers of the times would also serve as an illustration. Cromwell was a man of simplicity and his devotion to duty deserved special mention; he was ready and willing to obey law.

The lecturer then referred to Wordsworth and particularly to his poems on the *Happy Warrior* and then he dwelt on the trace of Nelson's character that Wordsworth particularly admired. There was his devotion to knowledge, there was his willingness to learn from the painful experiences of life and to convert such painful experiences into elements of moral growth. There was the simplicity of Nelson's character, his devotion to duty. Then the next writer was Tennyson and Tennyson had the ideal of Englishmen.

Our Economic Problem in India.

Mr. S. K. Nair of Travancore delivered an eloquent lecture in the American College Hall, Madura, on the 2nd inst. on "Our Economic Problem in India," with Mr. W. M. Zumbro, Principal of the American College, in the chair. A fair gathering of gentlemen and

students was present. Mr. Nair in the course of his address said that there was no subject in India at the present time more important than the question of 'our economic problem'. The three fundamental things for the improvement of the economic condition of a country were land, labour and capital. India had enough land and cheap labour. There was also sufficient capital in India provided it could be brought about in a co-operative form. The colossal wealth of the nations of Germany, United States of America and Japan was entirely due to the co-operation of the people. Indians required that spirit of co-operation which would enable them to utilise the capital. The best way of solving the economic problem was the best way of improving the land which meant the improvement of agriculture. The Indian soil was much exhausted and it should be enriched by the application of suitable manures. After giving the advantages and utility of the human and cattle manure, he said that slight alteration in the implements of agriculture was necessary for the improvement of agriculture and pointed out the importance of the climax plough which had been lately introduced. In the matter of irrigation he said that new irrigation pumps and oil engines might be introduced at the places where scarcity of water was keenly felt. They should also pay particular attention to the live stock which could be greatly improved by careful breeding, feeding and housing. To effect all these improvements, money was required and if Agricultural Credit Banks were opened in large numbers and if money was lent to the ryots at cheap interest, he had no doubt that agriculture would greatly improve. The most important thing which if not attended to the economic problem could not be solved, was that the educated young men of the country should train themselves in the art of agriculture and take to themselves agriculture as an honourable occupation in life. The lecturer then spoke upon the industries allied to agriculture such as Horticulture, Poultry-farming. He said that India could not be a manufacturing country for a long time to come and hence more and more progress in agriculture would be more and more improvement in the economic condition of the country. He next dwelt upon the weaving industry, sugar industry and cottage industries such as preservation of fruits, salting vegetables, bamboo work. He concluded by exhorting the young men to train themselves in the various industries to start factories and thus practically improve the economic position of India.

What a School boy wants.

Under the auspices of the Hindu High School Literary Society, Triplicane, the inaugural lecture was delivered recently by Mr. J. C. Rollo, M. A., Principal of the Pachaiyappa's College, on "What a School boy wants," in the Singarachari Hall, Triplicane, when Dewan Bahadur L. A. Govindaraghava Aiyar presided.

Mr. J. C. Rollo delivered a very interesting lecture for about an hour. He said that every school boy had an instinct for creation. That was the instinct of an artist in any field—the poet, the musician and so on. Every artist had a desire to make and leave something definite behind him. Even so with a child who tried to create a building with his bricks. The imagination of the child was working in the way of doing something himself. A good deal of aspiration and restlessness of boys was due to their faculty for creation. How to use that latent faculty for creation? They should try to create for themselves everything that was said to them. It was not sufficient if they had the things said and done in their intellectual tablet. They should make every moral and precept their own by acting it. So much for creating things that they were told.

Next they must create themselves. No one else could even attempt to do that. Man could almost make anything of himself. Self development and self creation was possible in the case of any human being. The mere acquisition of facts was quite useless unless it be to effect a particular action. Geography was a definitely useful scientific study. There was nothing superior to History in intellectual training, because they had human interest in the careers of great men which would rouse them up. The study of history had the quality of purifying souls and had the wisdom giving effect upon their nature.

Then came self creation in a moral and emotional sense. Whenever they had a task to perform they should kindle themselves and rejoice in it. Such a thing would form self-control, and would give efficiency and self-reliance. Hardly any of them would get an employment in after-life which would be congenial to him. It was so with any profession in life. Lawyer's profession was a noble profession. It afforded them many an opportunity for sympathy and help. But sometimes lawyers would have to spend sleepless nights. When there was necessity to get up a case in a certain time and when there was the most horrible compulsion to do the work, there

was an absolutely intellectual agony. A successful lawyer had to work abominably hard, too hard for a man. It was so with other professions equally noble. He would some day lecture to them on the sportingspirit which was the glorious mother of self-devotion and fair play. The feeling of boys were trained, guided and enlightened. The Indian boys were ready to respond to the teacher whom they liked. Their sympathy went out very quickly to any poetic expression of hope or of resolution. They were ready for poetic training. The function of poetry was to inspire feeling and first to last, boys should be taught to feel poetry.

Muslim Education in the Punjab.

His Honour the Lieutenant-Governor of the Punjab, in laying the foundation-stone of the Maynard Islamia Hotel, Agnew Hall and Renouf Library at Rawalpindi on 2nd August, made an interesting speech in the course of which he said :

In your address the history of higher Mahomedan education has been briefly described. And it has been rightly pointed out that the development of Western education among the Mahomedan community is due mainly to the efforts of the great Sir Syed Ahmad. No people at a critical time of their history ever had a wiser leader than the Mahomedan community had in Sir Syed and no Government ever had a sounder or more trusted adviser.

I am, therefore, particularly glad of your assurance that you regard the progress of the national interest of your community as inseparably linked with the permanence of British rule. That is the ideal which Sir Syed laid down and I am glad to see that the community is still pursuing his high ideals not only in politics and in religion, but also in education. Gentlemen, it has been aptly pointed out to-day that Sir Syed's plant has borne fruit indeed and good fruit, but the produce is still insufficient for the growing needs and the growing demands of your community. Hence the Mahomedan community of Rawalpindi which, though numerically great, is not richly endowed with worthy goods, has come forward to ask the assistance and the co-operation of Government. That assistance I can assure you, will be readily forthcoming. The policy of Government in these matters is a policy of equal opportunities to all the communities who are the subjects of Government. It is not the policy of Government to favour one community at the expense of another. I am sure your community

does not desire any special favours at the expense of others, but you desire and you are entitled to receive consideration according to your circumstances.

The attitude of Government towards the various communities is rather like the treatment which a wise father extends to his children. A father may have many sons. One of them may be forward and well developed, quick at his books and may therefore require no special treatment and be able to look after himself. Another son may be younger or may have started his education late or may be a little slow at his books. The wise father looking to the interests of both of them says that the latter requires a little special assistance. Therefore he will arrange for a tutor to give him teaching out of school hours and to help him over his difficulties so that he may in time catch up his elder brother. That is not a policy of favouritism. It is a policy of wise discrimination based on the respective needs of the different members of the same family. I do not think any one of you will dispute the description of the various communities in India being members of one and the same family of which Government is the head. Government is, therefore, quite ready to co-operate with the leaders of your community in placing your educational institutions on a sounder and better basis. That policy has been very clearly enunciated in the recent circular to which you have referred as the Magna Charta of Mahomedan education. In that circular the objects and aims of Government have been very clearly defined and the responsibilities of the Mahomedan community have also been very clearly stated. It is for you to rise to those responsibilities, and if you do so, you may rest assured that Government will perform its share. I have the circular before me and among the definite objects which Government has put forward, the first is the improvement of the existing institutions for Mahomedans i.e., Islamia College at Lahore and of the Islamia High Schools. Another object put forward is the maintenance of hostels for Mahomedans under private management with religious teaching. Well, gentlemen, this institution will fulfill, I am glad to say, both these objects. It aims at an improvement of the existing Islamia school and, at the same time, it provides for the maintenance of a hostel for Mahomedans under private management associated with religious teaching as well. It is therefore a great pleasure to the Punjab Government to promise a donation of Rs. 28,000 towards the building fund on condition that a sum equal to half of the Rs. 14,000 will be provided by

the Mahomedan community. That condition, I understand, has not yet been fulfilled but I trust that the generosity and the public spirit of the leading Mahomedans, many of whom I see here to-day, will very speedily supply the deficiency and that you will soon be able to come forward and say that "we have provided our Rs. 14,000 we shall be very glad of the Rs. 28,000 placed at our disposal." If your community is able to raise a still larger sum than Rs. 14,000 I think I can assure you that Government will within reasonable limits also increase its donation. The policy of Government in these matters, I need not assure you, is not one of doles; it is one of assistance. Government will supplement the efforts of local associations and communities, but it depends on each body to show that it has made due efforts and that its members have done what is in their power. They can then come forward and ask Government to supplement their action.

In your address you have suggested a method by which funds for the development of Mahomedan education might easily be secured, viz., that a special cess be raised from the Mahomedan members of the community who pay land revenue in addition to the land revenue, the proceeds of this cess being devoted to Mahomedan education. The suggestion is worthy of consideration and when put forward will receive it. Probably the only way in which the proposal could be entertained would be for the District Board to represent that the existing cess which is still below the limit which the District Board could levy for public purposes should be raised to some point within that limit, and that the additional amount so realised be distributed between the different communities, i.e., Hindu and Sikh landowners as well as the Mahomedans, for the benefit of their respective educational institutions. Put in that way without committing myself to any promise, I can say that the proposal will receive due consideration from Government.

I have explained to you briefly the policy of Government in regard to Mahomedan education. At the present moment a circular is issuing on the subject from the Punjab Government. It asks for the co-operation of the various Mahomedan associations and it invites their opinion as to the best method of realising the policy which Government has now laid down. I trust that when that letter reaches you, Government will be put in possession of many valuable opinions which will enable it to co-operate with the community in removing the stigma that the Mahomedan community is the most backward in education of all the

communities in the Province. The statistics of Mahomedan education in the Rawalpindi Division which have been quoted in the address just read out are very significant, and I am afraid, are rather depressing. But now that the community has awakened to a sense of its obligations, and that Government is willing to assist the community in developing its educational institutions, I trust that before many years this reproach will be removed. The present institution is one of the indications of that co-operation, and I simply give the promoters of this undertaking a word of friendly advice, that is that just at first you should not attempt to do too much, and that you should cut your coat according to your measure by keeping your scheme within the resources at your disposal.

(FOREIGN.)

Vernacular Universities.

Sir Theodore Morison, a member of the Council of India and of the Public Services Commission, delivered a remarkable address on July 8 at India House in support of the proposition that the vernaculars should be the medium of instruction in the Indian universities, writes the London correspondent of the *Manchester Guardian*. A large audience of Indian students assembled, several of whom in the subsequent discussion made appreciative references to the lecturer's notable work as Principal of the Mahomedan College of Aligarh. Sir Theodore declared that we must work towards the creation of universities in India imparting their knowledge in the vernacular. English education had been an enormous boon to India, and Western ideas had produced a beneficent direction of Indian thought. But this revolution might have been more general and useful if ideas had been spread in the vernaculars. The main disadvantage of the system of instruction in English was that it kept the Indian vernaculars poorer and unenriched by the thought and learning of Indians who are making large contributions to the thought of the world. The value of their work did not pass to the vernacular-speaking peoples. Then the student was hampered by the task of reproducing his ideas afresh after learning them in English, and words have a genius of their own which frequently cannot be recovered in another tongue. The continuance of the present bilingual system in India was undesirable, and we must seek in the universities to enrich, enlarge, and expand the vernaculars so that they may become an adequate medium for the expression of Indian thought and emotion.

Students in Germany.

In the year 1893, the number of students attending the Universities of Germany amounted, all told, to 27,000. Ten years later the number had increased to 35,000, but shortly afterwards an enormous addition took place, so that in the course of a further decade the number of German students attending the various seats of learning in the Fatherland had nearly doubled itself. In the winter term 1912 to 1913, there were 58,925 students matriculated at the twenty-one German Universities, and if we add to this number 3,750 men and 1,722 women who were not matriculated, but who were attending the lectures as guests, then we have a grand total of 64,337 persons attending the various German Universities during the term in question. But the summer term of 1913, witnessed a still greater increase in numbers, the number of regular students amounting to 60,350, and the entire number of ladies and gentlemen attending the courses, including those who had not regularly matriculated, amounted to 64,462. This great increase in the number of German students may, writes a Berlin correspondent to a contemporary, be attributed to various causes. In the first place, the increase in the population of Germany has naturally created a vast number of positions to be filled; more schoolmasters, judges and barristers are called for, and there is also a greater demand for doctors, chemists, etc. Further more, the vastly improved financial position of the entire country and the higher existing standard of culture have caused great numbers of the middle, and even of the lower classes to strive for the advantages of a University education. There are also two other factors which must not be forgotten: the increasing number of foreigners attending German Universities, and the fact that women students are now admitted. In the year 1872, the German Universities were visited by about 800 foreigners; at the present moment, the number of these non-German students must amount to some 5,000. With regard to lady students, there were about 1,108 of them attending German Universities in the year 1908, but the winter term 1912 to 1913 could boast of 3,213. The number of students is still steadily increasing, but not with such leaps and bounds as during the period already mentioned.

Law Teaching for the Citizen.

The retiring President (Sir John Macdonell, C.B.), of the Society of Public Teachers of Law, delivered an address, at the annual meeting of

the Society held on July 4, at the London School of Economics.

Sir John Macdonell asked his hearers to consider two questions. Whom were they to teach, and what were they to teach? The public teachers of the law did not, as it seemed to him, always put their claim sufficiently high. They had too much abandoned a large region to others, who if not trespassers, had only a bare possessory title—certainly had no prescriptive rights. The average citizen knew nothing except what he picked up from miscellaneous reading of law or its history; nothing of the principles discernible in all systems of law; nothing of its chief rules which embodied well-tried ethical truths; nothing of that sense of continuity to be imparted by a study of law as by nothing else. What wonder that there was often a kind of estrangement or alienation between the bulk of men and the administration of law. The study of law was once deemed in this country an essential part of a liberal education. Locke, who for more than a century dominated opinion as to education, argued at great length for this. "It will be strange to suppose that an English gentleman should be ignorant of the law of his country." What Locke supposed to be "strange" is to-day fact. Yet could any system of liberal education for the intelligent citizen be complete which left out law? The President indicated some of the many classes other than lawyers which might profit by such instruction; for example, future public officials and administrators, legislators, some men of letters, and the large and powerful, if indefinite, class, journalists, no doubt a vague term but sometimes applied by those who could not write to those who could as if a term of opprobrium.

There was one obstacle, the prevalence of something like distrust of jurisprudence having any thing to teach of real value to the ordinary citizen, which was the burden of so much litigation. Professor Radbruch had collected examples of the hard sayings by men of eminence as to the worthlessness of jurisprudence. Heine's description of the Corpus Juris as the Devil's Bible was but one example of many. Even the successful advocate or solicitor rarely thoroughly believed in the value of scientific teaching of law. The eloquent speeches of Lord Westbury and Selborne and Lord Russell in praise of legal education must have prompted in many minds the question, "Did you rise to professional eminence by the means which you recommend to others?" To teach the ordinary citizen you must

satisfy his thirst for reality—what a German jurist called *Wirklichkeitshunger*—put life into what often seemed to so many so much dead matter. The public teachers of law might one day have to combat the endeavour to expel it wholly from the curriculum of liberal studies. They would pass through a crisis and resist the enemies with more success if they heightened their claims and enlarged the bounds of their science. This was not a question of the knowledge to be got by practising in Court. The great teachers or expositors of law were not experienced practitioners, but those who combined the scientific spirit with discipline and imagination working in an atmosphere of knowledge; of whom there were three supreme examples—Montesquieu, Blackstone, and Ihering. If they were to convince the ordinary citizen that they had a message well worth listening to—if in the struggle, becoming ever keener, of competing studies theirs was to hold its own. "Back to Blackstone," with his culture, his wide outlook, his good sense and his grip on the facts of life might be sound advice.

Moslem Education.

In introducing the Indian Budget in the House of Commons Mr. Montagu referred to his visit to India and his speech concerning education in India is interesting.

They realize that they have too long neglected the educational opportunities Government has offered them. The fact that some most eminent Mussalmans occupy high places in India must convince them that there is no discrimination against Islam.

All educated Indians must recognize that it would be disastrous if divisions of population due to religious and historical causes, were to coincide permanently with a difference of intellectual level, and if the important Mussalman community were allowed to remain outside the influences of the forces moulding the India of the future.

We may say that arrangements which the Local Government can make for the encouragement of Mussalman pupils in scholarships and special courses will be welcomed by the best elements in other communities.

DACCA UNIVERSITY SCHEME.

Mr. Montagu referred to the proposed new University at Dacca and the opening of a most important chapter in the higher education of India, with a residential system which Government contemplated as a model for New Univer-

sities in India. He paid a tribute to the private enterprise in teaching in India, especially the splendid work of Missionaries. He referred to the Biscoe School at Srinagar, the Anglo-Vedic Arya Samaj College at Madras, the Oxford and Cambridge Hostel at Allahabad, St. Xavier's College in Bombay, and the criminal tribes. He emphasized the need for personal influence in and the inadequacy of text-book cramming.

He alluded to the education Resolution and said: "Well we have contemplated the Great Central Research Institute in India for equipping Indian students for original work in oriental philosophy, and have a great Oriental School in London, then we may hope that we have done something to remove the reproach that we lag far behind France and Germany in our interest for Asiatic culture."

THE UNIVERSITIES.

BOMBAY UNIVERSITY.

The proposals of the Syndicate of the University of Bombay in regard to the utilisation of the recurring and non-recurring grants given by the Government of India have now been published. The Syndicate first referred the matter to a Committee which recommended the following measures:—(1) Courses of lectures by eminent Professors of British Universities, who would visit India for this purpose; (2) Inter-Collegiate lectures to be delivered in the main by members of the staffs of the Colleges of the Presidency and to be paid for by the University, the appointments being temporary; (3) University Professors holding permanent appointments. The Committee, however, recommended that such permanent appointments should be postponed till the Expert-Adviser had made his report. The proposals of the Committee were accepted by the Syndicate, approved by the Senate on September 30th, 1912, and submitted to Government. The Government of India approved provisionally this triple scheme, but they suggested that the inter-collegiate lecturers should hold permanent appointments and they reversed the amounts allotted by the Senate to the lecturers from Europe and India respectively. The Syndicate have now reconsidered the scheme and have laid down certain principles by which they should be guided. They consider that for the promotion of post-graduate study three classes of teachers are required. First come Professors of distinction holding

permanent appointments, who would carry out original research, train students and lecture to them and give an indication of their work to the public. They shall have to be highly paid and be given ample leisure, and they will be expert advisers of the University in all matters connected with their subjects. Secondly, there will be Readers to deliver courses of lectures on the special branches of learning in which they are interested with a view to the assistance of students entering upon research work or conducting special studies. These lecturers would be selected from distinguished scholars in Europe. They would be requested, in selecting the subject of their lectures, to have regard to the nature of the post-B.A. Course and to publish beforehand a synopsis of the Course. They would be expected to deliver not less than 24 lectures and also to undertake some direct supervision of students' work in the period during which the Course lasted. Such supervision might mean a personal interview once a week with students and advice as to their methods of study. Only genuine post-graduate students should have a claim to such help from the Readers. Lastly, there will be lecturers, appointed by the Syndicate who will give systematic instruction to M.A. students and supervise their work. These lecturers would be generally though not as a rule, drawn from College Professors. The Syndicate, however, propose to confine themselves in the next year to the second and third parts of the scheme outlined above, in view of the limited funds at their disposal. The time in which these lecturers will be delivered will be the monsoon term of 1914 and the place will be either Bombay or Poona according to the number of students that come within the scheme. In regard to the appointment of Readers, the Syndicate, it is proposed, will apply to such bodies as the Universities Bureau of the British Empire and advertise the places in London papers, and after choosing the persons, request the India Office to engage them. Each Reader is proposed to be given Rs. 4,000 for a course of lectures, all the expenses to be borne by him. Each lecturer will get, for one course of not less than 24 lectures, a sum of Rs. 400, which may be supplemented by fees paid by students. The subjects chosen by the Syndicate are Oriental classical languages, preference being given to Sanskrit and Persian, general modern history and Indian history, sociology and economics and philosophy. Three gentlemen distinguished for scholarship will be invited from Europe to give as Readers of this University, courses of lectures respectively, (i) in an Oriental Language and Literature (pre-

ferably Sanskrit); (ii) Modern (including Indian) History; (iii) Sociology (including Economics). The courses will, in each case, consist of not less than 24 lectures. The University will provide three distinct courses of lectures in each of the following five branches of the M.A. Course: (i) Oriental Classical Language, Sanskrit; (ii) Oriental Classical Language, Persian; (iii) History; (iv) Economics; (v) Philosophy. These subjects are the same as those proposed for the Readers, with the addition of Philosophy, so that M.A. students who attend the Courses of both Readers and Lecturers will get from three to seven Courses directly on or connected with the branch they have selected for study: in addition they will have advice and direction from as many teachers of ability.

University Teaching.

EXPERT ADVISER FOR BOMBAY.

A meeting of the Senate of the Bombay University was held recently, the Hon. Mr. Justice Heaton, the Vice-Chancellor, presiding. The only item of importance on the agenda was the appointment of an expert adviser on University teaching. It may be remembered that a Committee under the Chairmanship of Lord Sydenham was appointed to recommend an expert adviser, and recently Lord Sydenham in a message recommended the appointment of Sir Alfred Hopkinson for a period of six months on an honorarium of £1,000.

Principal A. L. Covertton, moved, as recommended by the Syndicate: That the Senate approves of the appointment of Sir Alfred Hopkinson, K.C.M.A., LL.B., B.C.L., Vice-Chancellor of the Victoria University of Manchester, as expert adviser on University teaching on the terms mentioned in the message from Lord Sydenham quoted in the telegram from the Government of India, Department of Education, to the Secretary to the Government of Bombay, Educational Department, dated the 25th June 1913. Dr. Robertson seconded the proposition which was put to the vote and carried.

CALCUTTA UNIVERSITY.

A Gift.

Dr. Rash Behari Ghose has made a magnificent gift of Rupees 10 lakhs to the Calcutta University for scholarships and studentships in connection with the University College of Science. All praise to Dr. Ghose.

Chair of Economics.

The University of Calcutta has offered the Minto Chair of Economics to Mr. C. Findlay Shirras, a native of Aberdeen. He is the eldest

son of Mr. G. F. Shirras, Aberdeen, and was educated at Gordon's College, Aberdeen University, and London. At Aberdeen University, he was first prizeman in political science, second prizeman in the graduation class of political economy, and first prizeman in the honours political economy class. He was senior student in economics at Wrens, London, and at the Indian and Colonial Civil Service Examination did well in that department. In October, 1908, for original work in labour economics, he was elected a Fellow of the Royal Economic Society. In 1909, he was appointed Professor of Economics at Dacca College while a year later he was appointed to the Government of India Prices Inquiry Committee, and placed on special duty in the Finance Department. Mr. Shirras is at present attached by the Government of India to the Board of Trade, Whitehall.

ALLAHABAD UNIVERSITY.

Applications from Private Candidates.

The Registrar has addressed the following communication to the Director of Public Instruction, Principals of affiliated Colleges, Headmasters of recognised schools, and Inspectors of Schools.—

As there seems to be some misapprehension in regard to this office Circulars Nos. 9 and 13 of 1911, the undersigned has the honour to reiterate the directions communicated in the aforesaid Circulars, and to ask that they may be strictly adhered to.

2. The Meetings of the Syndicate and the Senate in the month of January being no longer mandatory, all applications for permission to appear at an examination other than the Matriculation examination should reach this office by the end of October each year. Applications which are not received in this office by the end of October will not be considered. All intending applicants should be so informed.

3. Applications from candidates asking for permission to appear at the Matriculation examination as private candidates, should reach the University office not less than six months before the date fixed for the commencement of the next Matriculation examination. All applications that are not received on or before this date, cannot be entertained.

4. It has been ruled by the Syndicate that candidates for the M.A. Final (not Previous), who have studied at a College for two years and failed should be permitted to appear at future examinations for the degree of M.A. without being required to attend further lectures, pro-

vided that the Principal of their College recommends their application. The same principle should be applied to persons who have been allowed to appear as Private candidates for the M.A. Final as Teachers. This, however, does not exempt such would-be private candidates, i.e., candidates, who would appear either as ex-students of a college or as teachers, from applying, as usual, for the grace of the Senate, under section 19 of the Indian Universities Act of 1904.

PUNJAB UNIVERSITY.

Hon. Mr. Shadilal Re-elected.

The Hon'ble Mr. Shadilal has been re-elected to the Council by the members of the Senate and Honorary Fellows of the Punjab University.

CAMBRIDGE UNIVERSITY.

The Acton Library.

The establishment of the Acton Library at the west end of Scott's building in the Cambridge University Library has been completed at a cost of nearly £9,000. The library was offered to the University and accepted by them in 1902 by Mr. John Morley (now Viscount Morley), to whom it had been bequeathed by Lord Acton, formerly Regius Professor of Modern History in the University. In the letter in which the offer was made, Mr. Morley described the library as 'not one of those noble and miscellaneous accumulations that have been gathered by the chances of time and taste in colleges and other places of old foundation, but 'collected by Lord Acton to be the material for a history of liberty, the emancipation of conscience from power, and the gradual substitution of freedom for force in the government of men.' The Acton Library contains some sixty or seventy thousand volumes of books chiefly historical, of which the main body is understood to have been acquired by the late Lord Acton between the years 1854 and 1884. The transfer of the library to Cambridge was no light matter, as the books weighed no less than 400 tons. All this mass of literature has been arranged and catalogued, a special staff having been employed for the purpose. Metal-framed cases were specially designed and made for the accommodation of the books. The Library Committee have issued a report putting on record how the mammoth work was undertaken and accomplished, and they are now asking for a sum of about £1,750 to enable them to prepare and publish a separate catalogue. Not till this need is met, they declare, 'will the history of the splendid gift of the Acton Library have found its fitting consummation.'

TECHNICAL EDUCATION.

TYPEWRITER TOPICS.

REMINGTON NOTES

In the publishing of this issue the Remington Typewriter Co. have gotten out a most excellent number. The cover is a Fourth of July one, showing the American Eagle and the Liberty Bell and the great Remington seal.

This issue we find is very helpful and interesting to stenographers, and we call particular attention to the article by Miss Mary E. Orr, entitled "The Gospel of Work," and also to the analysis of last year's Remington employment department figures. An article headed the "Wonder City" and topped by a wonderful picture of the Panama Pacific Exposition is another feature of this issue. Good pictures of C. Latham Sholes and his daughter are produced in connection with an article entitled "Remembrances of the Early Days."

THE VICTOR TYPEWRITER PLANT IN NEW YORK.

The basement contains the new power plant, which generates electricity for the use of power as well as light; the equipment is of the very latest and most modern make, the power being transmitted to motors on each floor.

The street floor is not yet equipped, but the second floor is equipped with the latest and most modern milling and drilling machines obtainable at the present time.

The third floor, where the offices were previously located, is crowded full of punch presses that are everlastingly busy punching out the parts that are later to be assembled.

The fourth floor is devoted entirely to the polishing, plating and automatic screw machines. About two-thirds of this floor is covered by the most modern and up-to-date screw machines made.

The fifth floor is devoted to the offices, shipping department and stock room. In the stock room, especially, are many modern but simple devices for keeping stock in order and for inspecting same, which convinces us, beyond a doubt, of the great care the Victor Company takes of the finished product before it goes to the assembling room. Each part is so inspected that no imperfect pieces will go into the Victor typewriter.

The sixth floor is another great revelation as on this floor the japanning room, which in most other factories is rather an unclean place owing to the character of the work which of necessity

must be done, is, owing to the modern equipment of the Victor Company in this respect, immaculately clean. On this floor is also the type-making department, on which is one of the very latest models of machines for making type.

The next floor is a well equipped assembling room. Everything in it is neat and in order and the work laid out in a way that shows that great care and thought has been put forth in the equipment of this floor for the assembling of the Victor typewriter.

TECHNOLOGICAL EDUCATION IN BENGAL.

A Committee was appointed by the Government of Bengal in January 1912 to consider various questions connected with Technological Education generally and to advise on the desirability of creating Technological Institute in Calcutta. The Committee duly submitted its report which was subsequently examined by another committee of experts who have worked out a detailed scheme for the establishment of the proposed institute. In accordance with the promise made by the Government the reports of the two committees are now published for general information. Copies can be obtained at the Bengal Secretariat Book Depot, Writers' Buildings, Calcutta, for annas 10 and Rupee 1 respectively. The Governor in Council will take the reports into consideration in October 1913, and will be glad to receive before that date any criticisms or comments which may be offered on the subject of the proposed scheme. All such communications should be addressed to the Secretary to the Government of Bengal in the General Department.

INSTITUTE FOR CALCUTTA.

A report by the Hon. Mr. R. N. Nathan, Mr. G. W. Küchler, and Mr. W. H. Everett, Superintendent of Industries and Inspector of Technical Institutions, Bengal, on a Technological Institute for Calcutta has just been issued. The report suggests that the Imperial Secretariat and Government of India Press would make an admirable Technological Institute. It estimates the capital expenditure involved in the scheme at more than Rs. 10 lakhs, and the net annual expenditure at Rs. 2,93,000.

SYDENHAM COLLEGE OF COMMERCE, BOMBAY.

The staff of the proposed Sydenham College of Commerce, Bombay, will be a Principal on £900 per annum, a Professor on £700 per annum, and two lecturers on Rs. 300—500 per mensem

each. The Principal and Professor will be appointed in England and the lecturers will be qualified Indians. The College scheme has obtained the financial support of wealthy merchants, but the institution will be entirely under Government control.

SUCCESS OF INDIAN STUDENTS.

The results of the City & Guilds of London Institute Examinations, held in the Victoria Jubilee Technical Institute, Byculla, Bombay, in April 1913, have been received.

Thirty-two students of the Institute entered for the Cotton Spinning Examination of whom 27 or 84 o/o were successful; viz: 9 in Grade I, 12 in Grade II, 2 in Final Section A, and 4 in Final Section B.

Twenty-three students of the Institute entered for the Cotton Weaving Examination of whom 16 or 69 o/o were successful; viz: 12 in Grade I, 3 in Grade II, and 1 in Final Section B.

Five students of the Institute who entered for the Cotton Dyeing Examination were all successful. Twenty students of the Institute entered for the Mechanical Engineering Examination of whom 14 or 70 o/o were successful; viz: 11 in Grade I, and 3 in Grade II. Forty-five students of the Institute entered for the Electrical Engineering Examination of whom 30 or 67 o/o were successful; viz: 15 in Grade I, 7 in Grade II, (Alternate Current) and 8 in Grade II, (Continuous Current). Twelve students of the Institute entered for the Motor Car Engineering of whom 4 or 33 o/o were successful.

	Appeared	Passed	
Telegraphy	32	26	i.e. 81 o/o
Telephony	5	5	
Electric Wiremen's Work	5	5	

These results compare very favourably with the results obtained in England, the papers and conditions of Examinations being the same in both cases.

The following is the list of successes forwarded from the authorities in London:—

CITY AND GUILDS OF LONDON INSTITUTE.

DEPARTMENT OF TECHNOLOGY.

TECHNOLOGICAL EXAMINATIONS 1913.

List of Candidates who have passed the examinations held at Bombay, Victoria Jubilee Technical Institute, Byculla.

Examination No.	Candidate's Name.	Subject of Examination.	Grade or section.	Class.
85	Bhosekar, K. D.	Soap Manufacture	Final	2
210	Rahotgi Jugalkishore	Silk Dyeing	Grade I	2
1	Gupte Yeshwant, V.	Cotton Dyeing	Grade I	2
174	Mande, M. B.	do. do.	do. I	1
181	Mistri Jamshed, P.	do. do.	do. I	2
171	Chobe, D. J.	do. do.	do. I	2
149	Row V. Hanumanta	do. do.	do. I	2
150	Row V. Hanumanta	Cotton and Linen Bleaching	Grade I	2
329	Desai Tatya, V.	do. do.	do. I	2
3	Sundram, N. M.	Cotton Spinning	Grade I	1
46	Sahar Phiroze, B.	do. do.	do. I	2
49	Kothwala Jamshed, D.	do. do.	do. I	2
138	Dikshit, D. C.	do. do.	do. I	2
175	Mande, M. B.	do. do.	do. I	1
187	Wajifdar Bapuji, D.	do. do.	do. I	2
203	Chudghar Kemchand, P.	do. do.	do. I	2
354	Madan Ruttonsha, E.	do. do.	do. I	2
44	Limaye Jagannath, R.	do. do.	do. I	2
45	Darukhanawalla Naoroji, A.	do. do.	do. I	1
54	Bilimoria Falee, R.	do. do.	do. I	2
125	Oke Sitaram, D.	do. do.	do. I	1
168	Wadia Ardesir, N.	do. do.	do. I	1
336	Elavia Jamshedji, A.	do. do.	do. I	1
338	Desai Dayalji, G.	do. do.	do. I	1
2	Gupte Yeshwant, V.	do. do.	do. II	1
40	Pitale Jayawant, H.	do. do.	do. II	2
50	Bhiwanker, Z. R.	Cotton Spinning	Grade II	1
55	Fozdar Gordandas, K.	do. do.	do. II	1
126	Oke Sitaram, D.	do. do.	do. II	1

Exami- nation No.	Candidate's Name.	Subject of Examina- tion.	Grade or section.	Class.
176	Mande, M. B.	Cotton Spinning	Grade II	1
178	Aggarwal Chet, R.	do. do.	do. II	1
204	Chudgar Khemchand, P.	do. do.	do. II	1
337	Elavia Jamsbedji, A.	do. do.	do. II	1
4	Sundram, N. M.	do. do.	do. II	1
45	Limaye Jagannath, R.	do. do.	do. II	1
52	Gonsalves Alexander	do. do.	do. II	1
164	Wadia Ardeshir, N.	do. do.	do. II	1
208	Joshi Kashinath, S.	do. do.	do. II	2
122	Meswani Vithaldas, M.	do. do.	Final Sec: A	2
195	Kapali Ratilal, M.	do. do.	do. Sec: A	1
119	Wesmaker Nathubhai, G.	do. do.	do. Sec: A	1
397	Elijah Hoel	do. do.	do. Sec: A	2
117	Wesmaker Nathubhai, G.	do. do.	do. Sec: B	1
196	Kapali Ratilal, M.	do. do.	do. Sec: B	1
123	Meswani Vithaldas, M.	do. do.	do. Sec: B	1
5	Sundram, N. M.	Cotton Weaving	Grade I	2
29	Nathani, N. J.	do. do.	do. I	1
51	Bhiwanker, N. R.	do. do.	do. I	2
56	Fozdar Gordbandas, K.	do. do.	do. I	1
60	Mogreli Phirozshaw, E.	do. do.	do. I	1
69	Modi Kesharimal, G.	do. do.	do. I	2
101	Ghella Shevji, H.	do. do.	do. I	2
151	Row V. Hanumanta	do. do.	do. I	1
172	Chobe, D. J.	do. do.	do. I	2
199	Dalal Parmanandas, V.	do. do.	do. I	2
371	Poonatar, M. K.	do. do.	do. I	2
393	Moses, J. M.	do. do.	do. I	1
396	Nathani Alaudin, J.	do. do.	do. I	1
6	Sundram, N. M.	do. do.	Grade II	2
118	Wesmaker Nathubhai, E.	do. do.	do. II	2
121	Meswani Vithaldas, M.	do. do.	do. II	2
198	Patel Harilal, M.	do. do.	Final Sec. B	2
327	Aiyer, P. V. V.	do. do.	do. Sec. B	2
391	Vartak Dinkar, V.	Telegraphy	Grade I	2
356	Jethmalani, K. L.	do. do.	do. I	2
141	Nair, K. V.	do. do.	do. I	2
378	Daru Manilal, S.	do. do.	do. I	2
353	Ramnathpur Subba, R.	do. do.	do. I	1
324	Monohar Vasudev, H.	do. do.	do. I	2
92	Sant Narayan, M.	do. do.	do. I	1
73	Dick Shavaksha, P.	do. do.	do. I	1
168	Bendali Rupaji, G.	do. do.	do. I	2
81	Abidin Sam	do. do.	do. I	1
90	Sarangpani, S. W.	do. do.	do. I	1
77	Vergis Cyril, M.	do. do.	do. I	2
89	Aras Vishwanath, B.	do. do.	do. I	1
209	Rao Narasipur, R.	do. do.	do. I	1
147	Shinde Sakharan, A.	do. do.	do. I	2
380	Kaiwar Tirumala, R. H.	do. do.	do. I	1
352	Setti K. S. Bhadra	do. do.	do. I	1
388	Thosar Chintaman, N.	do. do.	do. I	1
12	Mehta Koonverji, M.	do. do.	do. I	2
110	Thorvey, K. R.	do. do.	do. I	1
78	Marathe Gangadhar, H.	do. do.	do. I	2
157	Langer, R. N.	do. do.	do. I	2
111	Pillai M. Thanu	do. do.	do. I	2
105	Pillay, J. K. N.	do. do.	do. I	2
67	Rao, M. R. M.	do. do.	do. I	2
38	Alaudin, R.	do. do.	do. I	2

Exami- nation No.	Candidate's Name.	Subject of Examina- tion.	Grade or section.	Class.
323	Desai Bhalchandra, R.	Telegraphy	Grade I	1
165	Desai Lalubhai, D.	do.	do. I	1
86	Shahnis Dayaram, G.	do.	do. I	1
91	Sarangpani, S. W.	Telephony	do. I	2
93	Sant Narayan, M.	do.	do. I	2
325	Manohar Vasudev, H.	do.	do. I	2
360	Kumthekar, V. L.	do.	do. I	2
395	Parikh Jekisondas, M.	do.	do. I	2
11	Mehta Koonverji, M.	Electric Wiremen's Work	do. I	1
79	Sri-vastavai Radhikaprasad	do.	do. I	2
107	Pillay, J. M. L.	do.	do. I	2
127	Pillai, M. Thanu	do.	do. I	1
129	Thorvey, K. R.	do.	do. I	1
25	Lal Girdhari	Electrical Eng.	do. I	P
42	Motiwan, N. D.	do.	do. I	P
66	Din, M. S.	do.	do. I	P
68	Rao, M. R. M.	do.	do. I	P
76	Vergis Cyril, M.	do.	do. I	P
87	Shahani Dayaram, G.	do.	do. I	P
94	Dhavlé Krishnaji, B.	do.	do. I	P
100	Dadachanji Jamshedji, P.	do.	do. I	P
106	Pillay, J. M. N.	do.	do. I	P
140	Nair, K. V.	do.	do. I	P
120	Din Mohammad	do.	do. I	P
136	Kumthekar, R. L.	do.	do. I	P
361	Basavalingam Basavappa	do.	do. I	P
364	Sri-vastavai Radhikaprasad	do.	do. I	P
350	Ramnathpur Subba, R.	do.	do. I	P
24	Asaiwaid Eruch, H.	do. (A. C.)	do. II	P
75	Dick Shavaksha, P.	do. do.	do. II	P
38	Karpur Govind, R. B.	do. do.	do. II	P
185	Cantol Narandas, R.	do. do.	do. II	P
184	Daftary Ratilal, N.	do. do.	do. II	P
192	Bhatt, M. B.	do. do.	do. II	P
189	Parekh Jekisondas, M.	Electrical Eng: (Alternate Current).	do. II	P
372	Mondgal Nugehalli, N.	do. do.	do. II	P
382	Kaiwar Tirumala, R. H.	do. do.	do. II	P
20	Raghavan, N. C.	do. (Con. C.)	do. II	P
74	Dick Shavaksha, P.	do. do.	do. II	P
182	Cantol Narandas, R.	do. do.	do. II	P
190	Parekh, J. M.	do. do.	do. II	P
191	Bhatt Motiram, H.	do. do.	do. II	P
206	Rao Narasipur, R.	do. do.	do. II	P
355	Jethmalani, K. L.	do. do.	do. II	P
274	Mondgal Nugehalli, N.	do. do.	do. II	P
381	Kaiwar Tirumala, R. H.	do. do.	do. II	P
368	Datt Sarat, C.	Plumber's Work	do. I	P
330	Fewkes Henry, G.	do. do.	do. I	P
98	Pillai Ramaswami, P.	Mechanical Eng.	do. I	P
15	Choulapally, C. Ranga, R.	do. do.	do. I	P
28	Natesan, S.	do. do.	do. I	P
108	Naidu, N. S.	do. do.	do. I	P
128	Pillai, N. Tharu	do. do.	do. I	P
179	Aggarwal Chet Ram	do. do.	do. I	P
383	Driver Framroz, H.	do. do.	do. I	P
344	Narasimham, C. V.	do. do.	do. I	P
375	Narasimacharya, B. G.	do. do.	do. I	P
347	Rao, G. Ranga	do. do.	do. I	P

Exami- nation No.	Candidate's Name.	Subject of Examina- tion.	Grade or section.	Class.
161	Nathan, S. Magima ...	... Mechanical Eng.	... Grade I	... P
332	Murti, C. Rama ...	... do. do.	... do. I	... P
358	Rao C. Mallikharjuna ...	... do. do.	... do. I	... P
389	Iyengar, S. Narasimha ...	... do. do.	... do. II	... 2
99	Pillai Ramasawmi ...	... do. do.	... do. II	... 2
359	Rao, C. Mallikharjuna ...	... do. do.	... do. II	... 2
153	Pillai Ponnuswamy, G. ...	... Rail Carr: Buildings.	... do. I	... 2
335	Mistri Dhunjisha, T. ...	... Carpentry and Joinery.	... do. I	... P
167	Sataria, S. F. ...	... Briskworks	... do. I	... 2
326	Motiwalla Dadabhoi, R. ...	... Milling (Flour Mf.)	... Final	... 2
357	Rao, C. Mallikharjuna ...	... Motor Car Eng:	... Grade I	... P
346	Rao, G. Ranga ...	... do.	... do. I	... P
36	Joseph, C. J. ...	... do.	... do. I	... P
331	Murti, C. Rama ...	... do.	... do. II	... 2
166	Nadodwalla Jamsbed, L. ...	... do.	... do. II	... 1
22	Naiyadu, K. G. K. ...	... do.	... do. II	... 2

Reviews and Notices.

OUTLINES OF VICTORIAN LITERATURE, BY HUGH WALKER AND MRS. HUGH WALKER. (CAMBRIDGE UNIVERSITY PRESS). 3s. net.

Nothing is more striking in the recent tendencies of literary study than the special attention paid to modern epochs. The kinship that undoubtedly exists in a very intimate form, between a reader and the literature of the period which is almost contemporaneous with him, is receiving adequate recognition. The Literature of the Victorian Era may be expected to rouse greater interest in the student of to-day, than that of any other period. Mr. and Mrs. Walker have been successful in bringing out a very useful manual for the study of Victorian Literature. It does not profess to be anything more than the mere outlines of the subject, but we have no hesitation in saying it is enough for the average student at College, who has to specialise in that epoch. The division of authors according to the departments of literature connected with them is a great convenience, and the authors also deserve to be congratulated on the biographical interest they have been able to introduce into their treatment of literary history.

We may however be excused for expressing the feeling that there seems to be an occasional want of balance in the judgment of the authors. We are conscious of the influence exercised by German literature and thought on some writers of the Victorian Era, but we would certainly hesitate to say that 'it may be described as the era of German

influence.' Nor should we think of ranking Alexander Smith with Matthew Arnold, Edward Fitzgerald, Rossetti and Arthur Hugh Clough. It is doubtful if John Warren and Lord de Tabby deserve treatment in a manual of this description. James Antony Froude does not certainly deserve special praise for the accuracy of his research. We remember Frederic Harrison calling the historian a 'Charlatan' in his methods, but Mr. and Mrs. Hugh Walker would make out, he was the model of accuracy and precision. Such trivial imperfections apart, the book must prove a very valuable guide.

The lists of works given at the end of the treatment of the writers is a new feature, and they must be of great help, for cultivating a first-hand acquaintance with them.

SPELLING AND PUNCTUATION, BY H. SHOOSMITH, M. A. (UNIVERSITY TUTORIAL PRESS). 1s.

Educationists of the older generation in this country, have often bewailed the neglect of some of the fundamental needs of education in the pursuit of new methods. This small book on Spelling and Punctuation is quite opportune, as it serves to draw attention to things which do not seem to be receiving adequate treatment at the present day. The treatment of the subject is quite attractive, and the book must prove particularly useful to boys in the lower forms of our schools.

HENRY IV: PART I, EDITED BY A. J. F. COLLINS, M. A. (UNIVERSITY TUTORIAL PRESS). 2s.

We have often had the pleasure of drawing attention to the merits of the volumes in Tutorial Shakespeare Series. They seem just the kind of editions necessary for examinal purposes, and they also enjoy the merit of stimulating interest even in the laymen. The introduction is valuable as usual and the notes are correct and to the point, being ample at the same time. The arrangement of the matter is clear and analytical, and must therefore be easily remembered by the student.

BELL'S ENGLISH HISTORY SOURCE BOOKS: THE REFORMATION AND THE RENAISSANCE, BY F. W. BEWSHER, B.A.; IMPERIALISM AND MR. GLADSTONE, BY R. H. GRETTON. (GEORGE BELL AND SONS). 1s. net each.

Indian Universities have begun to recognise the need of introducing the study of History from original sources into the curriculum of the B. A. degree in History. The two volumes under review are admirably fitted for such a purpose, with regard to two such important periods in the History of England, as the *Reformation and the Renaissance and Imperialism and Mr. Gladstone*. Mr. Bewsher's collection is particularly valuable as he has made a very discriminating use of available sources. He has wisely indented upon Literature, and has included for instance sources like Skelton's *Why Come Ye Not to Court* for Cardinal Wolsey, and More's *Utopia* for some side reflections on the social and economic conditions of the period. *The Rutland Papers, Holinshed's Chronicles*, and the *Paston Letters* have also been availed of for information. Mr. R. H. Gretton seems however to go in for sources of not very great authority, and has also entirely neglected the help he may have received from the literature of the period dealt with by him, 1876-1887. Would not Alfred Austin, William Watson and Rudyard Kipling afford some valuable passages for an understanding of Imperialism, the Eastern Question and affairs in the Transvaal? Should the *Times* be the great oracle of the period on all subjects? It should certainly have been quite easy to mention the sources from which passages have been extracted in the contents. A mention of the authors and journals responsible for the passages, would seem to be necessary in the *Contents* page itself. We hope the omission will be rectified in the next edition.

XIX

THE GOSPEL OF ST. LUKE, EDITED BY REV. T. WALKER, M.A. AND REV. J. F. RICHARDS,

M.A. (UNIVERSITY TUTORIAL PRESS). 1s. 6d.

The study of English Literature cannot be complete without a thorough acquaintance with the Bible. The University Tutorial Press has shown its recognition of this invaluable principle in quite a practical manner, by the publication of this edition of the Gospel of St. Luke. The Introduction is very comprehensive, dealing with almost all aspects of Biblical scholarship. The large number of maps and illustrations must form a real aid to the understanding of the book.

LESSONS ON CHARACTER BUILDING, BY W. H. BALDWIN AND W. ROBSON. (THOMAS NELSON & SONS). 1s. 6d.

It is no exaggeration to say there is no subject receiving more attention at the present day in the world of Indian Education, than the building up of the character of children in schools. It has not been easy to find a very satisfactory solution to the complex problem. But Messrs. Baldwin and Robson deserve to be congratulated on the very acceptable manual they have produced. Its merits are many and we hope the following points will be enough to convince our readers of the success attained by the authors. The illustrations are culled from the most varied sources; the teachings are based on a universal basis and do not contain anything offensive to any particular religion; the presentation is very simple and vivid and therefore eminently suited to the elementary classes. When we consider the insuperable obstacles that exist in teaching morality through religion in this country, we trust an excellent manual like this, which proceeds on an entirely non-sectarian basis will command very wide support.

THE CITIZEN AND THE STATE (INDUSTRIAL AND SOCIAL LIFE AND THE EMPIRE), BY J. ST. LEO STRACHEY. (MACMILLAN & CO., LTD.). 1s. 6d.

The series of books in Messrs. Macmillan's *Citizen and the State* have attained to a very deserving reputation for their valuable matter, and attractive exposition of problems which are of the highest interest to every citizen. Mr. Strachey's book is quite up to the level of the other volumes in the series and no one will consider the Industrial and Social Life of the

Empire as a subject of less importance than the political privileges and responsibilities of the Empire. We confess to our keen sense of disappointment at the way in which the author has dealt with the problems relating to India. There is neither sympathy, nor insight displayed in the chapters on India. Some idea of his reactionary spirit can be gathered from his vehement opposition of the principle of increasing the Indian element in the administration of the country. The immediate result will be, in his opinion, absolute ruin and anarchy. We hope the publishers will have those chapters rewritten by a writer with real sympathy for India, when there may be a second edition of the book.

ELEMENTARY ECONOMICS, BY S. J. CHAPMAN, M.A. (LONGMANS, GREEN & CO.). 2s. net.

Mr. Chapman is eminently fitted for writing College manuals, for he has more than anything else, simplicity and clearness of exposition. The matter is arranged with great care and the manual will be found a very valuable introduction to the subject of Economics, to students of the History Branch of the B.A. Degree Examination. The manual is quite handy and very cheap, being priced only at 2s.

BELL'S CONTINUOUS READERS: A TALE OF TWO CITIES, EDITED BY W. M. SUTHERLAND; ALICE'S ADVENTURES IN WONDERLAND, BY ALICE WOODWARD. (GEORGE BELL & SONS). 9d.

Messrs. Bell & Sons have done very well in selecting two such popular favourites, for adaptation to school use. The stir and adventure of the *Tale of Two Cities* will command keen interest from children, and the poetry of childhood, dealt with so much sympathy in *Alice in Wonderland* must exercise similar fascination. The beautiful illustrations add charm to the books, but we are rather surprised to see the editors have not thought it worth their while, to preface the books with anything by way of Introduction.

DEW AND MILDEW, BY P. C. WREN, M.A. (LONGMANS GREEN & CO.). 6s.

We owe an apology to Messrs. Longmans Green & Co. for this long delay in noticing this volume of Indian Stories by Mr. Percival Wren. We wish however we had a favourable opinion of the book to offer. The stories have in them

an element of boisterous humour which is agreeable only in some places, the general effect being rather in bad taste. But what we are most seriously concerned with is the utter absence of sympathy with Indian life, which seems to form such a prominent feature of the book. It is a matter for regret that a member of the Indian Educational Service should give expression to such unfavourable sentiments about the Indian student. It looks as if he is anxious to tell the reader that the average Indian student is an anarchist, engaged in schemes of dacoity or bomb-throwing; and that in the intellectual sphere he is a contemptible wretch devoid of common sense and intelligence of any kind. The Member of Parliament who ventures to take an interest in Indian problems, is in Mr. Wren's opinion quite an undesirable being, judged by the ridicule poured upon Mr. Buggin, M.P. There is not a single Indian character with any loveable traces and there is thus not the remotest chance of its ever interesting Indians, or Anglo-Indians who have any affection for the land and people around them. The only soul of goodness is the Anglo-Indian educationist, Mr. Harris and the reader may be pardoned for drawing significant inferences from this circumstance. If Messrs. Longmans Green & Co. have any respect for the feelings of their numerous Indian constituents, they will probably consider in all seriousness, the advisability of withdrawing the volume from sale.

A VICTORIAN ANTHOLOGY FOR SCHOOLS, EDITED BY M. P. HANSEN, M.A., LL.B. (MACMILLAN & CO., LTD.). 1s. 6d.

Mr. Hansen's Victorian Anthology contains an admirable selection of pieces from the works of writers in the Victorian era. The selections display considerable taste, and are quite adequate in prose as well as in poetry. We are glad to see Tennyson represented by a large number of fine extracts. The passages from Ruskin's *Sesame and Lilies*, in praise of books are bound to kindle a genuine love of literature in students. The editor was very well advised again in including Morley's *Address on the Study of Literature*, and paragraphs from Frederic Harrison's *Choice of Books*, though they are somewhat above the standard of the High School. It must indeed be difficult to satisfy the tastes of all readers in the selection of passages, but on what grounds of literary merit can the editor defend the inclusion of passages from Thring, Cathberton, Lawson, and Kendall?

CHILDREN'S STORY-BOOKS. (MACMILLAN & CO. LTD.).

TALES FROM HAWTHORNE. 1s.

LITTLE WANDERLIN, ETC. 9d.

FAIRY TALES FROM FRANCE. 9d.

LITTLE RIDING HOOD. 6d.

TALES FROM GRIMM. 6d.

DONKEY SKIN, ETC. 6d.

FOUR WINDS FIRM, ETC. 1s.

We have great pleasure in recommending this series of books to the notice of English teachers of elementary schools in India. They are admirably suited for the purpose they aim at, affording pleasure and instruction to children. Nothing is more marked in the Indian mind, than the absence of a healthy delight in tales of mirth and adventure. The Indian boy is apt to become prematurely serious, and there cannot be a better corrective to this inherent weakness in him than the reading of books of this nature. The value of the books is considerably enhanced by the fine illustrations.

THE CHILDREN'S SHAKESPEARE, JULIUS CAESAR. (MACMILLAN & CO. LTD.) 4d.

Julius Caesar is the latest addition to Messrs. Macmillan's Series of Children's Shakespeare. The story is narrated as far as possible in Shakespeare's own words. The extracts from the play are linked together by the editor's own narration. There cannot be a better introduction to the study of Shakespeare in the original than books of this type.

MEDIAVAL ENGLAND—A FRAMEWORK OF ENGLISH HISTORY, 1066—1485, BY S. M. TOYNE, M.A. (PUBLISHED BY G. BELL AND SONS, LTD., LONDON.) 1s. net.

This handy volume is a boon to students preparing for the Matriculation and S. S. L. C. Examination as it will enable them to understand the correlation of facts. The author's aim as set forth in the preface is to enable a student to see at a glance the general trend of the period, and he never forgets his aim throughout. A summary of the salient points of each reign is given at the head of each chapter. Then the events are analysed and arranged chronologically, care being taken not to break the natural order. The most important feature of the book is that the latest

researches are embodied then and there. The appendices are really valuable as they give a short history of the political institutions of the present day. The test questions form a fitting close. The price is cheap considering the get-up for which Messrs. G. Bell and Sons deserve to be congratulated. We hope the author will cut short the number of details and introduce some suitable illustrations such as maps, coins, etc., in the next edition.

THE FIRST 5 VOLS. OF PIERS PLOWMAN HISTORIES, JUNIOR BOOKS FOR CHILDREN—GENERAL EDITOR: E. H. SPALDING, M.A. (PUBLISHED BY GEORGE PHILIP & SON, LTD., LONDON). Price 6s. 2d.

We welcome these beautiful volumes full of suitable, striking and coloured illustrations, and written on the concentric system in a very simple and charming style. The treatment of the subject is scientific, the historical tales are very interesting and are selected not only from the histories of many countries but also from the old English literature. Volumes 4 and 5 deal with the social history of England from the earliest times to the present day. We deplore the absence of such books in the vernaculars. They can be safely introduced as supplementary readers in the forms of an incomplete secondary school. A careful study of these volumes by the pupils will not only stimulate interest in history but will enable students to understand the Realien of the English Language. The books are priced cheap and the get-up is excellent.

PUBLICATIONS RECEIVED.

Spelling and Punctuation, by H. Shcosworth, M.A. London: University Tutorial Press. 5d.

Gospel of St. Luke, by Rev. T. Walker, M.A. and Rev. J. F. Richards, M.A. London: University Tutorial Press. 1s. 6d.

Henry the Fourth, Part I, by A. J. F. Collins, M.A. (Oxon). London: University Tutorial Press. 2s.

Industrial and Social Life and the Empire, by J. St. Leo Strachey. London: Macmillan. 1s. 6d.

Annual Report of the Smithsonian Institution for 1910-11. Washington: Govt. Printing Office.

The Children's Classics, No. 22. 2½d. London: Macmillan.

Seipmann's French Series: *De La Terre, A La Lune*, Edited by Eugene Pullissier 2s. *Cinq Semaines en Ballon*, by Jules Verne, Edited by Eugene Pullissier, 2s. London: Macmillan.

Regional Geography of the World: Part II, Asia, Europe and British Isles (in Telugu) 6 As. Part III, America, Africa and Australia. (Telugu) 10 As. by M. Sitaram Rao, Headmaster, Viresalingam High School, Rajahmundry.

Social Programmes in the West, by C. R. Henderson, the Barrows Lecturer. Bombay: Macmillan. 9 As.

Report on Public Instruction in Mysore for 1911-12. Mysore: Govt. Press.

Composition from English Models, Book I, by Ernest J. Kenny, 1s.; Book II, by Ernest J. Kenny, 1s. 6d. London: Arnold.

Literary Selections from Newman, by a sister of Notre Dame. London: Longmans. 1s. 6d.

Father Gregory, by Percival C. Wren. London: Arnold. 3s. 6d.

Indian Educational Notes. MADRAS.

"The Children's Day Record."—The July *Vireka-chintamani* is a record number. It is the best children's Day Record in Tamil. Lord Hardinge's birthday is bound to become an abiding institution in India and it is an excellent idea of the Editor, in view of His Excellency's forthcoming visit to this Presidency to collect together in a record number all the standing information on the subject necessary to enlighten and interest the child-mind. It is truly "the Viceroy Memorial Edition" and deals with subjects closely connected with the Viceroy.

The Sourashtra High School Literary Society, Madura.—The inaugural meeting of the above Society for the year 1913-14 was held on the 1st August 1913 at 5-45 P.M. in the school premises under the presidency of Mr. A. Raja Ram Iyer, Principal, Madura College. Mr. A. Govindaraja Mudaliar, B.A., L.T., Headmaster of the School delivered the inaugural address on the "Uses of Literary and Debating Societies." There was a large attendance of teachers and students of the various institutions. Mr. Mudaliar, in the course of his eloquent address, pointed out to the students the distinction between cramming and learning by heart. He condemned the former and exhorted the students to cultivate the latter practice. The practice of getting by heart important

passages of prose and poetry should be cultivated by young men, if they wished to train themselves in the art of speaking or writing, and he quoted the names of eminent men of England, who encouraged this kind of practice, to substantiate his arguments. He also dwelt at length upon the advantages of Debating Societies as a training ground for public speaking. Mr. Raja Ram Iyer, in his concluding remarks, strongly supported the Lecturer and impressed on the audience the importance of learning by heart splendid passages from well-known standard authors and recommended the organisation of Tamil Societies in order to develop the Tamil literature. After the usual vote of thanks proposed by the Secretary in adequate expressions to the Chairman as well as the Lecturer, the meeting came to a close.

Teachers' Association, Mayavaram.—At a meeting of the Teachers' Association held on the 8th instant under the presidency of the Inspector, Mr. W. A. Hart, M.A., L.T., all the Primary School teachers of Mayavaram Range—about 200 all told—were assembled in the Municipal High School Hall to witness a number of well-arranged, neatly illustrated model lessons, some being dramatised. The Sub Assistant Inspector of Schools, Mr. L. Vencatasubbiah, B.A., L.T., made them so engrossing and practical, that the Inspector spoke highly about the utility of such lessons and the realistic way in which they were gone through. Mr. N. P. Krishnasami Iyer, B.A., L.T., the First Assistant of the M. H. School, on rising to propose a vote of thanks to the Chairman, spoke as follows:—

I have yet a pleasant duty to perform—a pleasant and an agreeable duty; in the absence of the Headmaster, the President of the Teachers' Association, his mantle naturally falls on my shoulders, his lieutenant, and happy am I that the function of proposing a vote of thanks to our worthy Chairman on this occasion devolves on me.

Before doing so, I wish to call our Chairman's attention to a few facts touching ourselves, as he is the guardian angel of our interests and pursuits.

I see before me a large assemblage of Primary school teachers of this Range, who have come from far-off places, at some expense and personal inconvenience, in obedience to a call of duty.

I regard them in more sense than one, as nation-builders; I do not mean that they are Cecil Rhodes and giants of that kind—but humble, honest workers in the field of education. Their trade is brain culture. They shape and mould the future statesmen and rulers, they make or mar the progress of humanity. They can elevate or depress the character of the coming generation.

Thus their function is very noble, nobler than that allotted to men in other walks of life. You know the expression, "The schoolmaster is abroad." What does it mean? To my mind, it means that he is the eye-opener of the coming generation, nations yet unborn, and into his custody humanity entrusts the upbringing of loyal and useful citizens.

When a fond parent, leading by the hand his young hopeful, meets you, the first and foremost request that he makes to you is, "Sir, here is my darling, the stay of my life, please see your way to open his eyes."

Such at least is believed to be the noble privilege and prerogative of these humble devotees in the temple of learning.

You know very well with what esteem and honour our ancients regarded the status of a Guru; why, the very Vedas, our Bible, cries at the top of its voice, "I bow to you, mother, my first God, I bow to you father, my second God, I bow to you, Guru, my third God."

Our Tamil literature abounds in maxims such as these, "Let my Guru's feet protect me," that is, whenever people undertake arduous tasks or risky business, they invoke the aid of the spirit of their Gurus.

Such was and is still believed to be the sacred calling of a schoolmaster. You have seen the picture now presented to you and now I call on you to look at the one that follows.

Bear with me awhile and survey the present status of this anciently respected people. They now go by the name of 'Poor schoolmaster'. Note the expression, gentlemen. It is full of significance. They are hailed with such epithets, because, more often than not, they are absolutely innocent of all the villainies and rascalities of the world; why, gentlemen, the schoolmaster, week in and week out, from year's end to year's end, are ever with unsophisticated innocent young Adams and Eves yet unsinned, naturally imbibe their innocence and gullibility. No wonder then, that worldly men of business seating themselves on the scientific elevation of £1,000 a year, treat the schoolmasters as a set of harmless folk—to be used by them sometimes as hideous-looking hobgoblins to scare away their naughty children.

Thus you see in the expression 'Poor schoolmaster' is lurking the inner idea of simple innocence and incapacity to do harm to others; add to this their poor and unremunerative salary—many of them are passing rich with Rs. 10 a month.

In this wicked and saucy world filthy lucre commands and compels respect; it is the long purse—the accumulated energy of some forgotten ancestor—rules mankind. Brain-force and heart culture counts for nothing. These must bow low before the demands of the belly, because of all kinds of rebellion, the rebellion of the belly is the worst, and when one cannot find the wherewithal to appease the torments of this Belly-God, he must bend his knee before these mighty tin-Gods of the purse. You are not unaware of the fact that "Fortune favours fools" as she is known to be proverbially blind.

Thus you see, though their function is holy and noble, their position in life is so low that Municipal Thoties compare favourably with them inasmuch as they are paid Rs. 10 for their work from morning 6 to 8 A.M.; after 8 A.M. they are free-lances, might go about squirrel-hunting to fill their stomach and basket-making to find their evening toddy; whereas

Primary schoolmasters have to work on Rs. 10 from morn to eve and be ever on their vigil for the surprise visits of Supervisors and Sub-Assistant Inspectors of Schools—who will not allow them to earn some extra pittance by way of private tuition even during their hours of well-earned repose and much needed rest.

My tale of woe, gentlemen, is at an end and if I am a little bit outspoken and unwise in my utterance, it is because of the justness of my cause—I know more than any other where the shoe pinches them.

You Sir, Mr. Chairman, we expect you to champion the right cause of these poor Primary schoolmasters and their avocation; we intend to use you as a lever to open the eye of the Director of Public Instruction and the Government and to make them see in the right and true perspective the poor status of this much neglected and often-forgotten Elementary school-masters.

Now, gentlemen, we cannot sufficiently thank our Chairman, for the patience he has shown and the willing ear he has lent to our cause and mission; I call on you all to sing in one chorus, in the right royal English style, the long life and prosperity of our worthy Inspector. (Hip, hip, hurrah!).

The Presidency College.—The report of Mr. E. W. Middlemast, Acting Principal, Presidency College, Madras, on the working of the college during 1912-13 discloses that the college was strengthened by the creation of two new appointments in the subordinate service during the year as Assistant Professors of Physics and Sanskrit. The numbers of students on the rolls in the first and second terms were 600 and 582 respectively compared with 583 and 577 in the previous year. There were as many as 38 M. A. students in the college. The total of 600 students which was reached during the year was, it is believed, the highest figure recorded for this college. There were 27 lady students. The distribution of students according to caste or race shows that Europeans and Eurasians were 27, Indian Christians (non-Panchamas) 13, Mohammadans 12, Brahmans 446 and non-Brahman Hindus 81. Another statement shows that students belonging to the richer classes were 44 in number, to the middle classes 502 and to the poorer classes 36. Out of the total number of 562, students whose parents or guardians were officials were 307 in number. Tanjore contributed as many as 101 students to the college, i.e., a little less than one-fifth of the total strength of the institution. The number of students taking up a language other than English has increased from 2 to 7 but the study of languages other than English is reported to be still unpopular. The college has again had a large amount of success in every subject in the Intermediate, B. A. degree and M. A. degree examinations, in which it presented candidates. In the degree examination sixteen students of the college were placed in the first class; and in Mathematics, Physics, Chemistry, Zoology, Mental and Moral Science and History, the college

students were first in the first class and two of them secured the rare distinction of a triple first. Seventeen University prizes were awarded to students of the college. The number of applications for admission on the strength of secondary school-leaving certificates was again in excess of the number of vacancies; out of 566 candidates for admission only 97 were admitted. It is said that the secondary school-leaving certificates of a large number of the applicants showed that they were not fit for a University course. While the receipts from fees and miscellaneous items amounted to Rs. 57,713, the charges amounted to Rs. 2,12,512. The games of hockey, football, cricket, lawn tennis and badminton were played during the year. One hundred and sixty-two students were living in the Victoria Hostel and the remaining 420 either with parents or guardians or in lodgings. The lodgings were inspected during the year by members of the college staff deputed for the purpose, and in only one or two cases were found unsuitable. The Principal has included in his report extracts from the reports of the professors on the working of their respective departments. The Director of Public Instruction on reviewing the Principal's report has come to the conclusion that the working of the college during the year and the results of the various University examinations were very satisfactory.

College of Engineering.—The Director of Public Instruction has submitted to Government proposals of the Principal, College of Engineering, for the distribution of marks consequent on the rearrangement of the College classes, and also the modifications necessary to bring the syllabuses up-to-date. The proposals have been approved by the Board of Visitors, and it is stated that the proportion of marks awarded in the College examination for practical work is smaller, in the rules as now proposed to be revised, than formerly. The Director adds that the proposed modifications in the syllabuses involve no radical changes. The Government have approved the modifications and the revised distribution of marks proposed by the Director of Public Instruction.

The North Malabar Teachers' Association.—The first meeting of the North Malabar Teachers' Association was held in the Brennen College Hall with Rev. C. A. Schener in the chair. Mr. Krishnan Nair, the College Principal, has been appointed President, Mr. K. K. Subramania Iyer, Head Master, Mission High School as Vice-President and G. Eshutachan as Secretary and Treasurer. The Inspector of Schools and Mr. Schener have been appointed Patrons. The Managing Committee consists of Messrs. Maller, Vaidianatha Iyer, M. Kanudinya and some others. This Association will be affiliated to the South India Teachers' Union. We wish the Association every success and hope similar Associations will spring up in South Canara and

South Malabar. All teachers who are in a position to understand the proceedings can become members.

The S. P. G. College, Trichinopoly.—The S. P. G. College secured the services of another clergyman to the staff of Professors of the College in the Rev. W. E. McFarlane, M.A., B. D. Mr. McFarlane comes from Dublin University.

Kumbakonam College.—From the report of Mr. J. A. Yates, Principal, on the working of the Kumbakonam College during 1912-13, we gather that the average number on the rolls and the average daily attendance were 179 and 162 respectively. 163 students were Brahmans, 10 were non-Brahman caste Hindus, 1 was an Indian Christian and 1 was a Muhammadan. The great majority of the students, as usual, belonged to the Tanjore district. Distributed according to wealth, 159 students were of the middle class, and 7 and 5 were of richer and poorer classes respectively. There were some improvements carried out in respect of accommodation and equipment. Although the construction of quarters for the Principal has been abandoned, the land acquired for this purpose has been ordered to be reserved as an additional recreation ground for the college or as a site for possible future extensions. The tutorial system continued to work well and the discipline of the college is reported to have been satisfactory. 35 candidates were examined for the Intermediate examination in Arts, of whom 20 passed with six in the first class. Eleven students gained distinction in English. For the B. A. degree examination 22 were examined in the English language division, of whom 12 passed with four in the second class. In the second language division 10 out of 10 passed in Sanskrit and 7 out of 11 in Tamil. After two years of inadequate provision for games the college is in a fair way to be equipped with as great a variety of games and as good a ground as any college in Southern India. It is reported that there is ample enthusiasm among the students and next year the Committee hope to organize this enthusiasm in a permanent form by grouping students and holding inter-group competitions. Mr. Yates is very enthusiastic in regard to the value of games, for he says in his report, "I do not think there is anything in College life that lends itself more to the development of character, or brings the staff and the students more together than games." The net expenditure of the College deducting receipts, amounted to Rs. 35,388-12-2, and the net cost per student was Rs. 197 against Rs. 175 in the previous year. The work done by the College Literary Society during the year was on the whole satisfactory. The Principal is inclined to think that the College work showed vitality and that the year was one of progress all round. The Director of Public Instruction in his review of the report congratulates the Principal and his staff on the continued efficiency displayed in the working of the College.

Government Grant.—The Government have sanctioned a grant of Rs. 3,927 towards the cost of improvement to the buildings of the Canara High School, Mangalore. Government have delegated to (1) the Superintendents: School of Arts and Reformatory School, Chingleput, the power to make appointments up to Rs. 30 per mensem and to inflict punishment on persons so appointed; (2) to the Superintendent of Industrial Education power to sanction furniture grants to industrial schools up to a limit of Rs. 50 and building grants up to Rs. 100; and (3) to the above said three Superintendents the power to grant temporary exemption from examination rules, general and special, and to employ unqualified candidates for a period not exceeding three months when the sanctioned pay of the appointment does not exceed Rs. 30 per mensem. Government have sanctioned out of the Imperial grant of Rs. 23 lakhs for Education provided in the Budget, an additional allotment of Rs. 22,200 for payment of grants to managers of recognised training institutions on account of stipends to students under training and have passed an order that a sum sufficient to meet this excess expenditure in 1914-15 should be reserved out of the non-recurring portion of the Imperial grant of Rs. 23 lakhs.

Study of Vernaculars.—Under the auspices of the Town Students' Literary Union, an open debate was held in the American High School Hall with Mr. K. R. Venkatarama Iyer, M.A., B.L., in the chair, the subject being, "Is it necessary to introduce the Tamil Language as a compulsory subject in the curriculum of the Intermediate and B.A. classes?" There was a very large gathering of gentlemen, besides a good contingent of students present. Mr. T. C. Sreenivasa Iyengar, B.A., B.L., the Secretary of the Tamil Sangam, opened the debate and presented a strong case in favour of the re-introduction of the Tamil Language as a compulsory subject. Mr. K. Chinnaswami Iyer, M.A., Lecturer in English in the Madura College, opposed it on the ground that the present regulations should be given a fair trial before they were condemned. Mr. Ganapathi Iyer supported the opener and Mr. Rajagopala Iyer spoke in favour of the present regulations. A college student also spoke in support of the view of the opposer.

Mr. A. Rajaram Iyer, Principal of the Madura College, was also one of the speakers. He said he yielded to none in his admiration of the Tamil literature. He regretted that the Tamil Pandit had been unnecessarily dragged into the controversy. The issue was not the capacity of the Tamil Pandit to teach the language. The question for them to consider was whether the University has dealt a death-blow to the study of the vernaculars and of Sanskrit by its new regulations. He was emphatically of opinion that that was not the case. No indignity had been offered to the vernaculars by the new regulations. The old system had been tried sufficiently long, and he asked them to give the new

regulations a fair trial before they sat in judgment upon their effect.

The Hon. Mr. K. Rama Iyengar said that when he came to the meeting he had not intended to offer any remarks on the question either way. Now that an educationist of Mr. Rajaram Iyer's experience had spoken decidedly in favour of the present system, he thought it proper to mention one or two aspects of the question. He would not give any opinion. The point at issue was whether vernaculars had been buried—that was the expression used. He should respectfully ask whether the best interests of the country had been served by the Senate. The real point at issue was whether the University has justified its existence and whether it has done its duty. One of the speakers mentioned that a national literature should be built. And he asked with some vehemence: "If a national literature is to be built, are we to have a small percentage of those that study the vernaculars? Have the present regulations the tendency to bring in the largest number for the spread of the vernaculars?"

Mr. T. S. Krishna Rao, B.A., L.T., spoke in support of Mr. Raja Ram Iyer's views and Mr. Muddu Ramalinga Iyer against them. Mr. T. C. Sreenivasa Iyengar briefly replied and with the closing remarks of the Chairman in the course of which he supported Mr. Sreenivasa Iyengar's view, the meeting terminated.

Rajahmundry College.—The Principal's report on the working of the Rajahmundry College during 1912-13 reveals the fact that in the matter of strength and attendance the College has regained its former strength. The strength in the B. A. classes was an improvement on last year. Brahman students preponderated as usual, the other classes having been represented in comparatively small numbers. The majority of students belonged to the Godavari and Kistna districts. The College having been newly affiliated in Branch VI—Languages—the Principal pointed out the necessity of appointing in addition to the Pandits a graduate in languages to teach the subjects on the modern lines required by the University, the education and mental outlook of the Pandits being unequal to the critical and historical treatment of the languages concerned. The Principal has been informed that the Director sees no occasion for the appointment of a separate graduate in languages in addition to the Pandits. 62 students were sent up for the Intermediate examination and 27 came out successful with three in the first class. 30 students were sent up for the B. A. degree examination for all branches. The results were excellent, especially in English. Of the 25 sent up in this subject, 20 passed. The receipts were an improvement over the previous year's, being Rs. 19,621 against Rs. 16,154 in the previous year. Football, hockey, tennis, and badminton were played by the students during the year. The hostel had 24 boarders and 7 lodgers as against 30 last year. The discipline in the College is reported to

have been satisfactory. Sir Alfred Bourne states that the generally efficient condition of the College was creditable to the Principal and the staff.

Government Girls' School, Triplicane.—The following G. O. No. 586, Education, dated 21st June, 1913, has been issued :—

In their Order No. 258, Educational, dated 25th March 1913, the Government approved generally the proposal of the Director of Public Instruction to take over the Maharaja's Girls' School, Triplicane and to transfer thereto the Tamil Training Section of the Presidency Training School for Mistresses. The Director now submits detailed proposals for raising the school and the training section to the secondary grade and for revising the scale of establishment of the combined institution.

2. His Excellency the Governor in Council is pleased to sanction the Director's proposals subject to the substitution of the following modified scale of pay for the proposed establishment :—

Secondary School.—Superintendent, Rs. 250-10-300; Headmistress, Rs. 150-5-175; First assistant, Rs. 100-5-125; Second assistant, 75-5-100; Two assistants each 75-5-100; Three assistants each 50-2-60; Three assistants each 40-2-50; Three assistants each 30-2-40; One Telugu assistant, 50-2-60.

Training section.—First assistant 150-5-175; Second assistant 125-5-150; Third assistant 100-5-125.

Common section.—One music teacher 40; One drawing mistress 40-4-60; One clerk 20-1-51; Two peons, each 8; One watchman 6; One gardener, 7; Three conductresses, each 3; One sweeper, 4;

(The increments will in all cases be annual.)

The sanction will be registered as No. 87 of 1913-14.

3. The extra charge in 1913-14 on account of the proposals now sanctioned will be met from the lump provision of Rs. 15,000 in the current year's budget for a Government Secondary School for Girls in Madras.

4. The Government agree with the Director in considering that the transfer of the Maharaja's Girls' School to the Educational Department should be unconditional and they approve of his proposal to open negotiations for the purchase of the two plots of land belonging to the school.

Opening of New Elementary Schools.—Twenty-one new Primary Schools are to be opened by the Cuddalore Taluk Board with the Government grant recently given. The other Taluk Boards are busy starting similar schools. Municipalities also have had their quota of grants. The number of Board Elementary Schools is thus increasing by leaps and bounds. But it is to be regretted that there is expansion without solidarity. The quality of elementary education is now mostly gauged by the number of schools, by the number of pupils under instruction

and by the amount of money spent. Under the present system, pupils are often left in the same standard and there is no proper scrutiny in regulating their promotions. The three R.'s do not receive special attention and there is tangible retrogression. Elementary schools of higher grades are not much resorted to for want of incentive.

Education of Backward Classes.—The following G. O. has been issued :—

The Government sanction the expenditure of a sum of Rs. 6,000 for the supply of books, slates and writing materials to poor and backward classes of pupils in Government Elementary Schools, subject to the following conditions :—

(i) that the articles purchased shall remain the property of the school and be so marked,

(ii) that the Headmaster of the school shall keep a separate list of all the articles with the date of supply, and

(iii) that the articles shall be used by pupils during school hours only and shall not be removed from the school.

2. The charge will be met from the special Imperial grant of 23 lakhs for education which has been made available for expenditure in the current year.

St. Mary's High School, Madurai.—The annual distribution of the prizes of St. Mary's High School, Madurai, was held in the De Nobili Hall on the 14th inst., with the Revd. F. Bertram, S. J., Rector, St. Joseph's College, Trichinopoly, in the chair. The hall was packed.

Father J. A. Planchard, Manager of the School, read the report for 1912-1913. The distribution of prizes was a very interesting one. The list of donors of prizes included the names of several prominent gentlemen of the town, both European and Indian. The Chairman then gave away the prizes.

Brecks' Memorial School.—The large hall of Brecks' Memorial School was filled with a very large gathering of parents and well-wishers of the institution to witness the first distribution of prizes since its re-organization. The chair was taken by the Hon'ble Sir John Atkinson, I.C.S., K.C.S.I., and the prizes were distributed by Her Excellency Lady Pentland. Among the large gathering I noticed Lady Atkinson, Lady Stuart, Mrs. Young, the Hon'ble Mr. P. S. Sivasamy Iyer, the Surgeon-General and Mrs. and Miss Bannerman, Captain Allanson, Mr. Whitton Brown, Mrs. Baker, the Rev. H. A. D. and Mrs. Moorhouse, Mr. C. Gahan, the Rev. Mr. Price, the Rev. Mr. Thomas, Miss Ling, and very many others. The proceedings opened with the pianoforte trio, *Walls from Faust*, by Misses Valerie Ramble, May Watts, and Rut Ogg and the children of the Primary School followed with the Cantata, "The Sweetest Song." Master Edgar

Fewkes gave testimony of his skill as a very promising pianist in his rendering of Schumann's *Faschingschwank aus Wien*, while the members of the school choir rendered the part song *I would that my love*. Miss Copcutt very ably assisted at the piano.

Teachers' College, Saidapet.—Of the 93 graduate students on the rolls in the Saidapet Teachers' College on 31st March last, one was a Eurasian, two were Muhammadans, five Indian Christians, five non-Brahmins and eighty Brahmins. Their special subjects were distributed as follows :—Mathematics 28, Physical Science 24, Natural Science 5, and History 36. There was only one lady graduate under training.

A new Secondary School.—The 18th August was a red-letter day in the annals of Koranad—a suburb of Mayavaram. A new Municipal Secondary School was opened that morning when the elite of Mayavaram were gathered there to witness the ceremony. A new spacious building has been secured as the local habitation of the school. Mr. R. Krishnamurthi Sastriar, a very big Mirasdar and an influential citizen of the place, was proposed to the chair by Mr. K. Seshu Aiyar, the Headmaster, in a felicitous speech.

Mr. C. Kanagasabai Chettiar welcomed the citizens and in the course of his speech, emphasized the necessity for the Koranad Branch of the School, as Saliyas, the weaving community, have not been benefited to the full extent by the educational facilities afforded by the Municipal High School, Mayavaram.

Mr. K. Seshu Aiyar, in proposing the long life of the institution, said that a branch was opened at Koranad not simply to remove congestion in the High School but to enable more of the Saliya community to be benefited by the higher education impressed upon the audience the importance of a knowledge of English as a necessary medium of communication to a trading community and said that the citizens of Koranad should not rest content with having brought the school to their midst but should try to reap the fullest benefits accruing, by sending almost all their children to the school. Then Mr. N. P. Krishnaswamy Aiyar addressed the meeting :—Our Koranad citizens have been kind enough to invite us to witness the interesting ceremony of the opening of the Secondary School in their locality. It has been their long cherished dream and desire—at last it has been realised and has now become an accomplished fact by the combined efforts of our Headmaster and some of the city-fathers of Koranad, the chief of whom, Mr. Chidambaram Chettiar, a leading light of Koranad, has been, in season and out of season, knocking at the door of the Municipal Council to vend education at the doors of those who needed it most.

Mayavaram Municipality would not have been what it is now but for Koranad. If we compare

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what is called Mayavaram—in fact Mahadana and Pattamangalam Streets, with Koranad, we must yield the palm to the latter, because it supplies more than the lion's share of the sinews of war, and with respect to the strength of the population and the number of houses, Koranad beats Mayavaram hollow.

So, the Saliya community has had always a just grievance directed and levelled against Mayavaram inasmuch as they have been paying the piper for so many years, and Mayavaramites have been enjoying the tune. It took so many years for their complaints to be heard and for the Municipal Council to open its eyes to give education to those who filled its coffers most.

I own that there are a number of Municipal Primary Schools scattered round Koranad. The citizens here think that it is not sufficient. They want Secondary education to be ministered at their doors to their children, who, because of their tender age, cannot safely be sent over to our High School, more than a mile distant, along a road too full of traffic, over which the Jutkawallas are ever running riot—so risky even for elderly pedestrians to perambulate.

Now that Koranad has a Secondary School, it is the look-out of the citizens to see that it is strengthened and maintained in its vigour and finally to secure for it a local habitation befitting the traditions and munificence of the wealthy citizens of this place.

Allow me, Gentlemen, to make an earnest appeal to Mr. Chidambaram Chettiar and other gentries of Koranad to see their way to add to this institution as a fitting adjunct, Technical Classes of Carpentry, and Smithy and a Weaving Class, for it is industry and manual labour that prosper a nation. England would not be what it is but for Lancashire and Manchester, as you know that half the industry of the world is due to man being born without clothes and the other half of the industry of the world is due to man being born without tools.

My one duty now is to exercise my sacred function and prerogative as a Brahmin to pronounce my benediction over this new born baby. "May the Institution thrive long and be for ever prosperous."

Mr. Velayudam Mudaliar, Tamil Pandit, then spoke suitably to the occasion.

The Chairman, after a brief speech, declared the school open. Mr. R. M. S. Natesa Iyer Ayl., Chairman, Municipal Council, proposed a vote of thanks to the chair. Fruits and *pan supai* were distributed and the proceedings came to a close.

BOMBAY.

Bombay Primary Schools.—The following press note has been issued in the Education Department, Bombay :—

The Director of Public Instruction has recently represented to Government the desirability of relaxing the conditions under which allotments are made from the annual provision of one lakh

for Grants-in-Aid of the construction and equipment of Primary schools. This provision, which was first instituted in 1905 and is drawn from the recurring grant made in that year by the Government of India in aid of primary education in the Bombay Presidency, has hitherto been administered strictly in accordance with the building grant rules which require that the managers of the institution for which a grant is sought should first provide a half-share of the total sum required. It is now pointed out that the District Local Boards, whose schools form the staple of the system of primary education in the Bombay Presidency, find it difficult to comply with this condition owing to the inelastic nature of their revenues and the increased recurring liabilities which the extension of primary education and the improved conditions under which it is conducted have thrown upon them. This difficulty has resulted in the provision being only partially utilized, although the need for the better housing and equipment of primary schools is admitted on every side.

2. In these circumstances the Director of Public Instruction proposed that this annual provision of one lakh should, as an experiment for the next five years, be distributed among the District Local Boards in the form of free grants for the construction and equipment of their primary schools, the requirements of Municipal and Aided primary schools continuing to be met under the ordinary Grant-in-Aid rules but from another source.

3. Since the above proposals were received, however, the Government of India have made liberal assignments for the general improvement of education in this Presidency, included among which is a sum of Rs. 12½ lakhs for the erection and equipment of schools mainly of the elementary class. These very considerable additional resources will admit of a wider application of the principle underlying the proposals of the Director of Public Instruction, a principle which has the entire approval of Government.

4. The Governor in Council is accordingly pleased to direct that the system of free grants for the building and equipment of schools should be extended to Municipalities also, for he considers that the need of good school buildings in Municipal areas is as pressing and the difficulties to Municipalities in providing such buildings are often as great as is the case with the District Local Boards. Foremost among the measures which have been put forward in connection with the campaign against the spread of tuberculosis in urban areas is the provision of spacious, well-ventilated and generally hygienic school buildings. The Governor in Council considers that the importance of this measure can hardly be exaggerated, and he is prepared therefore to give Municipalities financial assistance towards the execution of projects designed to give effect to it.

5. The allotment of Rs. 12½ lakhs will accordingly be devoted to the payment of free building and equipment grants, not only to District Local Boards, but also to those Municipalities

which are in the greatest need of suitable school buildings but whose financial circumstances do not admit of their undertaking the construction of them on the terms laid down in the Grant-in-Aid rules.

6. For the present the existing annual provision of one lakh referred to above will continue to be distributed on the same terms as before. The question of drawing upon it for the purpose of free grants will be considered when the allotment of Rs. 12½ lakhs has been fully expended.

The Deccan College, Poona.—The portrait in oil of Dr. F. G. Selby, M.A., LL.D., late Principal of the Deccan College and Director of Public Instruction in the Bombay Presidency, was unveiled in the principal hall of the Deccan College. His Excellency Lord Willingdon who performed the unveiling ceremony, in the presence of a large gathering of past and present students of the College, described Dr. Selby as a great scholar, deep philosopher and a man of great character and influence. He loved the Deccan College and took the deepest interest in all its students. Out of the money subscribed for the memorial, a scholarship has been founded in memory of Dr. Selby for the student who secures the highest number of marks in Logic in the Intermediate Examination of the Bombay University.

Zenana Central School.—The Hon'ble Mr. Sharp, Director of Public Instruction, presided recently at the opening ceremony of the first Zenana Central School in the Bombay Presidency for Mahomedan girls. In opening the proceedings, the Hon'ble Maulvi Rafiuddin Ahmed laid stress on the fact that there was no institution in the Presidency which had for its object the training of Mahomedan girls as teachers for Urdu Girls' Schools. Though this object has not yet been attained, the Mahomedan community were thankful to the Government that they now had a Central School in which to prepare girls of their religion for a course in the training college.

In replying, the Director of Public Instruction referred to the appreciable increase, in the attendance of Mahomedan boys in the Primary Schools of the Central Division during the last six years, which he considered a healthy sign. Considering the increase in the attendance of Mahomedan girls, the Government had wisely resolved to establish a Central School where Mahomedan girls would be prepared for the teaching profession.

Grant Medical College.—The Bombay Government have issued a Press Note regarding the improvement of teaching and raising the standard of the teaching staff of the Grant Medical College. They consider that the present arrangements, governing the appointment of honorary medical officers at the J. J. Hospital, and of paid minor

professors, lecturers and tutors at the Grant Medical College, are defective, both on the score of lack of uniformity and because in some cases they are likely to operate to the detriment of the institutions concerned, by preventing the selection for these posts of persons, for the time being, best fitted to fill them to advantage in supersession of all previous orders. The tenure of appointment of honorary medical officers at the J. J. Hospital will be for one year. These officers will be eligible for re-appointment, provided that no officer shall hold the same appointment for more than two consecutive years. At present there are four minor professorships at the Grant Medical College, carrying an allowance of Rs. 200 a month each. In future they will be tenable for one year only, the term being extended by the Government from year to year, if in their opinion this should appear desirable. The same rules will apply to lecturers and tutors as regards fellowships. The objects of these are to encourage, after graduation, further study in professional subjects and to assist graduates to proceed to higher degrees. The orders, in this instance, remain unchanged and subject to the approval of the Surgeon-General, may be extended from one to four years by extension of one year each.

ALLAHABAD.

Victoria High School, Ghazipur.—A meeting presided over by Mr. J. W. Morris, the District Magistrate, was held recently in the Victoria School, for the distribution of prizes to the students of the Government Victoria High School and certificates to the students of the Victoria Sanskrit Pathshala who passed the Pratham Pariksha examination last year. The gathering was large in spite of the hot weather, the District Judge, the Sub-Judge and the Deputy Collector being among those who were present. The Headmaster, Babu Ram Gopal Mitra, in a short report dwelt upon the improvements effected in the school since its conversion into a Government institution. Then came the report on the Victoria Sanskrit Pathshala read by its Manager, Pandit Ramsaran Lal. He sketched the history of the Pathshala from its beginning and told how it at first formed a part of the Victoria School and afterwards was separated from it when the school was handed over to Government by the School Committee and how after passing through several vicissitudes established its reputation for efficiency and passed all the candidates that were sent up for the Benares Sanskrit College examination.

The Chairman rose amidst cheers and addressed in few impressive words the Headmaster of the school, the Manager of the Pathshala and the scholars of both the institutions on the great value of character-building in scholars and the duty of the teacher to infuse in them a high tone. He dwelt on the great value of games as productive of manly character and congratulated the scholars of the Victoria School on the prospect of shortly having a hostel with an ample play ground which

ought to prove to them of great benefit. Addressing the scholars particularly he advised them to be obedient and submissive to their parents and teachers, to be true to their country and loyal to their king. Referring to the unsatisfactory financial state of the Pathshala he advised the Manager to approach the local public in right earnest, and he hoped that the help he sought for the Pathshala would never be refused to it by those who were in a position to help. Should this resource fail it would be time for him to consider seriously the case of the institution. The boys of the Government Victoria School then received their medals and prizes from his hands and the students of the Sanskrit Pathshala their certificates and also prizes. Among the medals given to the boys of the Government High School were three gold medals from an endowment newly founded by the widow of the late B. Surendra Narain Rai, M.A., LL.B., who died a sad and untimely death at the beginning of a promising career. These medals termed Surendra Medals are to be given annually to the best Bhumihar boy passing out of the Ghazipur schools. The meeting then dissolved after a vote of thanks to the Chairman for the trouble he took in presiding over it.

MYSORE.

The Mysore Educational Association.—With a view to form an association of persons engaged and interested in education in Mysore, a meeting was recently held in the Government High School, Bangalore, Mr. J. G. Tait presiding. There was a large attendance of professors, teachers and others, prominent among them being Mr. J. G. Tait, Mr. F. R. Sell, Rev. Mr. E. P. Rice, Rev. Mr. Fuller, Miss Butler, Dr. M. Srinivasa Rao, Mr. C. Krishna Rao, Mr. B. Dasappa, Mr. K. Narayana Rao, Mr. B. Venkataranappa, Mr. S. Venkatesachar, Mr. N. Venkatesa Iyengar, Mr. M. T. Narasimha Iyengar, Mr. S. V. Setti, Mr. C. K. Narayana Rao, Mr. V. Subramanya Iyer and Mr. K. Ramachandra Rao.

Mr. F. R. Sell made an interesting speech.

Mr. Tait spoke to the following effect:—Gentlemen, I propose that such an institution as Teachers' Association or whatever you may choose to call it be formally started.

Mr. E. P. Rice seconded the proposition. Mr. K. Ramachandra Rao said a few words supporting the proposition and the resolution was carried unanimously. Mr. Fuller proposed the establishment of a Secretary and Mr. Sell was appointed to the place.

Next, a provisional committee consisting of Messrs F. R. Sell, E. P. Rice, E. P. Metcalfe, C. Krishna Rao, S. Krishnaswami Iyengar, C. K. Narayana Rao, B. Dasappa and V. Subramanya Iyer, was appointed to draft the rules, etc.

Mr. Tait made the following concluding remarks:—

I have not much to offer as regards the objects of such an Association as this. Mr. Sell has said everything on this and discussed the question of the status of the teachers in Mysore. I thought the

I. G. would be here before the proceedings ended. I hope that the Provisional Secretary of the Committee will soon be able to forward the results of the meeting to us later on.

With a hearty vote of thanks to the chair proposed by Mr. C. Krishna Rao, the proceedings closed.

Village School Fund.—The Inspector-General of Education in Mysore, having submitted the Budget estimates of the Village School Fund for 1913-14, the Government of Mysore have passed the estimates, providing for an income of Rs. 3,69,394 and an expenditure of Rs. 4,12,761. The excess of expenditure over receipts, viz., Rs. 43,367 will be met from the cash balance of about Rs. 46,000 at the credit of the fund on the 1st July 1913. Charges amounting to Rs. 30,872 have been added, with reference to the Inspector-General's remarks and this sum is for the purpose of meeting the cost of new schools and additional hands (Rs. 28,632), the employment of a Demonstrator for Magic Lantern Exhibition work Rs. 240, and the increase of provision for furniture and apparatus, Rs. 2,000.

COCHIN.

Scholarships.—On the recommendation of Professor T. B. Wood of the School of Agriculture, Cambridge, the period of training of Mr. T. Raman Menon, B.A., at that school has been extended by one year. A scholarship of Rupees 50 per mensem fallen vacant by the completion of the course of Miss D'Sousa in the Madras Medical College, has been awarded to P. Gouri Ammal of Trichur, who has successfully passed the first year's course in the Rayapuram Medical School and has secured admission into the Medical College.

In the course of his reply to the peoples' address on the Shashtipurthy day, it may be remembered, that H. H. the Rajah promised a grant of 50,000 Rupees towards the encouragement of Sanskrit learning and the improvement of Malayalam literature. To obtain suggestions for making the best use of this munificent grant the Durbar, in January last, appointed two committees. Their reports, together with the Government orders thereon, are now published in the Gazette and they certainly make interesting reading.

The main proposals of the Sanskrit Committee are: (1) that steps should be taken to preserve as well as encourage indigenous systems of Sanskrit learning in its higher branches, and (2) that pupils should be prepared for the Oriental Titles Examination of the Madras University. To attain these two objects the Committee proposed the establishment of a school at Tripunithura which has been approved by the Durbar. The school which will be opened early in 1089 is to be under the management of a committee appointed by the Durbar, of course, under necessary control by the Educational Department. Out of the total grant of Rs. 50,000, Rs. 30,000 are allotted for Sanskrit and a sum of Rs. 13,925 set apart by

His Highness in 1085 for the encouragement of Sanskrit learning will also be available for the purpose. Over and above this, the Sirkar is prepared to make up any deficit that might occur at the end of every year. The Sanskrit Library attached to the Eduvappu will be handed over to the School; and in all future appointments of Pandits in the Schools of the State, preference will be given to the students of this School.

With regard to the improvement of Malayalam literature the proposals of the committee are not wholly accepted by the Durbar. Some of them, like the one for the starting of a model magazine, are considered by the Durbar to be impracticable, if not altogether beyond the legitimate functions of the State. The compilation of an Anglo-Malayalam Dictionary, the Durbar is prepared to subsidise, and a grant of Rs. 5,000 is made towards it. The appointment of a permanent committee to advise the Durbar in matters connected with the improvement of Malayalam literature is also approved; and Messrs C. Achyutha Menon, T. K. Krishna Menon, and H. H. the 12th Prince are appointed to it. The amount of Rs. 20,000 will be handed over to this committee who will spend it for the purpose for which it is intended under a definite scheme sanctioned and approved by the Durbar.

Lower Secondary Schools.—The Dewan has ruled in his proceedings dated the 29th July 1913 that in future all Lower Secondary Girls' Schools in the State shall be open to all castes and creeds like boys' schools and admission of girls to the 1st to 3rd forms of boys' schools should be absolutely prohibited. Girls who want to continue their education up to the school final course should obtain special sanction from the Director of Education for admission into the boys' schools, provided there are no High Schools for girls in such places. The Dewan in accordance with the recommendation made by the Director of Education has ordered the abolition of the Malayalam Pandits' posts in the Sirkar Lower Secondary Schools with effect from the 1st Chingam 1089. The Director says in his report that the abolition of Pandits' posts will tend to improve the Malayalam work of the teachers in the L. S. Department where everything, according to him, is to be taught in Malayalam.

Foreign Notes.

Professor Norman Collie.—At the Assembly of Faculties at University College, Gower-Street, on the 2nd instant, Professor G. D. Thane (Dean of the Faculty of Medical Sciences) said that Sir W. Ramsay's successor as Director of the Chemical Laboratories was Professor Norman Collie. "I cannot record that appointment," he said, "without referring to the remarkable series of investigations that Professor Collie, in conjunction with Mr. Patterson, has made and brought to a suc-

cessful issue during the session. Professor Collie and Mr. Patterson have investigated the effects produced on gases at low pressure by high potential electric discharges. As a result of these investigations, it is now established that neon and helium can be obtained when the electrical discharge passes through the hydrogen under suitable conditions. Other products of a hitherto unknown character are also obtained. These startling results appear to indicate either a synthesis or a transmutation of elements, or it may be both combined. It is no overstatement to say that this will prove to be both one of the greatest discoveries ever made in chemistry and will possibly lead to a solution of the fundamental problem of chemical science—namely, the nature and relationships of the elements." It was stated that Sir William Ramsay had presented £500 for the purchase of chemical library books and periodicals. Professor Thane also called attention to the baronetcy conferred upon Sir William Gwynne-Evans, who, he said, give the magnificent sum of £50,000 in order to promote the incorporation of the College in the University. It was only now, after six years had elapsed, that he allowed the fact to be made known.

Students' House in Cromwell Road.—The Report of the Managing Committee at 21, Cromwell Road for 1912-13 records substantial progress in the work and usefulness of the house. The total number of the different students residing there, was 221 of whom 124 were straight from India. The average number of daily residents was eleven. It is difficult, owing to constant changes, to establish full corporate life, but the tone has been good, the students always working well together, new arrivals receiving welcome. The Societies accommodated in the house have an aggregate Indian membership of three hundred, and provide constant social opportunities. The Law Library is now established, the institution representing a substantial attempt to provide the students with facilities for their legal studies.

LITERARY NOTES.

The Cambridge Histories. The 'Cambridge Modern History' was planned by the late Lord Acton in 1896. The idea upon which the whole was based was that of summarising the historical development of the last four hundred years. About eighty writers, as far as human wisdom could judge the most capable, were invited to write their portions in such a way that a continuous book (not an encyclopedia) should result. Of these some fifty-eight eventually took part in the enormous task of reporting the world's progress for four hundred years to the English-speaking public.

Several other histories based on a similar plan are now in course of production, including the 'Cambridge History of English Literature,' the 'Cambridge Medieval History,' and the 'Cambridge History of India.'

An important series of Cambridge Manuals is now being issued at a shilling, and aims at bringing concise and accurate information on great subjects, within the reach of all seekers after knowledge. Psychology, economics, literature, music, natural science, and history are but a few of the subjects covered by these volumes, which in many cases are illustrated. Another attractive series is that of the 'Cambridge County Geographies,' which are at once guide-books for the traveller and class-books for the school-boy.

The Cambridge University Press will shortly publish "The Literary Relations of England and Germany in the Seventeenth Century," by Gilbert Waterhouse, B.A., formerly Scholar of St. John's College, Cambridge. Tiarks University German Scholar, English Lecturer in the University of Leipzig; also "A National System of Education," which has been written by Mr. J. Howard Whitehouse, M. P., the Chairman of the Education Group of the House of Commons, whose labours on behalf of boys are well known. It deals with the co-ordination of all forms of education, reforms in both elementary and secondary schools, University reform, legislative reforms respecting juvenile labour, and further education. It also includes an enquiry into secondary schools and private schools generally, and the outdoor life and physical care of school children.

Messrs. Heffer and Sons, Ltd., of Cambridge, have in the press, and will publish in the autumn, a "History of University Reform from 1800 A.D. to the present time, with suggestions towards a complete scheme for the University of Cambridge," by Mr. A. J. Tillyard, of St. John's College, Cambridge.

Mr. F. W. Hirst, Editor of *The Economist*, has written a volume entitled "The Six Panics and other Essays," which Messrs. Methuen will shortly issue. It will deal with various problems of the day, but more especially with Armaments, Tariffs, Foreign Policy and Finance.

The Syndics of the Cambridge University Press have undertaken the publication of "The Cambridge Technical Series" (under the General Editorship of Mr. P. Abbott, B.A., Head of the Mathematical Department at the Polytechnic, Regent Street, London), a new and important series of books on technical subjects. It is intended to meet modern requirements and changed conditions, and will be up-to-date in every particular.

There are now seventy volumes ready of the *Cambridge Manuals of Science and Literature* (Cambridge University Press, 1s. net each). Of the batch of ten new volumes which have been received,

five deal with subjects of science: "Bees and Wasps," by Mr. O. H. Latter; "Submerged Forests," by Mr. Clement Reid, F.R.S.; "Wireless Telegraphy," by Prof. C. L. Fortescue; "The Wanderings of Animals," by Mr. Hans Gadow, F.R.S.; and "Beyond the Atom," by Prof. John Cox. The other five volumes, though not so directly concerned perhaps with subjects included in the curriculum, deserve a place in the school library, especially Miss Spurgeon's "Mysticism in English Literature," Mr. A. H. Thompson's "English Monasteries," and Mrs. Adam's "Plato: Moral and Political Ideals." Small authoritative volumes of this kind will serve an extremely useful purpose in helping young students to discover their own individual aptitudes and the subjects with which they can concern themselves most profitably. In fact, it would be difficult to find more suitable and helpful introductions to the study of large and exhaustive standard works.

The following educational books have been recently published:—

The Tragedy of Education. By E. Holmes. 100 pp. (Constable.) 2s. 6d. net. *The Demonstration School Record.* No. II. Edited by J. J. Findlay. 283 pp. (Manchester University Press.) 5s. net. *Every-day Problems in Teaching.* By M. V. O'Shea. 388 + xlii pp. (Longmans.) 4s. 6d. net. *Human Behaviour: A First Book in Psychology for Teachers.* By S. S. Colvin and W. C. Bagley. 336 pp. (Macmillan.) 4s. 6d. net. *Children's Play and its Place in Education.* By W. Wood. 218 pp. (Kegan Paul.) 3s. 6d. net. *Handwork and its Place in Early Education.* By L. L. Plaisted. 327 pp. (Clarendon Press.) 4s. net. *The Service of the Hand in the School.* By W. A. Bone. 212 pp. (Longmans.) 3s. net. *Vives: On Education.* Translated and edited by Foster Watson. 328 pp. (Cambridge University Press.) 5s. net. *Text-book in the History of Modern Elementary Education.* By S. C. Parker. 505 pp. (Ginn.) 6s. 6d. *The Posture of School Children.* By Jessie H. Bancroft. 327 pp. (Macmillan.)

SCHOOL AND COLLEGE SPORTING NEWS.

L. M. SCHOOL, COIMBATORE.

The London Mission School First Annual Sports were played off recently. The staff, the students, and a few other gentlemen, European and Indian, in response to the kind invitation of Rev. Hatch witnessed the function. A few European ladies were also present to whom refreshments were provided in a tent by Rev. and Mrs. Hatch. Mrs. Fischer distributed the prizes to the winners. Mr. Moberly after congratulating the winners dwelt upon the importance of sports and appealed to the boys to take particular attention to sporting also. Rev. Hatch thanked the old boys and the visitors and after three lusty cheers for Mrs. Fischer, the gathering dispersed.

Football League.

ENGINEERING v. CHRISTIAN.

The League tournament played annually under the auspices of the M. C. A. Association commenced recently, the opening match being played on the Engineering College ground between the Engineering and Christian Colleges.

The play throughout was interesting to watch, the teams being very evenly matched. The Engineers won the match somewhat luckily, for it was only late in the second half, when the Christians were handicapped by having to play one player short, Arthur having left the field owing to a damaged foot, that they obtained the only goal of the evening.

The opening exchanges were decidedly in favour of the Engineers who attacked with great vigour, but Arthur arrested their progress before they got dangerous. The next few minutes saw the Christian forwards appearing to considerable advantage, the three inner men all putting in some fine footwork. The Engineers put up a stout defence and gradually forced the play into the Christian territory once again. Nearing half, the Christians attacked strongly, but the Engineering defence was too good for them, so that at half-time the score sheet was blank.

On the teams crossing over, the play took a faster turn than before. The Christian attack was more methodical than the Engineering attack, but they proved to be palpably weak in front of goal. Exchanges were even for a long time when Arthur got hurt in a melee near his own goal and had to leave the field. This was a great blow to the Christians, for he had played a really great part in their defence; and the Engineers frequently threatened their goal. Yemathri and Desika Chari on whom the brunt of the defence now fell worked exceedingly hard and defended well. However, shortly afterwards Old scored with a lovely cross shot from a good centre from the left. With our goal to the lead, the Christian forwards made great efforts to equalize but, lacking finishing powers, were unable to accomplish it. Thus it was that when time arrived the Engineers were left winners of the match by one goal to nil.

MEDICAL v. PACHAIYAPPA'S.

It was a fairly fast and very evenly contested game that was witnessed in the match between the above teams played on the Medical College ground. While the Medicoes were in full strength, Pachaiyappa's were without the services of two of their best players, Sambasiva Rao, Ragavendara Rao, their usual centre half and centre forward respectively, so that the result, a draw, reflects great credit on the latter.

From the kick-off, the Medicoes by dint of some good passing transferred the play to the Pachaiyappa end. Evidently roused by this reverse so early in the game, the Pachaiyappa boys set to work

and the Medical goal was in imminent danger frequently. After this, the play was mostly confined to midfield for some time. Undismayed, Pachaiyappa's still continued to attack. With the score one all, the play took a faster turn than before and though both sides alternately attacked vigorously, neither side was able to obtain the lead before half-time.

On the teams crossing over, Pachaiyappa's were seen to greater advantage than their opponents for nearly 10 minutes. Though frequently hard pressed, the Medicoes defended well and gradually forced back the play to the other end. Then a couple of free-kicks against Pachaiyappa's, gave the Medicoes some good chances of scoring but the Pachaiyappa goal-keeper saved splendidly. After this, Subramaniam, the Pachaiyappa centre forward broke away in fine style but on nearing the Medical end overran the ball and Ramu rushed out and cleared. Nearing time the Medicoes forced some corners but failed to improve upon them, Pachaiyappa's putting up a stubborn defence. Thus the match ended in a draw, one all.

Hockey League.

PRESIDENCY v. CHRISTIAN.

The second of the series of matches in connection with this tournament was that between the above teams played on the Presidency College ground. The play was somewhat one-sided, the Presidency, who, it will be remembered, are the holders of the cup, having much the better of the exchanges right through. The Presidency forwards were miserably weak in front of the goal, though otherwise they played fairly well. The Christians had a rather poor team but with all that they put up a plucky fight against their formidable rivals, Henderson

and Ananthanarayanan, both of whom played really well at back proved to be their mainstay in the defence. In the front-line Vencoba Rao was the only forward who did any appreciably good work occasionally.

ENGINEERING v. WESLEY.

This League tournament played annually under the auspices of the M. C. A. Association commenced recently, the opening match being played on the Engineering College ground between the Engineering and Wesley Colleges. The play though not of a high order or even particularly fast was none the less interesting to watch, the teams being very evenly matched. The opening exchanges were decidedly in favour of the Engineers who attacked with great vigour for some time. Almida and Vencataramanjulu, the two Wesley backs, repeatedly cleared in fine style. However about 10 minutes from the start, the Engineers were after all, rewarded, Ahmed Baig their outside left scoring from a melee in front of the Wesley goal. Evidently roused by this reverse, the Wesleyans took up the attack and though Ramasami, their centre forward, frequently put in some very fine stick work, he was unable to beat the engineering defence. Nearing the interval the play was somewhat level and the teams changed ends with the Engineers leading by one goal.

On the teams crossing over, the play as in the closing stages of the opening half, was fairly level for a long time. About half way through the second half, Ramasawmi after cleverly eluding both Bell and Lanaman, the two engineering backs made a good opening for his elder brother Baliah who equalized with a good shot. With the score one all, the play took a faster turn and though both sides made great efforts to obtain the lead, time saw no alteration in the scores, the match thus ending in a draw, one goal each.

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The Educational Review.

The report of the Inspector-General of Public Instruction for the year 1911-12, dated the 4th November 1912, and the review thereof by the Government of Mysore, is an interesting document. There has been during the year 'steady and substantial progress in education.' The number of educational institutions rose from 4,267 to 4,478, and the number of pupils in them from 138,153 to 149,214, and this notwithstanding 'violent outbreak of plague in almost all the districts,' in some places so severe as to require the temporary closure of schools. In certain points the State of Mysore is in advance of the Presidency of Madras and the latter may well follow in the footsteps of the former. One of these is the large number of Industrial (not that vague phrase, Technical, which may include anything) schools. There are twenty-two of them training 1,506 pupils in handicrafts. Another point in which Mysore beats Madras is in its provision for Sloyd classes. Pupils are trained in Sloyd work in so many as 49 centres and 2,164 students learn it. This is highly creditable to Mysore.

As Sloyd is a comparatively new "subject" in the School Curriculum and on account of other causes, the work in the Sloyd class is not correlated with that in the other classes; so the Government has ordered the Inspector-General to consider and report on the best means of 'co-ordinating it with other subjects so as to turn it to the best advantage.' We consider that no one is fit to be teacher of science or of mathematics who has not undergone a complete course of carpentry and has not, besides, learnt to 'turn' metals and glass, as no one is a fit teacher of other

subjects who cannot draw well on paper as well as on blackboard. A feeble attempt, we believe, is being made at Saidapet to compel teachers under the training to learn a bit of carpentry; but unless the bulk of teachers realize that the old world-contrast between brain and brawn, brain-work and hand-work is false and mischievous, that in the child as also in the man, the brain grows in exact proportion to the use of the hand in handwork, as in the remote past man's brain attained its characteristic superiority to that of the gorilla not by means of his committing poems to memory but by means of his working his hand in ingenious new ways, the attempt is bound to fail. Sloyd is not mere mechanical carpentry, such as the professional carpenter learns; it is not a series of exercises in sawing and chiselling and jointing, analogues in the world of wood-work to analysis of sentences, transformation of sentences and synthesis of sentences in the world of word-work. Sloyd is educational handwork, the presentation of a series of problems in the form of objects to be made by pupils; it involves the translation of plans into wood-work, it involves a training in accurate measurement, the overcoming of difficulties by thinking as well as working. But even if Sloyd were badly taught, mechanical wood-sawing would be more useful to pupils, than mechanical word-sawing.

Messrs. Wyman and Sons have published the report of the Consultative Committee on practical work in secondary schools, and it is a very interesting paper. The idea underlying it is a thorough-going application of the old, old, educational motto, so often repeated as a cant phrase, but so seldom remembered in class work—'Learning by doing'. The Committee unhesitatingly con-

demns what now obtains in most schools—the exclusive devotion to "the cultivation of the mind by means of books." To balance and complete this, the Committee require that attention must also be paid to the fostering of "those qualities of mind and that skill of the hand which are evoked by systematic work of the kind described in this report, we think that the time has now come when every secondary school should provide for the teaching of some branches of educational handwork, should make them an integral part of its curriculum, and give them a position on the same level with other subjects studied. The value of such work, both as an element of a general education for all pupils and as a preparatory training for the special needs of some, has been amply demonstrated by the wide and representative body of evidence which we have had before us." This applies with great force to India, where we are so terribly examination-ridden, that it is almost impossible to take up any work in schools which does not lead to a pass in some examination or other. It is remarked in the report that handwork has a social value, because it will tend to correct the depreciatory attitude towards work with the hands which no doubt yet exists in England. In India, for several thousands of years, the man that has memorized books has been held to be immensely superior to the man that works with the hands—however far-reaching the benefits of such hand work may be—that this corrective, is absolutely necessary. The Committee rightly insists on the correlation of handwork with other subjects. Already the school subjects are, in most schools, separated in water-tight compartments, that work during one hour has no bearing on the work of other hours and it will be cruel to add one more compart-

ment to them, though it might be argued, and that rightly, an hour's work in the workshop will be a welcome relief to the dredgery of the intellectual (?) subjects. Carpentry, the most important form of handwork can very well be correlated with mathematics, with drawing, with science. Paper cutting can be connected with Elementary Geometry, cardboard work with Geography and so on.

As in the case of boys' schools, so in that of girls' schools, English teachers have begun to protest external examinations. The Association of Headmistresses has passed resolutions, and urged by means of deputations, that external examinations exercise a deleterious effect on education and that in matriculating pupils credit should be given for the School Record in the case of pupils who have passed through a complete course of studies for not less than four years in schools inspected by the Board of Education, periodically examined by a University Board of Examiners and on the staff of which there is a fair proportion of registered teachers. Here in Madras, the S. S. L. C. which was intended to bring about this very reform, has so far as this particular object of robbing examinations of their importance and their mischievous influence on teaching is concerned, proved a miserable failure. This it will continue to be, so long as the Headmaster is a suspect, so long as the mark awarded by an examiner in the course of valuing 400 answer-books in three weeks' time in accordance with the half-understood instructions of a chief examiner is held to be infinitely more trustworthy of a pupil's work than the average mark arrived at by a day-by-day appraisal made during a period of three years, by the teacher or

teachers who have taught him. If teachers are all dishonest or incompetent to award marks, as educational theory assumes, can the chance shot if an Assistant Examiner remedy the evil? This suspicion of the teacher is absurd, unworthy of the people that unthinkingly idolize the examination marks. It is highly true Madras teachers met and protested against this gross injustice they suffer under.

We believe the Senate Committee that has been asked to answer this question is going to meet soon. We notice with regret that some people are anxious to earmark some part of the amount for European professors and some for Indians. We should think that the race-question is entirely out of place in this question, where we are concerned with research work. In ordinary school and college work, it is but just that as between rival candidates of similar qualifications, an Indian, should in India be preferred to a European. But, here, where we go beyond the outermost fringe of college work, where we want such work as cannot be provided by colleges at all the question of race does not at all arise. It will be difficult enough to find men, let alone considerations of race. After this preliminary protest to clear the ground, we proceed to express our strong feeling that a very large part of this money should be devoted to the advancement of Dravidian studies. Northern India being near the Imperial throne, the languages of Northern India have received very much more attention than those of the South. The linguistic survey has concerned itself much more with the dialects of the Himalayan regions than with the great Dravidian languages; in fact these latter are included at all in the linguistic survey under protest and as a kind of accident, as any reader of the IV Volume of Dr. Grierson's report knows. We therefore advocate that the bulk of this Government grant should be spent on furthering Dravidian studies. By furthering Dravidian studies we do not mean the conservation of the Pandit. The Pandit is a very estimable person, with a vast deal of knowledge very essential to the unravelling of vernacular literatures, but such study is exactly

what ought to be done in Colleges—especially those devoted to the acquisition of Oriental titles. We hold that Colleges exist for disseminating what knowledge there is and Universities for discovering what knowledge there is not as yet. A University lecturer should be a research worker for discovering new vistas of knowledge and passing them on to the College for dissemination. Thus the University lecturer should investigate Dravidian. Philology, discover MSS. and edit them, and so on. Under other circumstances we should demand that all this money must be spent on Dravidian languages, but it is a melancholy fact that modern Sanskrit scholarship is non-existent in Southern India. We never had a Buhler, a Cowell and so, while we are far in advance of every other Indian province, in every aspect of education in this one point of Sanskrit scholarship alone, we are really and truly 'benighted'. To remedy this a minor portion of this grant may be utilized.

So little does the science teaching in our Blood-Parasites. colleges find its way into our souls (we know of a science B. A. of the old days who could not read a clinical thermometer) that a fairly large proportion of us believe that wind and bile and phlegm course through our veins and submit ourselves to the medication of the Vydian, all the more so if one of his shots in the dark happens to hit. A few of us have a vague notion that some diseases, especially cholera, are caused by germs. It will, therefore, be not out of place to draw attention to the contents of an interesting lecture on "Blood-parasities" by Mr. H. G. Plimmer delivered at the Royal Institution on Friday, May 2, an abstract of which was published in a recent number of *Nature*. "A blood-parasite is a living being, vegetable or animal, passing part or the whole of its existence in the blood of another living being, upon which it lives, this being obligatory and necessary to its life-cycle. They have "an enormous distribution both geographically and as regards their hosts. For instance, during the last five years I have had the opportunity of examining all the animals (in the large sense of the word) which have died in the Zoological

Gardens. I have examined the blood of 8,000 animals, coming from all parts of the world, and I have found parasites in the blood of 587 of them, that is in about 7 per cent., and in 295 species of animals, I have found them for the first time." Mr. Plimmer excludes from his purview the microscopic plants, called bacteria, which cause among numerous other diseases, cholera, consumption, typhoid, etc., for these are not parasites but only visitors, for they do not live on their hosts. The spirochetes are parasites which cause such diseases as relapsing fever, tick-fever, syphilis, etc. Those causing the first two diseases are carried by, developed in and communicated to man by ticks and bugs. The next class is formed by the worms called *Filaria*, whose embryos live in the blood and developed forms in other parts of the body. They cause elephantiasis, varicosities, chyluria and certain tumours. Some of these live a part of their life in the mosquito. The third class is called trypanosomes, which are transferred from animal to animal by flies, fleas, lice and leeches. One of the diseases caused by them is sleeping fever. Then there are the malaria parasites, which again are communicated from man to man by the mosquito. Many other fevers are caused by various parasites, the most deadly being the Leishmania, which cause Kala Azar, Delhi boil, etc.

Following the lead of the Madras University, the Bombay University Year in Bombay has proposed to make the academic year begin soon after the annual burst of the monsoon and end in March. The comparatively cooler part of the year—from July to March affords the fittest period for work and the hot months for rest. Under the old system, whose abolition some reactionaries even now regret, the best portion of the year—November to February—when real, good work can be done was irrationally devoted to a cessation of scholastic activity. The Bombay University requires an attendance of 130 days for keeping the yearly term. Madras demands a smaller number of days, every year, i.e., three-fourths of 150 days, but every college, so far as we know, finds it very hard to arrange for 150 days' work in the 2nd and 4th years, because the Registrar's

office demands the attendance certificates of candidates for the University examinations to be despatched practically 20 days before the end of the term. The loss of 20 days' attendance merely to suit the convenience of the Registrar's office is one of the evil influences exerted by examinations on college work. This evil can be remedied by a simple expedient which we commend to the notice of the Syndicate. That is to cancel the present application forms which are sent three months before the examination, and to substitute for them a list of pupils likely to appear for the examination signed by the Principal. The day before the examination, each Principal may send to the Superintendent of the Examination, before whom his pupils are bound to appear, a list of his pupils who are unfit to appear by reason of short attendance or lack of progress. Some such simple expedient will remedy a real evil which every Principal feels now.

Louise Pound writing in the *Modern Language Review* on 'blending' Word-coinage in English as a mode of word-formation in English, makes some interesting points. Thus *scurry* is a cross between *scour* and *hurry*. *Flaunt* seems to blend the elements of *fly*, *flout*, *vaunt*, etc.; so *slump* is mentioned as having been built out of *slip*, *swamp*, *plump*, *thump*, *bump*, etc. *Cangle* meaning to quarrel, wrangle, haggle, cavil, results from *cavil*, *quarrel*, *wrangle*, *jangle*, *haggle*, etc. *Chelp*, meaning chirp, squeak, yelp, clatter, is compounded of *chirp*, *cheep*, *chatter*, and *yelp*. These words have been happily called 'portmanteau forms.' In discussing this question, the writer points to the permanent association of certain consonant combinations with certain fundamental notions: thus *sq.* which is the initial part of *squeeze*, *squelch*, *squirt*, *squirm* (whatever the ultimate origin of these words), conveys to English minds the idea of violent motion; and *sh*, the final sound of *crush*, *crash*, *splash*, *wash*, *gush*, *dush*, *squash*, *mash*, *dash*, *rash*, *rush*, suggest the idea of continuous motion and leads on either to the coinage of new words or extension of the meaning of old ones. An analysis of the roots of the Dravidian languages shows that this phenomenon which is

noticeable in English which is the last of the innumerable forms which a German dialect or even a hypothetic Indo-Germanic language has assumed, is a fundamental guide in the tracing of the roots of the Dravidian languages. Thus associated with the sound of -l are the ideas of 'inside,' 'place,' 'location,' 'being,' 'mind,' 'house,' etc.; the ideas of rapid motion, beating, breaking, are connected with the sound of d. But Dravidian philology has yet to be investigated and a study of it by one who is trained in modern Comparative Philology and more especially the latest developments of Phonology and the laws of sound-change is likely to enrich linguistic studies and enlarge the outlook of the philologist.

Some of our readers may not have heard of this institution, which has for more than 60 years exerted a powerful influence in the development of science in the United States. It started with a bequest of Smithsonian in 1846 of 515,169 dollars, and other bequests and other sources have now raised its permanent fund to nearly 1,000,000 dollars. This is supplemented by sundry pieces of real estates and various other contributions. The income is devoted to making researches in American Ethnology, Astrophysics, Geology, Biology, to publishing books, enlarging the National Museum, etc. The report of its work for 1911 contains in a huge appendix brief accounts of scientific discoveries in various directions, reports of investigations by collaborators and memoirs of a general character or on special topics. The subjects treated of can be judged from the plates which deal with the gyrostatic compass, Radiotelegraphy, Multiplex telephony, Invisible light, Artificial precious stones, Legal time, Geologic work of ants, the great horned owls, the Passenger pigeon, colours of birds and insects, Birds in flight, Native plants of new Mexico, Tree ferns, Mexican manuscripts, Kabyles of North Africa, Chinese architecture, Lolos of Kientchange, etc. We cannot,

of course, in these columns discuss the numerous interesting scientific discoveries here dealt with, because they deal with the more recondite portions of science which interests only the specialist. The general reader will read with interest the articles on artificial precious stones, legal time in various countries, and profitable and fruitless lines of endeavour in public health work.

M. Guilbert has introduced a method of foretelling the weather, which is quite different from and simpler than that followed in the Indian Meteorological Department. M. Guilbert observes the speed and direction of superficial winds and the consequent variations of pressure. He regards winds proportional to the gradient as normal, that for those displaying more strength than the gradient would warrant, cause a barometric rise and those abnormal by default a barometric fall, according to the *Chemical News*. "Now a determining of these mere movements of barometric pressure allows the forecast of the future of squalls, and also makes it possible to know if such or such depression will be filled up or hollowed out, and if consequently the wind is going to increase or decrease. In certain circumstances, when the abnormal winds by excess surround a centre of depression, this centre is completely destroyed: tempestuous winds—and thus the method foretells—are followed by a perfect calm in a delay of twenty-four hours, sometimes even in twelve hours.....The distinction of the winds designated as convergent and divergent is not less important. The former have a tendency to contract the depression, to push it back, they constitute a resistance of the invading march of the cyclone or tend to destroy it; the latter on the contrary, are attractive winds; they constitute centres of attraction of less resistance; they determine the fall of the barometer and sometimes even a cyclone."

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THE PLACE OF PHONETICS IN THE TEACHING OF ENGLISH IN INDIAN SCHOOLS.*

IN recent years much attention has been directed to the subject of teaching Foreign Languages and great improvements have been made in the methods adopted. The Direct or Reformed method of teaching Foreign Languages has come into prominence, and specially important in India is this method as applied to the teaching of English. The chief reform which has taken place in this country is in the direction of emphasizing the spoken speech. Pupils are now being taught not chiefly to write English but

* A paper read by Mr. R. W. Ross, B.A., Vice-Principal, Teachers' College, Saidapet, before the South Indian Branch of the English Association, Madras.

to speak it and a great deal of importance must necessarily be attached to the correct sounds of speech. As soon as a pupil attempts to use words of a Foreign Language he is met by the difficulties of new sounds—sounds which he has never encountered in his own language. In order to utter these sounds he needs to be told how the new sounds should be produced. This is the work which the science of Phonetics undertakes. Phonetics deals with the organs of speech, and attempts to show how these organs must be used in the pronunciation of sounds. The importance of the subject is indicated in the Board of Education Circular, No. 797, dealing with the subject of Methods of Teaching Modern Languages.

"It is fortunately no longer necessary to insist that the utmost importance should be attached at the earliest stage to the mastery of the sound-system of the new language; this is universally admitted to be an essential preliminary to effective progress. Experience shows that the work of the teacher of any living language is much facilitated if he has a thorough knowledge of the position and movements of the several organs of speech proper to the production of each sound, and every teacher of modern languages should make himself fully familiar with this knowledge not in order to teach the technicalities to his pupils but so as to be able to use it to assist them in overcoming their difficulties.

In the case of very many children, especially those who begin the language late, it is not safe to depend on imitation as a means of securing a correct pronunciation—"a pronunciation according to the usages of the best companies." It is especially necessary in many schools that teachers should be able to give systematic instruction based on scientific knowledge owing to the pupils' extremely imperfect power of correctly using the sounds of even their own native language." The need for a study of Phonetics becomes even more urgent when we consider the processes involved in Pronunciation as outlined by Wyld in his book, *The Historical Study of the Mother-Tongue*.

"Before a word is pronounced the organs of speech have to perform certain movements and take up a certain position. These movements and positions give rise to certain muscular sensations and when the sound is uttered certain physical sensations are produced upon the auditory nerves. Besides these physiological processes certain nervous impressions are recorded in the consciousness which help to form memory pictures. Thus there are memory pictures of the sound itself and of the muscular sensations and the position of the vocal organs. These memory pictures of sound, movements and position are the psychological processes which accompany the utterance of every speech sound, and until they are formed the sounds cannot be reproduced. Naturally, first the unaccustomed movements are performed with difficulty, but with practice the memory pictures become clearer and more definite until the sound can be reproduced accurately. It will thus be seen that the seriousness of acquiring the habit of wrong pronunciation cannot be

overestimated, because each repeated utterance of the wrong sound makes the memory picture of the movements and position clearer and deeper and increasingly difficult to eradicate. This also explains the difficulty that teachers have of correcting wrong pronunciation acquired in the early years of their school course. They have obtained memory pictures of the sounds and positions peculiar to their own language, the muscles have become fixed and it is difficult for them to experience the new muscular sensations which are necessary in grappling with the new language."

MODE OF PROCEDURE.

We may all recognise the importance of the above remarks and realize that very much is necessary in the direction of improving the pronunciation of the pupils; yet at the same time as there seems to be a good deal of haziness with regard to the method followed in teaching the subject of Phonetics, I think it desirable to give a brief outline of a possible method of teaching the subject.

BREATHING EXERCISES.

The first thing to consider is the means by which sounds are produced. That implies a study of the vocal organs and of the processes of breathing. Speech is often defective because breathing is defective, and therefore the importance of breathing exercises cannot be overestimated, for, by the ejection of the breath the vocal cords are made to vibrate and by their vibration sound is produced which is modified by the throat, nose, mouth, and lips. Each sound is the result of certain definite actions or positions of the vocal organs by which the sound passage assumes a certain definite shape. Breathing exercises should therefore be regularly practised, for

until the pupil can control his breath he cannot read or speak correctly. In the lower forms, it is desirable to devote a few minutes of every lesson to breathing exercises until the pupils show themselves capable of regulating their breath. Time will not permit me to mention the various exercises which are indispensable to correct breathing, but the subject may be studied in *Burrell: CLEAR SPEAKING AND GOOD READING*, (Publishers: Longmans Green & Co.), and *Hulbert: BREATHING FOR VOICE PRODUCTION*, (Publishers: Novello & Co.)

When a teacher speaks to his pupils slowly and clearly the organs of speech which are apparent to them are usually the tongue, the teeth, and the lips. Recognizing this fact the teacher will ask his pupils to direct their attention to the position of these organs in the pronunciation of certain sounds. He will first of all take the simple sound common to most languages which is represented by the symbol "a:" He will call attention to the position of the lips and the flat position of the tongue. He may then proceed to give the sound "i:" and will make clear the altered position of vocal organs. From that sound he may proceed to the sound "u:" and will show the rounded position occupied by the lips. As the tongue in the pronunciation of the "u:" sound is not visible it will be necessary to tell the pupils that its position has changed and that the tongue instead of being raised at the front as is the case in giving the "i:" sound is raised at the back and he should seek to enable the pupils to gain control over the movements of their tongue by rapidly changing from "i:" to "u:", maintaining a fixed position with the lips. As the pupils are not always sure that they are imitating the teacher, they should be supplied

with hand mirrors so that they may test the accuracy of their imitation. After the pronunciation of the above three sounds the pupils may be taught the manner in which the "j" and the "w" sounds are produced. In the pronunciation of the "j" sound the tongue is raised at the front as high as it will go, and in the pronunciation of the "w" sound it is raised at the back to its utmost limit. The transition from "i" to "j" and from "u" to "w" is quite simple, but the pupils must be taught clearly the difference which exists in English between the sounds, because there is a great tendency amongst Indian pupils to substitute the consonantal-sounds for the vowel-sounds, e. g., *rit* is often substituted for *it* and *wonly* is substituted for *only*. The "w" sound is always a difficulty because it does not exist in the vernaculars, and the best way to secure a good pronunciation of the "w" sound is to exaggerate the rounded position occupied by the lips. The series of vowels represented in the "a:" to "i:" series is known as the "Front Series" because the tongue is gradually being raised at the front, and the "a:" to "u:" series is known as the "Back Series" because the tongue is gradually being raised at the back. The vowels occurring in the Front Series are a: æ, e; e, e; i, i: as in the words "ART, AT, AIR, END, EIGHT, IT, EAT." The vowels in the Back Series are: "o:" as in ON "o" as in OUGHT; "o" as in SOFA; "u" as in FOOT; "u" as in FOOD. The pupils should have regular Phonetic Drill in these sounds and practise the Front and Back Series until they are conversant with them. Special attention must be given to the vowel sounds which do not occur in the vernaculars. The sounds "æ", "o:", "o:", "e:....." do not occur and the sounds represented in the

vernaculars by "e" and "o" are, generally in English diphthongs and should be pronounced as "ei" and "ou"; as in the words "RAIL" and "NO." Other vowel sounds peculiar to English are the unaccented obscure vowel...e...as in the word REPORT...e... as in the word BIRD; "oi" as in the words "BOY" and "CHOICE." It is a good thing for pupils to pronounce these sounds in chorus provided sufficient privacy can be secured, for the repetition of the sound by the whole class tends to fix it in the memory of the pupils and a good teacher should be able to discover both by looking at the pupil and by hearing him whether he is uttering the correct sound or not.

In the treatment of consonantal sounds much attention should be given to detecting the difference between the voiced and voiceless consonants, and much practice should be given in sounding the various pairs of consonants together such as "p" and "b," "t" and "d," "f" and "v." Considerable attention should be directed to the task of producing the sounds of "f" and "v," "t" and "d," σ and θ , as these sounds are new to the vernacular. The position of the tongue for σ and θ and for the sounds "f" and "v" must be carefully noted and the slight explosive sound in the pronunciation of "t" and "d" requires particular attention. The difference between "v" and "w" must be clearly emphasised and contrasted with the sound in the vernaculars. Another consonantal sound which is frequently mispronounced is the sound of "z" which is often given the sound of "s", because it is frequently represented by the symbol "s"; e.g., in the word EYES, "z" is the final sound and not "s" as occurs in the word "ICE." Another consonantal sound which is often forgotten is the sound of "h." Because it is

sometimes omitted as in the words HOUR and HEIR and HONOUR, pupils frequently omit it in such words as HOUSE, HARD, HIM, &c. Special combinations of consonants are also important, e.g., "str.", "sw.", stretch, sweet.

PHONETIC SCRIPT.

We are all aware that English spelling is very unphonetic and one of the difficulties of correct pronunciation results from the peculiar orthography which is the possession of the English. The International Phonetic Association has drawn up a system of phonetic symbols which, if properly understood, enable any one to pronounce a word with accuracy. In the first year of teaching English it is very desirable that the pupils should refrain from learning anything which interferes with correct pronunciation. There is no doubt that the ordinary orthography acts as a deterrent in acquiring good pronunciation, and for that reason it should be avoided. At the same time, it is too much to expect a pupil to be able to remember all the sounds he has heard; and therefore, although writing should occupy a very insignificant place at the beginning of the study of English, it is very necessary that whatever writing is done should be in phonetic symbols. The objection brought against this is that there are very few books written in phonetic script and that therefore the pupil is unable to read English at all. Personally, I do not consider that a disadvantage, for it is one of the defects in the teaching of English that pupils are made to read English before they can talk it and before they understand what they are reading. A system of teaching English which keeps books out of the hands of pupils for at least the first few months in their study of the subject is to be welcomed. The only symbols of the sounds uttered by the pupils

should be the phonetic symbols which the pupils themselves with the help of their teacher have written. It is a good exercise for the pupils to group words according to the sounds which are common to them. After teaching the sound "e:" the pupils should group all the words together which contain that sound; e.g., HAIR, CHAIR, THEIR, FAIR; after teaching the sound "f," let them group together the words which occur in course of conversation, such as, FAN, FACT, FEET, FATHER.

Another objection brought against phonetic script is that it spoils the pupils' spelling. We have to admit that the pupil must sooner or later make use of the ordinary orthography, and it is surmised that those who have learnt to write in phonetic symbols will make some fearful howlers when they write the ordinary symbols. This is one of the fears which mitigate against the teaching of the phonetic script, but it is not a realised fear. The subject is so new in this country that few can definitely say that phonetic symbols lead to defective spelling; whereas those who are conversant with the subject can definitely say that the spelling of pupils trained by the new method is not inferior to that of those trained under the old method. If the teacher in his transition from the phonetic script to the ordinary script is careful to point out to the pupils the difference between correct pronunciation and correct spelling and to call attention to the appearance of the word, the pronunciation of which has long been familiar to the pupils, the emphasis placed on correct spelling by the new method will be much greater than that secured by the old method. It is a good exercise for the pupils to write in phonetic symbols a sentence or two in order to test the accuracy with which they hear sounds. But after the first year the phonetic

script should be sparingly used and emphasis placed on the ordinary spelling. Pupils should, of course, retain their knowledge of the phonetic symbols and whenever the teacher wishes to discriminate between sounds which seem to be somewhat alike, the difference can be well illustrated by writing the sounds on the black-board in phonetic script; e.g., YEWVS, YOUTHS, PRICE, PRIZE: ju:z, ju: sz, prais, prai:z.

When the speech sounds have been correctly uttered in single words, attention must be directed to their utterance in conjunction with other words; otherwise, an artificial pronunciation will be cultivated; e.g., the pupil learns the two words separately 'that' and 'book'; but often in rapid speech we do not wish to emphasise the word 'that' and we pronounce it simply as $\sigma\theta$. This leads us on to the question of stress and intonation in speech.

Stress depends upon the degree of force with which the air stream is expelled from the lungs, and it is the variety of stress in the English language which contrasts so strikingly with the absence of it in the vernaculars. As we all know, the subject is one of exceedingly great difficulty and it is useless for any teacher to attempt to define the rules of stress. Knowledge of the subject can only be learnt by the use of the word or words in speech and by reading phonetic scripts of passages with intonation curves such as have been prepared by Daniel Jones, Rippman, Sweet, Grant and Lloyd. Sweet in his NEW ENGLISH GRAMMAR discusses the subject of stress with his usual thoroughness.

This grouping of words together is sometimes called breath-grouping and implies that a certain number of sounds are uttered with each expiration and that the breath must be carefully sustained to the very end of the

phrase. The unaccented syllables must not be slurred over, but some of the articulatory movements will be reduced; e.g., HAND and HANDKERCHIEF; CHRIST and CHRISTMAS; DAY and SUNDAY; FORD and OXFORD; LAND and ISLAND.

Intonation is a question of pitch and alterations of pitch are produced by tightening the vocal cords for a high tone, loosening or shortening them for a low tone. How important this subject is every one knows who has listened to school boys reading aloud their texts. As a rule there is no variety in intonation, but a monotonous level is maintained throughout and very little meaning is conveyed by the pupils' effort. It is very often difficult to discover from the reading whether a question is being asked or a statement made or an exclamation expressed. Although the passage read indicates that a certain character is speaking either solemnly or jokingly the pupil usually ignores the mood of the speaker and reads the whole passage without feeling and without expression. So much variety of meaning can be conveyed by the tone of the voice that it is essential for good reading and speech to develop the tones of the boys and to show how various moods and emotions can be indicated by raised or lowered pitch of the voice.

PROSODY.

The bearing of all this on the subject of English Prosody must be evident. Without a knowledge of sounds, accentuation and rhyme, poetry cannot be appreciated and scansion cannot be attempted. Because the subject of phonetics has not received very much consideration hitherto, the subject of scansion presumably has been neglected. Yet how is it possible for a pupil to appreciate poetry, and

to read it with appreciation without a knowledge of the metre employed? As Bradley observes in his book *THE MAKING OF ENGLISH*, "the sound of a word has a real intrinsic significance; for instance, a word with long vowels which we naturally utter slowly suggests the idea of slow movement. Repetition of the same consonant suggests the repetition of movement; slow if the vowels be long, and rapid if the vowels be short. The vowels that are produced by the passage of the breath through a narrow opening, such as, i and i, are suited to convey a notion of something slender or slight, while a full vowel, such as u, suggests a massive object. A syllable ending in a stopped consonant, especially an unvoiced one, like "p", "t" or "k", preceded by a short vowel, affords a natural expression for the idea of some quick and abrupt action. Sequences of consonants which are harsh to the ear or involve difficult muscular effort in utterance are felt to be appropriate in words descriptive of harsh or violent movement."

Such explanations as these are unintelligible to the pupils who have not studied the sounds of English and therefore a great deal of the profit that may be derived by a study of poetry is denied to them.

THE HISTORY OF SOUNDS.

When the pupils have studied the spoken language of to-day a necessary part of their training in English is a study of the history of the English language. Pupils should know something of the changes which have taken place in the development of English, and the changes in words correspond to a change in sounds. Once phonetics has been studied, phonology may receive some attention and not be relegated to the college course

The study of the history of the language will enlarge the pupil's views of the living element in a language and perhaps incidentally teach him to recognise the folly of trying to limit his own language to the written forms of past ages. If this fact were recognised there would not now be the divergence between the written and spoken language of the vernaculars; for on the analogy of English the written forms would change with the spoken forms and be a record of the spoken language of to-day. A study of sound-laws is the study of the observed facts of pronunciation of a given language at a particular period. Pupils are interested in the subject and a comparison of the English of to-day with that of previous centuries together with a contrast with the Aryan forms of the remote past cannot fail to promote interest and stimulate further inquiry.

PHONETICS AND REFORMED SPELLING.

What is to be the attitude of the teacher of phonetics to the subject of reformed spelling? He is conscious of a radical difference that exists between phonetic spelling and the orthodox script. At the same time he is particular to teach the difference that exists between the two and is insistent on the latter. Our spelling is out of date and no longer represents the sounds as pronounced to-day. Printing has done much to fix the standard of spelling and has checked the progress of the written language. There are those who wish to reform spelling and to make it phonetic. The teacher of English, however much he may be in sympathy with the movement, usually feels that it is impossible and inadvisable for him to teach reformed spelling until there is a consensus of opinion as to what extent reform is permissible. The school that teaches the reformed spelling will probably find that its pupils have a difficulty in obtain-

ing situations and therefore until there is a general opinion in favour of certain reforms it will find it necessary to adhere to the old spelling. Yet surely some reform on a small scale is possible and the example of America in gradually year by year introducing a new spelling of a few words may well be followed. Is it not possible, by means of school textbooks, to gradually introduce a new spelling of certain words which shall be accepted by most people and could not the University be the power to decide which words admit of an alteration in their spelling? The amount of time that pupils now spend in cramming up an artificial spelling is enormous and this time would be saved and more profitably devoted to developing a genuine lasting love of literature, and an acquaintance with the sayings of the greatest of our literary artists if reformed spelling were considered desirable and generally adopted.

AIDS TO THE TEACHER OF PHONETICS.

Charts of the vocal organs, such as are published by The Cambridge University Press and models of the organs of speech are useful for pupils of the higher forms. There is also a series of sound charts prepared by Messrs. Friedrich Rausch and Daniel Jones and published by Dent & Co. Diagrams of the position of the tongue occupied in the pronunciation of vowels and consonants appear in most of the books on phonetics and a list of these books is published by the International Phonetic Association. Frequent reference to the subject of the teaching of phonetics is made in the *MODERN LANGUAGE TEACHING*, a magazine published by A. & C. Black, Soho Square, London W., and teachers of English in India will always derive much benefit from a perusal of its contents. An English Phonetic Dictionary, pre-

pared by Michælis and Jones, has recently been published and is worthy of a place in every school library. Another aid, especially useful in schools where English-born teachers are not to be found, is the gramophone. Teachers experience difficulty in always pronouncing the same word in the same way and they certainly find it rather monotonous to be continually operating before their pupils. Now, in a gramophone the advantages are obvious, if the records have been well made. There is a breath of English atmosphere, intonation and pitch about a gramophone which is not always apparent in an Indian teacher and it certainly can minister to the delight and improvement of the class without necessitating any expenditure of energy on the part of the teacher. Of course it has its limitations and it can never take the place of a teacher, but it can supplement his work. Mr. Daniel Jones has written a book entitled *Phonetic Readings in English*, published by Carl Winter, Heidelberg, and gramophone records have been prepared of the whole of the anecdotes contained in that book. They belong to the series known as the English Educational Records and may be obtained from any agent of the gramophone company. One word of warning, however, must be uttered to the effect that the pronunciation represents that of the educated classes in the south of England and there is grave doubt as to whether that pronunciation is typical of the educated classes of England and Scotland. The difficulty of fixing the standard of pronunciation is always felt and the teacher of phonetics will have to decide which standard he considers it desirable to adopt and having once fixed that standard he must endeavour to abide by it, or otherwise there will be "confusion worse confounded."

MEMORANDUM ON MODERN TELUGU

BY

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MODERN Telugu is the Telugu now spoken by the educated classes of the Telugu community living in the Telugu country. It is, for all practical purposes, uniform except in the border-districts where contact with other languages has affected the idiom. As a general rule a writer ought to use in his composition only such forms and such vocabulary as occur in the polite conversation of educated Telugu gentlemen and ladies of the upper classes. It goes without saying that the so-called vulgar forms of the uncultivated dialects as well as obsolete grammatical forms and expressions should be avoided, except when they are used in proverbs, etc.; if it is the aim to secure as many readers as possible. It is allowable to use not only Sanskrit words but words from other languages if they are current. 'Coined words' should be avoided.

A few points are mentioned to indicate what is meant by the brief description given above.

Forms of Words.

(1) The written symbols should represent as far as practicable the sounds of the word as heard in careful, deliberate, formal utterance. The word is the unit of composition. Each word should be written separately except in compounds in which Sandhi is compulsory; e.g., debbalādu (దెబ్బలాడు); rāniyyi (రానియ్యి). In other places Sandhi is unnecessary, absolutely in books written for young children, e.g., ēmi kāya (ఏమి కాయ); ēmi tshira (ఏమి తీర); ēmi nāra (ఏమి నార), etc.; not ēnkaya (ఏంకాయ), ēntshira (ఏంతీర), ēnnāra (ఏన్నార).

(2) Half anuswara (◌̣) and R (ఱ) should be given up.

(3) The vowels in words like elaka (ఎలక), tshilaka (తిలక), marudulu (మరుదులు), in modern Telugu, are due to the Law of Vocalic Harmony and are therefore right, though in an older stage of the language the forms were different from what they now are.

(4) The final vowels in such words as vadine (వడినే) may be written according to the best usage with which the writer is acquainted.

(5) The medial and (in some words) the final consonants may be either voiced or unvoiced, e.g., vetiki (వెతికి) or vediki (వెడికి) and tshituku (తితుకు) or tshiduku (తిడుకు).

(6) When two consonants in a word are assimilated owing to the disappearance of the intervening vowel as in mappu (మప్పు), the older form marapu (మరపు) should not be used. But forms like lāgaku (లాగకు), kālālō (కలాలో) should not be written lakku (లాక్కు) and kallō (కల్లో). As a rule, if the restoration of a lost vowel looks pedantic, it should be dropped, e.g., untu (ఉంతు) not unntu (ఉన్తు), vaddu (వడ్డు) not valadu (వలడు).

N.B.—No rules can be laid down for guidance in such cases. It is better left to the discretion of the writer.

(7) The augments 'y' (య) and 'n' (న్) have almost disappeared in modern Telugu, e.g., Old Telugu adiyā? (అదియ) = Modern Telugu adā? (అదా?). Old Telugu dānilō nunnadi (దానిలో నున్నది) = Modern Telugu dānilō un(na)di (దానిలో ఉన్నది ఉంది, ఉంది).

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(8) The variants in-mmu (ఁమ్మ); -mbu (ఁబు) of words ending in-mu (ము) as gurrammu, gurrambu, for gurramu, should be avoided as well as variants of other words when they are out of use.

(9) The r in such words as kīḍḍu (కీడ్డు) pratti (ప్రత్తి) has disappeared.

(10) Foreign words should be written as far as practicable in the way foreigners pronounce them unless they have been already modified in the current usage. (E.g., rulu (రూలు), iḍḍu (ఐడ్డు); kal ktaru (కలక్టరు), not kalakṭaru (కలక్టరు).

(11) The compensatory length of vowels should be fully represented, e.g., kūlā (కూలా) = Old Telugu kūlan (కూడన్); tshālā (తశాలా); arē (ఆరే) = Old Telugu andu (అనడు); aitē (ఐతే) = Old Telugu ait (iv) enin. (ఐవేనెన్).

(12) The length of a vowel due to emphasis should be fully represented; adā (అదా); adī rikalamu (అదీరికలము); aiḍā (ఐనా), iḱḱā (ఐంకా).

(13) The length of a vowel due to the dropping of the conjunctive particle u should be represented as in vadū nēnū (వాదూ నేనూ).

(14) So also the lengthening of the consonant as in vādunnū (వాడున్నూ).

(15) In case the letters of the traditional alphabet do not accurately represent the sounds of the modern spoken Telugu, some modifiers may be used.

Declension.

1. Obsolete plurals like vāndru (వాంద్రు), kālulu (కాలలు), iḍḍulu (ఐడ్డులు), are to be

avoided. Vāllu or vāṇḍḍu (వాల్లు or వాండ్లు), kṣāḷḷa (కాళ్లు), illu or iṇḍḍu (ఇల్లు or ఇండ్లు), are to be used instead.

2. Pronominal forms like, ēnu (ఏను), ēmu (ఏము) are obsolete. Nēnu (నేను) and mēmu (మేము) alone are current. Nānu (నాను) and māmu (మాము) belong to low-caste dialects.

3. Honorific forms like āyana (ఆయన), vāru (వారు), gāru (గారు) which Old Telugu ignores are to be used when required. Modern Telugu distinguishes between amma-gāru (అమ్మగారు) and amma-vāru (అమ్మవారు); attagāru (అత్తగారు) and attavāru (అత్తవారు); rāzugāru tshinnavāru (రాజుగారు చిన్నవారు) and ā pillalu tshinnavāḷḷu (or vāṇḍḍu) [ఆ పిల్లలు చిన్నవాళ్లు (వాండ్లు)].

4. The modern declension of vādu (వాడు) is vāḍini (వాడిని) or vānni (వాణ్ణి), vāḍi (వాడి), vāḍiki (వాడికి), etc.

5. Vāni (వాని), vāniki (వానికి) should not be used as the genitive and the dative of the neuter plural; in their place vāṭi (వాటి), vāṭiki (వాటికి) should be used.

6. Such forms as gurigālu, gurigāla, gurigāḷaku, gurigāṇiki or gurigāṇaku (గుర్రాలు, గుర్రాల, గుర్రాలకు, గుర్రానికి), have become current; however, the forms gurramulu, gurramula, gurramulaku, gurramunaku (గుర్రములు, గుర్రముల, గుర్రములకు, గుర్రమునకు) may be used if preferred.

7. The so-called case suffixes ponte (పాంటె), kole (కోలె), kinai (కినై), or kunai (కునై), guritshi (గురితీ), kūrishi (కూరితీ), etc., are all obsolete.

8. Tsheta (తేత) should be used instead of tshetan or tshen (తేతన్ or తేన్), and to (తో) or toda (తోడ) instead of tōn or tōḍan (తోన్ or తోడన్).

9. Such genitive constructions as ā-dēsa-muna-varu (ఆ దేశమునవారు), nātsheppinamāṭa (నా చెప్పినమాట) are obsolete.

10. Nuntshi (నంచీ) may be used as well as nuntḍi (నండి). Both of them are to be added on to the Genitive (or the Crude) form e.g., akkḍa (or i) nuntḍi or akkḍa (or i) nuntshi (అక్కడ (or డి) నండి), or (అక్కడ (or డి) నంచీ).

11. Kēsi (కేసి), kōsaramu (కోసరము), kōsamu (కోసము), valla (వల్ల) instead of valana (వలన) may be used.

12. Yokka (యొక్క) is modern; but it is unnecessary to use it in connection with every possessive form.

Conjugation.

1. Kottḍunu (కొట్టెను), kottunu (కొట్టును) are obsolete either as present or future forms.

2. Kottudun (కొట్టుదున్), kottan (కొట్టె), kottinan (కొట్టిన), kottangan (కొట్టంగ) are obsolete.

3. Kottutsun, kottu'su nuntḍini (కొట్టుచున్, కొట్టుచుండిని) are obsolete.

4. Kottitivā (కొట్టివా) (as subjunctive), kottuduna? (కొట్టుచునా?) (as an interrogative) are still current.

5. a as an emphatic particle, e or ē as an interrogative particle as in nēna (నేన) = I myself and rāvē? (రావే) = did you not come? are obsolete.

6. Kottuṭa (కొట్టుట), kottatam (కొట్టటమ్), kottadam (కొట్టడమ్), may be used.

7. The following forms are current:—Kottutunḍanu (కొట్టుతున్నాను), Kottinḍanu (కొట్టినాను) or Kottanu (కొట్టాను), Kottutḍanu (కొట్టుతాను); Kottanu (కొట్టును), Kottalēdu (కొట్టలేదు); Kottadāmulēdu (కొట్టడములేదు), Kottagalānu (కొట్టగలను) = I can strike; Kottalēnu (కొట్టలేను), Kottadāniki (కొట్టడానికి), Kottudunu (కొట్టుచును) = I should or would have beaten; Kottu (కొట్టు); Kottandi (కొట్టండి); Kottaku (కొట్టకు); Kottakandi (కొట్టకండి), Kottudānu (కొట్టుదాను) — used only in the first person plural (= let us strike); Kottavalēnu (కొట్టవలెను); Kottavatsunu (కొట్టవచ్చును), Kottakūḍadu (కొట్టకూడదు), Kottitē (కొట్టితే), Kottina-ēḍala (కొట్టినడల), Kottinatlaite (కొట్టినట్లైతే), etc., Kottakunṭe (కొట్టకుంటే), Kottakapote (కొట్టకపోతే), Kottani-ēḍala (కొట్టనిడల), Kottutū (కొట్టుతూ), Kottaka (కొట్టక), Kotti (కొట్టి).

8. Modern optional forms:—Kottanū ledū, tittanū ledū (కొట్టనూలేదు, తిట్టనూలేదు) Kottālēdu, tittālēdu (కొట్టాలేదు, తిట్టాలేదు) (vide I 13) may be used.

9. There is vast difference between old usage and modern usage in the case of common Verbs, some of which are used as Auxiliaries and occur in thousands of idiomatic expressions. Old Telugu, nākadī valayun (నాకడివలయున్) = Modern Telugu, nākadī kavalēnu (నాకడి కావలెను); Old Telugu nāku dzhēyārādu (నాకు జేయరాదు); nākudzheḃyagādu (నాకుజేయకరాదు) = Modern Telugu nēnu tshēya kūḍādu (నేను చేయకూడదు). Old Telugu

vādu pāren (వాడు పారెన్) = Modern Telugu vādu pāripōyinādu (వాడు పారిపోయినాడు).

Veyi, vesi (వేయి, వేసి), etc., are indispensable to Modern Telugu. Its older form vaitsi (వైచి) is quite obsolete; so also its infinitive vaivan (వైవన్), so that Old Telugu vaiva rādu (వైవరాదు) = Modern Telugu veyarādu or vēya kūḍādu (వేయకూడదు).

Such idiomatic phrases as Ākali-gā unnadi- (ఆకలిగా ఉన్నది) or a kaliavēstūn(na)di (ఆకలి వేస్తూ ఉన్నది); bhayam vēstundi (భయంవేస్తుంది), pitshi-ettindi (పిచ్చి ఎత్తంది) or pitshi-pattinadi, (పిచ్చి పట్టినది) must be used freely instead of Old Telugu ākuli vōdaminadi (ఆకలి వాడమినది), bhayamu gadirinadi (భయము గదిరినది), which are quite obsolete.

10. Telugu has no passive voice. The paḍu (పడు) form may, be used only in its proper sense as in adi kanabāḍadu (అది కనబడదు). It is wrong to say nātsheṭa untsa-badina (నాచేతనుంజబడిన) for nēnu untshina (నేను ఉంచిన), unless the meaning intended is 'what I happened to place.'

Arrangement of Words.

In modern speech the arrangement of words follows the order quite natural to the Telugu mind and that order is most forcible and expressive. Writers will do well to follow and write as the words naturally follow each other. Thus inverted forms like evaru rammannāru ninnu? (ఎవరు రమ్మన్నారు నిన్ను?), Vatsheḍāṇḍiinta sēpatiki misala duvvu kontunnu nabābugārilāgu! (వచ్చాడండి ఇంత సేపటికి మీసాలు దువ్వకొంటున్నానబదుగాని!) Vellā gāne aḍugutāḍu gāoi mānāḍē enduku

tshesināvu kāvu tsheppina pani ani emi tseyā dam? (తెల్ల నీటి అడుగుతామనాని చూడడే, ఎందుకు చేసినావు కావు, చెప్పినది ఆది—ఏమిచేయడం), need not be avoided, when natural.

Synonyms.

Telugu dictionaries (modern or mediæval) ignore all distinctions between synonymous words, e.g., kaka (కాక), vetša (వెచ్చ), vēdi (వేడి) uś-nām (ఉష్ణం) are used in colloquial Telugu each in its special sense; but so-called literary Telugu uses them indiscriminately. It is besides thought that all possible synonyms of concrete nouns should be used in a passage to avoid repetition. This, instead of being a grace of style, is in reality a mark of a vicious style. When a story is written about a kākī (కాకి) it is best to call it a kākī (కాకి) throughout, just as when a man tells a story about himself he uses I (నేను) throughout and does not hunt for synonyms for the first personal pronoun.

Even grammatical forms supposed to represent the same relations contain subtle distinctions: thus vāḍina tsheppalēdu (వాడైనా చెప్పలేదు) is different from vāḍu kūḍā tsheppalēdu (వాడుకూడా చెప్పలేదు), tirigī (తిరిగి) is different from tirigi (తిరిగి); tarugu (తరుగు) naraku (నరకు), koyyi (కొయ్యి), tempu (తెంపు), tentsu (తెంచు), tshiru (తీరు), tshintsu (చించు), tabilisū (టాబ్లెట్), etc., are all carefully discriminated in practical life. Modern writers should therefore follow modern usage and should not rely on lexicons of the so-called literary language.

Obsolete Words and Senses.

Thousands of words in the dictionary are obsolete; they should not be used. Many

have changed their meaning and application: tsī ira (తీర), kampu (కంపు), rēpu (రేపు), tegulu (తెగులు), nō su (నోచు), tēlu (తేలు): such words should be used according to modern usage.

Sanskrit Words.

Many Sanskrit words naturalized in Telugu have a sense different from what they have in Sanskrit, e.g., abhyantaram (అభ్యంతరం), māyāda (మాయాద), āgraham (ఆగ్రహం), rudzuvu (రుద్రువు), anna-ānam (అన్నానామ), nidzam (నిజం). Such words should not be used in their original sense. In the case of others, Sanskrit usage must be followed, subject to the distinctions established in Modern Telugu, e.g., gurudu (గురుడు)—'planet Venus'; guruvu (గురువు)—'teacher'; dantam (దంతం) and pannu or pallu (పంపు or పల్లు) are not the same.

So-called Hybrids—Some compounds made of Sanskrit and Telugu words have been accepted by Pandits, because they have been used by old poets, e.g., karakaṇṭhūdu (కరకంఠుడు). It is irrational to object to the use of similar later formations which are freely used by the people in daily life, e.g., duralavāṭu (దురలవాటు), if they express ideas naturally. Compounds of English and Telugu words and Hindustani and Telugu words, too, have become naturalized, e.g., rail baṭṭi (రైలుబండి).

Tadbhavas.

Some of these which occur in literary Telugu, e.g., nānisi (నానీసి) are not in use now. They are to be avoided. Others have come into use which were never used in old literature, e.g., manishi (మనిషి).

HEAT: A DETAILED SYLLABUS.

THERMOMETRY.

DEFINITION of temperature. Flow of heat: temperature analogous to level, pressure, pitch or potential. Comparison of temperatures: the sense of touch not a sure guide (Glazebrook, p. 10; Gregory & Simmons I, p. 95.) Some other method of measuring temperature. The effects of heat: change of state or size or temperature. How expansion may indicate temperature. Choice of thermometric substance: Solids, liquids, gases: mercury, water, alcohol. Conditions to be satisfied by the stem and bulb (Gregory and Simmons, pp. 95-96). The fixed points: fundamental interval: scales of temperature. Definition of degree. Conversion of degrees from one scale to another. Graphical exercises; interpolation; finding the equation of the graph.

Construction of a mercury thermometer. Determination of the fixed points: precautions to be taken. Graduation of a mercury thermometer. Comparison of the mercury and other thermometers. Reasons for selecting mercury as a thermometric substance.

Comparison of two thermometers: Graph to show correction. (Woolcombe, Exp. 3.) *Find the error in the lower fixed point.* (Woolcombe, Exp. 4.) *Find the error in the Boiling point taking into account the pressure of the air.* (Woolcombe, Exp. 5 Sinclair, Exp. 17.) Special forms: Rutherford's, Clinical, Six's.

PROBLEMS.

Why must the space above the mercury in a thermometer be free from air?—Why is the wall of the bulb of a thermometer very thin, while the wall of the stem is thick?—What would be the effect of (a) increasing the size of the bulb; (b) decreasing the width

of the stem of a thermometer?—Why is a small thermometer better than a large one for scientific purposes? Mention some of the disadvantages of small thermometers compared with larger ones.—Is it correct to say that the temperature of one body is twice as great as that of another?—Why is a fever thermometer made with a very long cylindrical bulb instead of a spherical one?—In view of the fact that alcohol expands quite irregularly, what would be the best way to graduate an alcohol thermometer?—

A thermometer provided with both a Centigrade and a Fahrenheit scale was used in taking the temperature of a room. The sum of the readings was found to be 88. What was the reading on each scale?—What is the temperature of an oil bath, when the reading on a Fahrenheit thermometer standing in the oil is twice that of a centigrade?—What is that temperature at which the reading of a Fahrenheit thermometer is as far above zero as it is below zero on the Centigrade scale?—A thermometer is graduated so that it reads 15 in melting ice and 60 in normal steam; convert into degrees Centigrade, the readings 20 & 90 taken on that thermometer.—The boiling point of water according to a certain thermometer is found to be 98.5 C. when the barometer pressure is 745 m.m. What is the error of the thermometer at this boiling point?—What is the correct temperature when this thermometer reads 30 degrees C.; assuming the zero point correct?—If a thermometer reads one degree C. in melting ice, what is the correct temperature when this thermometer reads 22 degrees C.; assuming that the boiling point is right?—In a certain experiment only the bulb of a thermometer is exposed to the temperature that it is desired to measure. If this temper-

ature is above that of the room, will the reading of the instrument be too large or too small?

EXPANSION OF SOLIDS.

Rough experiments (Bar and gauge and Gravesande's apparatus) to show both linear and cubical expansion in solids. To show that different bodies expand differently when raised to the same temperature (Exp. 9, Glazebrook): *To measure the co-efficient of linear expansion of a rod* (Sinclair, Exp. 19; Gregory and Hadley, Exp. 115) Exp. 12, Woolcombe may be reserved for demonstration. The co-efficient for platinum the same as for glass. Relation between the co-efficients of linear, superficial and cubical expansion. (The determination of the co-efficient of cubical expansion of glass or of a solid—Woolcombe, Expts. 13, 14, 15).

Practical consequences of expansion—Graham's mercurial pendulum, Harrison's Gridiron pendulum, balance wheel of a watch, dial thermometer, Trevelyan's Rocker.

Effects of expansion: large iron girders, gas and water pipes, furnace bars, rails.

The force exerted by a body in cooling—(Exercise 9, page 30, Sinclair)—advantage taken of this force in drawing together walls that have deviated from the vertical, in fixing iron tyres to a cart wheel, in the manufacture of large guns. Rupert's drops, Bologna vials, Annealing glass.

PROBLEMS.

A stiff brass wire, nearly half a metre long, is supported stably like the beam of a balance. When the wire rests horizontally, one arm is warmed. Why does the heated side sink?—A long glass tube is fixed at one end in a clamp so that it stands in a horizontal posi-

tion with its free end just opposite to a mark. Place a flame under the tube and heat it. The free end first goes above the mark and then gradually goes below it. Explain.—A glass rod is graduated in millimetres and is correct at 0 degree; a rod of steel is graduated in millimetres and is correct at 15 degrees. At what temperature (above 15 degrees) will the lengths of the divisions on the two scales be equal.—A copper rod is inserted in a glass tube so that they coincide at one end. If the co-efficient of linear expansion of copper is double that of glass, and the length of the tube at 0 degree C. double that of the rod, show that the distance between the other ends of the tube and rod will be the same at all temperatures.—Explain why glass stoppers can often be loosened by carefully heating the neck of the bottle.—How would you construct a large metal rod so that its length would not vary at all with the temperature?—What substance possesses a very small co-efficient of expansion? What use can be made of it (Invar 0.000,009)? The density of lead at 0 degree C. is 11.4 gr. per c.cm. Find its density at 200 degrees C. (Co-eff. of exp., 0.00029).—The brass pendulum of a clock beats seconds exactly at 25 degrees C. How many seconds a day will the clock gain if the temperature falls to 0 degree C.?

EXPANSION OF LIQUIDS.

To find the effect of heat on liquids (Exp. 20, Sinclair). Different liquids expand by different amounts. Do liquids expand regularly? (Expts. 5 & 6, Rintoul). Comparison of the mercury and other thermometers. Density of water when heated—Cold water float (Expt. 9, Rintoul).

Ideas of absolute and relative dilatation (Glazebrook, p. 76). Co-efficient of absolute

dilatation=Co-efficient of cubical expansion of glass+co-efficient of apparent expansion of liquid (Jones, p. 47). *To measure the co-efficient of apparent expansion of a liquid* (Sinclair, Exp. 21, Hadley, Expts. 117, 118).

(Determination of the same by the bulb tube, Woolcombe, Exp. 17. Determination of the co-efficient of cubical expansion of mercury at different temperatures by the density bottle. Woolcombe, Exp. 21. Determination of the co-efficient of cubical expansion of a liquid by Matthiessen's method. Woolcombe, Exp. 22).

Corrections to be applied to the reading of a barometer. (Woolcombe, Art. 1).

Maximum Density of water. (Exp. 22, Sinclair, Expts. 19, 20, Glazebrook or Exp. on page 280, Narasu's Physics). Draw two graphs (1) showing the relation between t and v (2) showing the relation between density and temperature of water (See Physical Table 13, page 559, Gregory and Hadley). The part played by the anomalous expansion of water in the economy of nature. Graphic representation of the change of volume and temperature accompanying changes of state of water.

PROBLEMS.

Alcohol is found to be about 3 per cent. more in volume during summer than during winter. How can a sharp spirit dealer take advantage of this?—A hollow sphere of metal is so constructed that it floats in water at 9 degrees C. with almost the whole of it below the surface of water. Explain what happens (1) when the water is heated above 9 degrees C.; (2) when the water is cooled from 9 degrees C. to 0 degree C.

Describe in detail the process of freezing of a pond until the ice is strong enough to support heavy loads. What would be the

effect on its bearing power of breaking the ice all round the edge?—On a cold winter day when the temperature of the air is 10 degrees C. below zero, a hole is made in the ice of a deep pond and the temperature is observed at various depths. What kind of a thermometer would you propose as most suitable for the purpose? What variations would you expect to find? Give reasons for your answers.—Exercises 1, 7, 11, 12, 13, Gregory and Hadley, pp. 171-172. Examples 6, 7, Glazebrook, page 95.

EXPANSION OF GASES.

Effect of heat on gases. (Exp. 23, Sinclair). Exercise 1, page 46, Sinclair. Galileo's thermometer, indications depend not only on the temperature but also on the pressure of the air.

To measure the co-efficient of expansion of a gas at constant pressure (Exp. 24, first and second method, Sinclair; Expts. 24 and 25, Woolcombe.) An interesting method due to Mr. N. H. Williams of Indianapolis is described in Chute's Laboratory Manual, Exp. 88, pages 159-160. Charles's Law. Graphical representation of results: Absolute zero. Prove that the volume is proportional to the absolute temperature. Charles's Law and Boyle's Law combined. Problems on reduction of volumes to N. T. P. (See Macnair, Art. 71, Note to the teacher).

The co-efficient of increase of pressure when the volume is constant. (Sinclair, Exp. 25; Woolcombe, Exp. 26). Description of an air-thermometer.

Relative merits of gases and mercury as thermometric substances. How 150 degrees C. or + 1000 degrees C. have been determined. Definition of a degree Centigrade on air ther-

mometer in terms of increase of volume or of pressure. Differential air thermometer

PROBLEMS.

Compare the amount of oxygen taken into the lungs at one inhalation in summer when the temperature is 30 degrees C. with that inhaled in winter when the temperature is 20 degrees C. Exercises 16, 17, 18, 19, Gregory and Hadley, p. 172.

CALORIMETRY—SPECIFIC HEAT.

Distinction between heat and temperature. High and low temperatures. Similarity of temperature and water-level. Changes of water-level in communicating vessels of the same size. Mixture of equal weights of hot and cold water (Exp. 122, Gregory and Hadley). Changes of water-level in communicating vessels of unequal size. Loss and gain of heat (Exp. 123, Gregory and Hadley). Mixture of unequal masses of hot and cold water (Exp. 124, Gregory and Hadley). Heating effect of water depends upon its mass and temperature. Unit quantity of heat. Calculation of the number of units of heat in water.

Relative capacity for heat. Analogy between fluid level and heat capacity. The same quantity of heat produces different changes of temperature (Exp. 125, Gregory and Hadley). Comparison of the rate at which water and mercury gain heat (Exp. 126, Gregory and Hadley). Different quantities of heat in equal weights of different substances at the same temperature (Exp. 127, Gregory and Hadley). Comparison of capacities of bodies for heat and capacities of vessels for water. Relative capacities for heat. Substances experimented arranged in the order of their capacities for heat. Results in nature of the high capacity of water for heat. Illustration

of different amounts of heat in balls of lead, iron, bismuth, tin, &c., taken out of hot oil and dropped simultaneously on a cake of bees-wax.

Definition of specific heat. Relative capacity and relative density. Specific heat and specific gravity.

Determination of the water equivalent of a calorimeter (Expt. 28, Sinclair, Woolcombe, Exp. 27, 28, 29, Rintoul.) Relation between water-value and heat capacity. *Specific heat of a solid* (method of mixtures) Exp. 29, Sinclair and Woolcombe.

Determination of the specific heat of a solid lighter than water or of one that sticks to the test tube (Woolcombe, Exp. 30).

Determination of the specific heat of a liquid, e.g., mercury or turpentine by the method of mixtures (Woolcombe, Expts. 32, 33, Sinclair, Exp. 30, first method).

Determination of the specific heat of a liquid by using a solid of known specific heat instead of a second liquid (Sinclair, Exp. 30, second method, Woolcombe, 34).

PROBLEMS.

Under the equator the surface of the sea scarcely attains a temperature of 30 degrees C., while the sand of the Sahara becomes heated to 70 degrees C. Why?—Why is mercury used in thermometers?—A piece of platinum weighing 100 grams is taken from a furnace and plunged instantly into 500 grams of water at 20 degrees C. The temperature of the water rises to 30 degrees C. What is the temperature of the furnace, if the specific heat of platinum is 0.032?—For the purpose of a foot-warmer, which is preferable, a bottle containing 10 lbs. of water or a 10 lbs. block of iron, both initially at 100 degrees C?

Explain your answer.—On entering the sea on a summer morning the water feels cold, but in the evening it feels warm. Explain this.—A piece of tinned iron is found to have a specific heat of 0.09. What is the percentage of iron and of tin present?—If the specific heat of copper is 0.093 when the Centigrade scale is used, what would it be if the Fahrenheit scale were used?—A mass of 250 gr. of copper is heated to 100 degrees C. and placed in 100 gr. of alcohol at 10 degrees C. contained in a copper calorimeter whose water equivalent is 20 gr. The temperature rises to 30 degrees C, find the specific heat of alcohol.

SOLUTION, FUSION, SOLIDIFICATION.

Melting points of crystalline and amorphous substances. Melting points of alloys, e.g. soft solder. To find what happens when ice is heated (Exp. 6, Sinclair). *To find the melting point of paraffin wax* (Sinclair 8, 35; Woolcombe, 6, 7.)

To determine the melting point of an alloy (Woolcombe, 8). Temperature remains constant during the process. To find the relative density of ice (Exp. 7, Sinclair) contrast the behaviour of ice with that of paraffin or stearine. Other exceptions, cast iron, type-metal, antimony, &c. Advantage taken of their exceptional behaviour. Relation between melting point and pressure. Bottomley's Expt. (Sinclair, Exp. 9; Glazebrook, Art. 108 (2).) Glacier motion.

Determination of the latent heat of fusion of ice (Sinclair, Exp. 32, Woolcombe, 37). *Determination of the heat of fusion of paraffin* (Woolcombe, 38, 39). Importance in nature of the high latent heat of fusion of ice. Determination of the specific heat of a solid by the fusion of ice (Woolcombe, 31).

XIX

To find the amount of heat absorbed when salt is dissolved in water (Woolcombe, 36, Sinclair, 34.) To find the effect of solids on the melting point of ice (Exp. 10, Sinclair). To find if the melting point of ice varies with the amount of salt present (Exp. 11, Sinclair). Freezing mixtures:

2 parts of pounded ice and
3 parts of crystals of Cal. Chloride. } —50°C
Ice and ice-cream. Fahrenheit zero.

Solidification:—To observe the development of heat produced by solidification (Exp. 29, Glazebrook; Exp. Fig. 349, Narasu's Physics. Exp. 21, Millikan and Gale's Laboratory Physics).

PROBLEMS.

Sinclair, Exp. 9, Questions 1 and 3.

Why are gold coins stamped not cast?—If the latent heat of fusion of ice is 80 when the Centigrade scale is used, what would it be when the Fahrenheit scale is used?—Explain why salt is sometimes thrown on icy sidewalks on cold winter days.—Give two reasons why the ocean freezes less easily than the lakes.—How does the presence of the tubs of water in a cellar tend to prevent the freezing of vegetables?—How do you account for the leaking of water pipes after a severe frost? How can you prevent the pipes from being burst?—Explain why the ice of a pond, which has just frozen, is sometimes found to be overhanging the edges.

EBULLITION AND LATENT HEAT OF STEAM.

Different liquids have different boiling points. *To find the boiling point of liquids* (Exp. 12, Sinclair; Woolcombe, Exp. 9). Determination of the boiling point of a saline solution by the air thermometer. (See also Woolcombe, Exp. 27, too high). To find the effect of impurities on the boiling point of

water (Exp. 13, Sinclair). To find if the boiling point of water varies with the amount of salt present in the water (Sinclair, Exp. 14; Woolcombe, Exp. 11.)

Graphic representation of the relation between the boiling point of a solution of common salt in water and the amount of salt present from data given in Physical Table No. 19, Gregory and Hadley. To find the effect of increase or decrease of pressure on the boiling point of water (Sinclair, Exp. 15; Rintoul 22). Place a flask containing hot water and a thermometer in the receiver of an air-pump and exhaust the air. To show the relation between the temperature at which water boils and the pressure to which it is subject (Ex. 57, Crew and Tatnall). A simpler form is also described in Narasim's Physics, page 310. Precautions to be taken in marking the boiling point of a thermometer. Hypsometry. Papin's digester.

Latent heat of vaporisation of water. (Sinclair, Exp. 33; Woolcombe, 40). *Determination of the heat of vaporisation of alcohol* (Woolcombe, Exp. 41). Refining sugar. Importance in nature of the high latent heat of vaporisation of water.

PROBLEMS.

Why do fine bubbles rise in a vessel of water which is being heated long before the boiling point is reached? How can you distinguish between this phenomenon and boiling?—Why does steam produce so much more severe burns than hot water of the same temperature?—Explain why a tea kettle sings before it begins to boil. Why does a large deposit of dew prevent the temperature of the air from falling very low? (Exercise 3 of Exp. 15, Sinclair).

EVAPORATION, VAPOUR PRESSURE, HYGROMETRY.

Difference between evaporation and ebullition. The effect of temperature, pressure, extent of surface and a current of air on the rate at which water or alcohol evaporates. Comparison of the rate of evaporation of several liquids, say, water, alcohol, carbon-di-sulphide, ether, oil. The presence of moisture in the air demonstrated. Cooling caused by evaporation (Gregory and Hadley, Exp. 133). Freezing of water by evaporation of ether (Exp. 134, Gregory and Hadley). Ice-machines and their construction (See Gorton's Physics, Art. 21). Advantage taken by man—cooling of pavements, rooms and wine in summer. How a dog cools itself. Why after violent exercise one should change. Woolaston's cryophorus.

PROBLEMS.

Explain why water can be frozen in a dry climate by exposing it in shallow pans under a clear sky even though the temperature of the air be above the freezing point.—What mass of ether at 0 degree C. must be evaporated in order to freeze 5 grammes of water at 0, the latent heat of ether being 95?

Condensation, Distillation, Separation of a mixture of liquids by fractional distillation. (Sinclair, Exp. 67). Why does the distillation of a mixture of alcohol and water always result to some extent in a mixture of alcohol and water?

VAPOUR PRESSURE.

Preliminary ideas. (Exp. 29, Jones' Practical Physics). Saturated and unsaturated vapours. The pressure of a vapour increases with temperature (Jones' Practical Physics, Exp. 30). To compare the pressure of various liquids at a given temperature (Exp. 137, Gregory and Hadley). The vapour pressure is independent of the pressure of air. (Exp. 138, Gregory

and Hadley). To measure the pressure of aqueous vapour at different temperatures (Woolcombe, Arts. 42, 43). (Determination of the pressure of alcohol vapour at different temperatures. Woolcombe, art. 44). *The vapour pressure of a liquid at its boiling point is equal to the atmospheric pressure* (Sinclair, Exp. 16; Gregory and Hadley, Exp. 139). Definition of boiling point. *Determination of the boiling point of alcohol* (Woolcombe, Exp. 10; Gregory and Hadley, Exp. 140). (Effect of change of pressure on the boiling point of alcohol (Ex. 145, Watson's El. Practical Physics).

PROBLEMS.

Does heating the air in a room remove the water vapour? Why is the air in an artificially heated room usually dry? Why are morning mists dissipated by the rising sun? Make a graph to show the maximum pressure of water vapour between 0 degree and 100 degrees C. Questions 2, 12, 14 and 16, Gregory and Hadley, p. 203.

HYGROMETRY.

Absolute amount of moisture present in air: the chemical hygrometer (Expt. 142 A, Gregory and Hadley). (Calculation of vapour pressure and from the tables of the hygrometric state. Too high. See Jones, p. 71; Glazebrook, page 148). From the data in Table 17, Gregory and Hadley, draw a graph connecting the temperature and the aqueous vapour present. *Relative humidity. Dew-point.* Aluminium cup hygrometer or Daniell's or Regnault's (Exp. 143, Gregory and Hadley; Woolcombe, 45). Mason's Hygrometer (Calculation of aqueous pressure, dew-point and relative humidity from tables. See Glazebrook, pp. 155, 130 and Ward's Exercises in Elementary Meteorology, appendix. Determination of the constant of a wet and dry bulb

thermometer, Woolcombe, 46. Determination of the mass of 1 litre of laboratory air (Exp. 47, Woolcombe) clouds, hail, snow, fog, dew, mist, frost.

PROBLEMS.

When it is dry and hot, one feels cooler during exercise in sunshine and open air than when sitting in the house. Why?—Why is the climate of Canada "delightfully cold"?—Is the climate of the interior of Australia healthy?—Why is the equatorial region of Africa called the "White Man's Grave"?—A person wearing spectacles comes into a warm room after a walk in the frosty air. What happens to his spectacles and why?—If on a certain day, it was found that the dew-point was: (a) very high; (b) very low; (c) equal to the temperature of the air, what would be the hygrometric state of the air in each case?—Four pegs are driven into the ground and the four corners of a blanket are fixed to them. Would you expect to find dew under or on the top of the blanket?

CONDUCTION.

Conduction defined. To show the variable and steady state in the conduction of heat (Exp. 36, Sinclair). Repeat the experiment with an iron wire and with a glass rod. To compare the relative conductivities of metals. (Exp. 37, Sinclair or Exp. 155, Gregory and Hadley; Exp. 12, Rintoul). How to calculate the relative conductivities of the metals. Metals arranged in the order of their conducting powers. Graphical representation from data given in Physical Table 20, Gregory and Hadley. Perform the experiment suggested in Exercise 2, Exp. 37, Sinclair, with rods of copper and lead and explain what happens when longer cylinders of the same metals are used. (Co-efficient of conductivity

(Gregory and Hadley, pp. 217—18). To compare the conductivities of a thick wire and a thin wire of the same material and to find a relation between the relative diameters of the wires and the relative conductivities of metals (Exp. 38, Sinclair, Exp. 11, Rintoul). Metals good conductors of heat (Exp. 39, Sinclair). Davy's Safety Lamp. Effect of different conductivities of wood and metal (Gregory and Hadley, 142). To show that a body becomes a worse conductor of heat when powdered (Exp. 40, Sinclair). Comparison of the conducting powers of different kinds of cloth (Exp. 41, Sinclair). Practical effects—uses of flannel, Norwegian cooking stove, boiling water in a paper vessel. Water a poor conductor (Exp. 42, Sinclair or Exp. 156, Gregory and Hadley). Poor conductivity in gases. Thermos Flask. Refrigerating Chambers. Dress of man.

PROBLEMS.

How do the Esquimaux manage to live in huts built of ice?—How can a silver spoon be distinguished from an electroplated German silver spoon, by inserting them both in hot water?—Why is a floor of marble much colder than a wooden floor?—What happens when a stream of burning alcohol is poured over wire gauze with narrow meshes?—Why is it warmer in winter under a thatched roof?—Explain the term 'insolation'.—Why will the moistened finger or the tongue freeze instantly to a piece of iron on a cold winter day but not to a piece of wood?—Why can hot water be poured into a glass beaker but not into a glass jam-jar without cracking it?—How is heat conserved in boilers?—Which would be warmer—one thick blanket or two blankets of half the thickness of the former?—How is a football field pro-

tected from frost?—Why are plants often covered with paper on a night when frost is expected? Ex. 3 & 4, Exp. 42, Sinclair.

CONVECTION.

To show how liquids are heated (Exp. 43, Sinclair). To show that convection assists the heating of a liquid (Exp. 44, Sinclair). To show how buildings are heated by means of water (Exp. 46, Sinclair). Convection currents in air (Exp. 45, Sinclair.) Principles of ventilation (Gregory and Hadley, p. 221). A hot-air heating system (Gorton's Physics, Art. 257). The cause of the draught in a chimney. Land and sea breezes, monsoons, trade winds, ocean currents.

PROBLEMS.

What are the chief objects of ventilation?—How is this effected in the case of (a) a living room; (b) a school room?—Why does increasing the height of a chimney increase the draught?—Exercise 27, p. 233, Gregory and Hadley.—Why does a small mica wheel rotate when placed over a lamp chimney?—Why are narrow chimneys better than wide ones?—Explain why the pointed end of a weather-cock is always turned towards the wind.

RADIATION.

First notions of radiant heat (Exp. 47, Sinclair). To show that radiant heat travels in straight lines (Exp. 48, Sinclair with exercise). Comparison of the radiating powers of various surfaces by means of a strip of sensitive paper or Crooke's radiometer (Exp. 50, Sinclair). Comparison of the absorbing powers of various surfaces by means of a strip of sensitive paper coated with these surfaces (Exp. 49, Sinclair). Radiation may be reflected by a polished surface. Does it pass through glass? Greenhouses. (Newton's

Law of Cooling; Hadley p. 224; Woolcombe, Art. 43; Rintoul, Exp. 41.) To plot the curve of cooling for a calorimeter and to determine how much heat is given off by it in unit time at a given temperature (Exp. 49, Woolcombe). Specific heat of a liquid by method of cooling (Sinclair, Exp. 31; Woolcombe Exp. 35; Rintoul. 34.) (Comparison of the emissive powers of two substances, e.g., lamp-black and tinfoil (Woolcombe, Ex. 50).

PROBLEMS.

Which will be cooler on a hot day, a white hat or a black one?—Which makes the better teapot, silver or earthenware?—Why should fire-irons be brightly polished?—A school room is heated by hot water. Should the pipes be polished or dull?—The bulbs of two identical thermometers are coated, the one with lampblack, the other with silver; compare their readings (1) when in a water-bath in a dark room, (2) when in the sun, (3) when exposed on a clear night, explaining why they do not agree on all these occasions.

HEAT: A FORM OF ENERGY.

The nature of heat; historical survey; Joule's experiments; the value of the mechanical equivalent. Experiments to illustrate the conversion of motion into heat (Exp. 163, Gregory and Hadley). Generation of fire by friction, of wood on wood at sacrifices, and of sufficient heat to boil water by friction. Is the reverse true? Discuss what happens in the steam engine.

Determination of the mechanical equivalent of heat (Exp. 164, Gregory and Hadley and Mallikan and Gale's Laboratory Physics, Exp. 20).

Compression and expansion of a gas. Heat by compression—the fire syringe (Exp. 165, Gregory and Hadley). Cooling by expansion

(Exp. 166, Gregory and Hadley). Apparatus for the conversion of gases into liquids. Typical instance of carbonic acid gas.

Inspection of a model steam engine. See also Exercise 62, Crew and Tatnall. All the American school text-books give a description of the steam engine in the various stages of its invention. A talk about solar energy.

LIST OF PRACTICAL EXERCISES (QUANTITATIVE.)

1. Comparison of two thermometers—Graph to show correction.
2. To find the error in the lower fixed point.
3. To find the error in the boiling point.
4. To measure the co-efficient of linear expansion of a rod.
5. To measure the co-efficient of apparent expansion of a liquid.
6. To measure the co-efficient of expansion of a gas at constant volume.
- *7. To measure the co-efficient of increase of pressure at constant volume.
8. Determination of the water value of a calorimeter.
9. Determination of the specific heat of a solid.
- *10. Determination of the specific heat of a solid lighter than water.
11. Determination of the specific heat of a liquid, e.g., mercury or turpentine.
- *12. Determination of the specific heat of alcohol by using a solid.
13. To find the melting point of paraffin wax.
- *14. To find the melting point of an alloy.
15. Determination of the latent heat of fusion of ice.
- *16. Determination of the latent heat of fusion of paraffin wax.

17. To find the boiling point of liquids.
18. Determination of the latent heat of vaporisation of water.
- *19. Determination of the latent heat of vaporisation of alcohol.
20. The vapour pressure of a liquid at its boiling point is equal to the atmospheric pressure.
21. Vapour pressure method of the determination of the boiling point of alcohol.
22. Determination of the dew point.
- *23. Specific heat of a liquid by method of cooling.
- *24. Determination of the mechanical equivalent of heat.

The exigencies of the school time-table and the limited powers of comprehension and assimilation of the average High School boy have been kept in view in drawing up the syllabus. Portions above the standard have been enclosed within brackets.

Experiments marked with an asterisk(*) need not be attempted by the average student but may occupy the quicker pupil when he has the time to spare. These quantitative experiments have to be supplemented by a judicious selection of *qualitative* exercises at each stage. The problems, &c., are meant to be suggestive and it is only by their correct appreciation that the success of the work is assured. The oral instruction of the teacher is of paramount importance at this stage of the course and provision should be made throughout for the discussion of experiments and results, and for written questions involving thought on the principles elucidated by the experiments. His neat demonstrations are appreciated by the pupil and his lectures prepare the student for the time when lecture

and text-book will be the chief source of information. On the supposition that about 80 periods of 50 minutes each will be available for the study of heat, 24 double periods may be set apart for practical work, 16 devoted to questions and discussion, 16 to demonstration and lecture, the orderly part of the note-book work also being done in class.

K. S. PARABRAHMAN.

THE S. S. L. C. MARKING SYSTEM.*

THE object of the marking system is to steadily and equably regulate the work of the boys, and put a check on spasmodic, fitful and desultory work. It does this satisfactorily; but I ask, can this not be done as well, if not better, by a system of periodical examinations? "Examinations, again!" you exclaim, "a plague upon them! It is to them that all evils of the old system are due—the mechanical memorising, the system of over-violent exertion, perniciously straining the tender, budding brains of young boys."

But, what is our oral questioning? Is not *this* examination—a dread spectre haunting at oftener intervals than the periodical examination, making its calls without notice or warning, therefore the more scaring, and throwing the victims into greater panic? Here, by the way, a question arises—Which is better: the surprise examination taking the boy unawares, or the examination with fair notice and warning? The latter has the appearance of fair and honest dealing, while the surprise affair looks like springing upon the unsuspecting foe at an unguarded moment.

* A paper read by Mr. V. Mahadevan at a meeting of the Tanjore District Secondary Teachers' Association held in the Town High School, Kumbakonam, on the 30th August 1913.

There are teachers holding either view. But this is a minor issue, and need not engage our serious attention this evening.

Now, to Questioning. How often is this oral questioning to be made? Every day of the week? "*Just put a few questions every day in the old lesson before you start the new one*," says the manager, or headmaster or Inspector, or such men who, not put to the real and practical working of it, can only conceive that teachers are raising unreal difficulties in order to shirk work and have an easy time of their school-day. *Allot $\frac{1}{4}$ of an hour or 20' for questioning, and then begin the new lesson.* Alas! How very easy to say, but how very hard to do! What is the extent of the portion that can be done within a period? Take the most serious and business-like pedagogue, who takes a straight course, never deviates into a digression, never pauses to have a hearty laugh with the boy, never wastes sermons on them. What can he do in the small remnant of time after questioning? Sixty lines of prose, 30 lines of poetry, some 4 pages of history or barely one historical theme, and so forth, at the highest computation. How many questions, really good and testing ones, can be framed for the next day's work within that small and narrow compass? These questions, mind you, must be *good* and *testing*, that is to say, carefully and cleverly calculated to test (i) the boys' attention in the class, (ii) their preparation at home, (iii) their power of thinking, (iv) their fluency and power of expression. Their answers should by no means be mechanical, done with in a word or two, but must be pretty long so as to discover their capabilities of arranging ideas in proper sequence and clothing them in fitting language without perpetrating heinous sins against grammar and King's English. All this implies

a string of sentences, which the boys must be delivered of in the short time which the teacher pinched for time can afford to give them. The teacher then has to allot his marks to the idea or matter, and then the language, readiness of utterance, and facility of expression, and value the whole answer. But, in the first place, is it fair to judge of the boys' capacity from his speaking which is commonly very halting, requiring to be every now and then urged and goaded on, and cross-questioned by the teacher, and which is after all ill-worded and faulty? How few of us ourselves could pass through the ordeal with any degree of grace and success? The answer to the teacher's question is known, but then for speaking it out it requires an address, promptitude, and a talent, 'the gift of the gab,' with which few are gifted. The generous teacher must make due allowance for all this. He must, within the space of a few minutes before him, make all due adjustments, and quiet his uneasy, vacillating conscience before he arrives at some estimate of the boy. It involves an inward struggle and conflict and pain, which must be felt by every honest teacher, whose lot is the more wretched and pitiful, because he cannot give utterance to it, and make his task-master understand the searchings of his heart, and pity him. The teacher has done with it after all, but only in a way, and not at all satisfactory to himself. "Conscience doth make cowards of us all," and we teachers have been cursed with too much of it.

"*There is no exactitude or perfection in these matters. Don't be squeamish and over-fastidious. It is all a question of approximation,*" say our masters, who to us appear to be cruelly indifferent and easy-going. But the teachers' vexatious qualm is, even to an

approximation he does not remotely approximate.

Let the teacher then question once a week, a fortnight. Let him devote his whole hour, if he likes, to questioning and make his *viva voce* examination. He can attack in the course of his hour, just three or four boys, and if he proceeds at this rate, how many 'rounds' as they call it, can he clear in a session? If you conduct such occasional oral examinations and enter your marks, can these marks be, in any proper sense, a record of the *daily* work of the boys? These are questions and questions; they vary widely in their degree of easiness or difficulty, in the length of their answers, in the demand that they make on the intelligence, or memory of the boys; and the questions being put to the boys, each to each, the hardest task still remains, that of arriving, in the midst of this perplexing diversity of elements, at a uniform standard of valuation. Is not this enough to send a tender conscientious teacher into a crying despair? Every answer of moderate length made has then to be discussed and corrected, and if you honestly proceed thus, you can hardly question the whole class twice over in the whole long term of the year. And yet you are bid to take at least *three* rounds!

There is one device however, by which this difficulty of oral questioning is obviated, and that is by giving one short paper to the whole class, a one-hour paper requiring very short answers. These cannot, in the nature of things, be anything but short and mechanical. This is indeed a fair test, easily made, as often as desirable. There is the same set of questions by which all the boys are tested, and the results yield to us the relative merits of the boys, judged by a uniform standard. But

by what strange construction or by what straining of language can this be called *oral* examination? How can the boy's power of *speaking* be tested in *writing*?

There is one point to which I should like to draw your attention. Our class marks are often put by the side of the public or annual examination marks, and often tested, in regard to their accuracy and reliability. If there is wide disparity, the inevitable conclusion is our judgment is faulty; and we should thereafter be at some pains to try to arrive at the figures of the written examination. This is a blunder and the more grievous because it is made by persons in authority, with whom it may be indelicate, if not positive treason, to argue. Sometimes, the Inspector gives a subject for composition and values the papers. Our class marks, if they are trustworthy, must tally approximately with the results of this composition. Or the disparity will be shown you to your mortification; and we shall be asked to beware. And then what a gaping difference there is between the school marks and the public examination marks! This difference is the more confounding because it is never uniform. Our very good and hopeful boys are often shamed by very low marks and very bad ones, desperately bad, score very high marks, and flaunt them upon the poor puzzled teacher.

The fact is our class marks are a conglomerate product of the results of the various oral and written examinations conducted in the year. They include marks for reading, recitation, composition, note-books, home preparation and what not. The last page shows the marks not of *one* year, but of three past years, spent sometimes in different schools. This is meant to show the history of their three years' life in a very tangible

and arithmetical form! If the teacher adds up all these marks given at various times, and for various purposes, he finds that he arrives at a number which is disproportionately high or low for the attainments of individual boys; he is himself aghast at the absurdity of his own added-up estimate. But that is the tyranny of figures!

This leads us to the question of the apportionment of marks between the terminal examinations on the one hand, and the various occasional examinations on the other. The commonly accepted proportion is 50 %. I should think this is attaching too much importance to the occasional examinations, made in very limited portions of a subject. It is very easy to do well in these examinations in parts and parcels, and though the marks here are evidence of the boys' regular preparation, it is by no means an index of their real capacity. This can be judged only by the annual examination, covering a whole book, a whole field of a subject, an intelligent grasp and knowledge of which is tested by questions only at the end of the year. There is such a phenomenon as being excellent in parts, and very indifferent in the whole. Here indeed two and two do *not* make four. The annual examination test is the real test of the boy's worth and excellence at the end of the year; while other examinations are of value only in so far as they serve as little prize-toys for children for inducement to systematic work. To say that this marking system has ensured regularity of preparation, and diligence appears to me to savour of a confession of weakness on the part of the teacher; and again to set up marks as an inducement for study seems to be a questionable means of education which ought to set forth higher and loftier ideals. At all events,

the higher class boys may be taught better than that. Above all, there is one feature of the marking system which is unfortunately too much extolled; and that is its disciplinary value in so far as it makes the boys docile and obedient to the teacher, the mark-giver, and therefore, the maker of his destinies. However it may appeal to our personal vanities, this might tend to develop a character in them which is far from manly and noble. We hope it has not bred and will not breed a race of little snobs. Let us regard this, if it be true, as an incidental evil.

If the marking system is held as a good incentive, let it be followed by all means; but let us not overrate its importance. Let the annual examination carry 70 or even 80 % of the total marks of the year, that being the true and real index of the boys' attainments at the end of a whole year. Let the occasional examinations, which are but means to the end, be given 20 or 30 %. To this it is objected that the annual examination is an affair of memory, and it cannot be relied upon. If the boys can memorise whole books, how much more thoroughly cannot they do little portions of a book? The question paper may be so drawn up as to set rote-work at a discount, and call forth real understanding and grasp of the subject. Such questions can be more easily set and in larger number in a whole book got through at the end of the year than in limited portions of a book occasionally examined in. Next it is urged that it is the training and the process that matter more than the result. But the training and the process are good only in so far as they lead to a desirable end, just as in a mathematical question the method and process are of value only in so far as they subserve to lead to the right solution. The

end or result is the thing, and the method is only subservient to it. To attach greater importance to it bespeaks want of proportion, and a confusion of means and end.

In conclusion, the marking system, if altered in some respects and wisely followed, is conducive of excellent results. Oral questioning, good and admirable as it is for purposes of drawing out the latent powers of boys, affords too elusive and intangible and perplexing material for purposes of marking. It had better therefore be dispensed with as a means of examination and marking. In making an apportionment of marks between the annual examination on the one hand, and the occasional examination on the other, I contend that a far higher percentage than fifty be given to the former.

A COURSE OF STUDY IN ENGLISH HISTORY FOR THE HIGH SCHOOL CLASSES.

(Continued from page 470.)

IN this, the third and the last of our contributions on the above subject, after having discussed in a way some of the rational methods of teaching History, we think we can profitably devote some space here to examine the value and the utility of setting practical exercises in the subject. Incidentally some hints, as to how these exercises are to be attempted, will not be found to be out of place and will deserve some attention and treatment here.

From the details of *practical work*, already incorporated in the scheme of studies found in the previous issues of this journal, practical exercises in History teaching may include

(a) the use of, and the pupils' working upon, documents and other sources; (b) the drawing up of maps and plans of battles and sieges; (c) the preparation of genealogical tables and lines of time; (d) excursions to places and scenes of historical importance; (e) researches in History as far as possible, from *archaeological*, *numismatic* and *traditional* sources and relics. Of the five divisions shown above under 'Practical work in History,' we have, in a previous issue, spoken enough about the use of documents and the drawing up of lines of time.

The one point to be noted here is that the teacher should make a judicious use of documents and should with their help stimulate the thinking faculties of the pupils. To achieve this end, the teacher should read the documents in the class at least twice at first, and then leave the pupils to work upon them. This mode of procedure helps pupils to understand the spirit of the times and the actual circumstances of the situation described in the documents. Once again it must be borne in mind that documents should neither be injudiciously used nor introduced in every lesson as a matter of course. Incidentally it may be remarked that transcription exercises as a piece of practical work may be set to the pupils from these documents. It is really fortunate that English History unlike the History of India, is not barren of such source books.

A word about the preparation of lines of time and genealogical tables. Pupils, while preparing these, may give an artistic turn to their work as by using different colours to denote details worthy of special note. Besides, the teacher with the help of his pupils, when he is doing a particular period in

History, may prepare such plans and lines of time as are found to be specially important in the period taught and these may find a prominent place in the class room. These will be renewed with every period in History. Though we are prepared to expatiate on the importance of *excursions* and *researches* in History, as far as our devotion to the subject admits, yet we have to consult the local and financial conditions of the school in the matter.

Last, though not least, we shall not have done full justice to the subject, with which we have been dealing all along, if we do not say a word or two about the distribution of work especially in English History in the classes where it is taught as one of the optional subjects. The importance of a well-thought out time-table for a school can hardly be over-estimated. It is quite true that 'what the curriculum of subjects is to the whole school so is the time-table to the class.' A difficulty, rather an apparent difficulty, has now cropped up in some quarters in this direction, probably out of a lack of a sense of proportion and out of a neglect of the exact scope of the subject and the degree of information required of pupils who are to study English History as a subject of the C. Group. Though the difficulty is worked up to such an extent as there are already, papers read before, references made and proposals submitted to such focuses of public opinion as the Tanjore District Secondary Teachers' Association, it appears to be no real difficulty after all. The practice, generally adopted now in most schools of allotting *five* periods a week for

English History, is found to be highly satisfactory; and any attempts at cutting short the periods to less than five will be preposterous besides being short-sighted and will surely result in inefficiency.

In this connection, it will be a source of great relief to teachers and pupils if the S. S. L. C. Board *clearly* lays down the proportion of marks which the questions on the *detailed portion* bear to those on the *outlines*.

Having thus taken a bird's-eye-view of the field of History and its requirements, we shall reserve our further talk on this subject, till any future occasion for it arises and complete here the scheme, more than a third of which still remains to be prepared.

But, in the meanwhile, from the above an earnest teacher of the subject readily realises the magnitude and the importance of the work before him and also the extent to which he is to be resourceful. It is no doubt, a matter for great regret and condemnation that, in the face of so many difficulties which a successful teacher of History has almost daily to face, some Headmasters, probably of a conservative spirit and of an immobile disposition are blind to the fact that specialisation in the subject is as indispensable to the History teacher as it is to the teachers of other subjects.

Our readers and those engaged in the profession will not forget how necessary it is for them to purge their Headmasters of such wrong notions as soon as possible, if education is to serve its real purpose.

A Scheme of Work in English History on the Stuart, the Hanoverian and the Twentieth Century periods.

TOPICS HEADINGS.	PERIODS TO BE DEVOTED.	PRACTICAL WORK
I. <i>The Stuarts. 1603—1688.</i>		
1. (a) The claims of James I to the throne of England. The Stuarts' conception of the kingly office—Religious parties at the time and their attitude towards each other—James I and his oppressions—The home policy of the reign—The Ulster Settlement—Differences with the Parliament.	3	Descent of the House of Stuart.
(b) The foreign policy of the reign—The beginning of England's Colonial Empire—The Thirty Years' War.	2	
2. The differences between Charles I and his Parliament culminating in the Civil War—The Petition of Right—The Grand Remonstrance—Ship-money—Charles I's eleven years' tyranny through his bad instruments—Laud and Wentworth—The causes, the progress and the results of the Civil War—The execution of the king.	4	A map of the Civil War.
3. The Commonwealth, a parenthesis in history—The foreign policy of Cromwell—Reasons for the Restoration—Compare Cromwell with Sher Khan of the Sur dynasty.	3	
4. The Catholic tendencies of Charles II and James II—The reign of Charles II, an "era of good laws but bad government,"—The disgraceful foreign policy of Charles II. The rise of the Whigs and the Tories. The Habeas Corpus Act, the third Great Charter of English liberties.	4	
5. The revolution—its causes, progress and results at home and abroad.	3	
6. The relation of William and Mary to the Parliament. 'The Declaration of Rights.' The beginnings of Party government.	3	The route of William of Orange to London. His descent from James I. Pedigree showing the claimants to the Spanish throne.
7. The strengthening of Party government under Anne. Foreign policy of the reign. The Act of Union with Scotland.	2	
8. The social, intellectual and political advancement of the period.	2	
II. <i>The Hanoverians.</i>		
1. The period of the Whig Supremacy and its causes—The firm establishment of Party government and the rise of the Cabinet—The Whig Schism and the creditable foreign policy of the reign of George I under Stanhope and Walpole.	3	Descent of George I from James I. Map of the '15' and the '45'—Map of the New England colonies at the beginning of the War of Independence.
2. England under Walpole—The Wars of the Austrian Succession and its results—The Seven Years' War and the War of American Independence.	5	
3. <i>The British Empire at stake. 1775—1784.</i> The stages in the American War of Independence—The rule of Warren Hastings in India—Home affairs.	3	
4. <i>Pitt's peace ministry. 1784—1792.</i> The Industrial Revolution—Canada, India and the French Revolution.	3	
5. <i>Pitt's war ministry. 1793—1801.</i> Revolutionary wars up to the Peace of Amiens—The Irish Union and its immediate results.	3	Plan of the battle of Aboukir.
6. <i>The struggle with Napoleon. 1802—1815.</i> The Peninsular War and its two phases—The fall of Napoleon—Ministerial changes in England—The Treaty of Paris.	3	Plans of Trafalgar and Waterloo.
7. <i>The overthrow of the Whigs and the Tory ascendancy. 1815—1827.</i> The last years of George III. The story of the British Expansion under George IV.	3	
8. <i>The period of Reform. 1828—1837.</i>		

The downfall of the Tories—The Reform movement, its causes, progress and results—Foreign, Indian and Colonial affairs of the period.	4	
III. <i>The Victorian Era 1837—1901.</i>		
1. (a) The rule of the middle classes. 1837—1868. The administration of Lord Melbourne—Sir Robert Peel—Aberdeen—The Free Trade movement—India and the Colonies.	3	Descent of Victoria from George I.
(b) The Crimean Question—The Great Indian Mutiny—Palmerston.	3	Map to show the chief operations of the Crimean War.
2. <i>The Growth of Democracy and Empire. 1865—1901.</i> (a) The administration of Gladstone—Benjamin Disraeli—Affairs in S. Africa.	3	Map showing England's development in S. Africa.
(b) The Home-rule movement—The Unionist party.	2	
IV. The reign of the Peace-Maker—The social, religious, political, economic and colonial development of England at the beginning of the 20th century.	3	
	A.D.	
	1603	Hampton Court Conference and the Ulster Settlement, 1604.
1605 Gun Powder Plot		The beginning of England's colonial empire, 1607.
		Beginning of the Thirty Years' War, 1618.
1621 Impeachment of Bacon		The Petition of Right, 1628.
	1633	The Grand Remonstrance, 1641
1645 Battle of Naseby		Execution of Charles I, 1649.
1651 The Navigation Act		The Restoration, 1660.
	1663	The Secret Treaty of Dover, 1670.
		Habeas Corpus Act, 1679.
		The Revolution, 1688.
1689 Declaration of Indulgence, 1693.		National Debt founded, 1693.
1694 } Bank of England founded and The Triennial Act passed.		The Union with Scotland, 1707.
		The Peace of Utrecht, 1713.
		The Methodist Society founded, 1730.
		Fall of Walpole, 1742.
	1753	Peace of Aix la-Chapelle, 1748.
		Peace of Paris, 1763.
	1783	Declaration of American Independence, 1776.
		Out-break of the French Revolution, 1789.
	1813	The Peace of Amiens, 1802.
		The Battle of Waterloo, 1815.
		Repeal of the Test and the Corporation Acts, 1828.
1832 Reform Bill passed		Abolition of Slavery; New Factory Act, 1833.
1835 Penny Postage adopted.		
	1848	Repeal of the Corn Laws, 1846.
1850 Australian Colonies becoming self governing.		
	1873	The Irish Land League, 1879.
		The Queen's Diamond Jubilee, 1897.
1899 Out-break of the S. African War		Formation of the Australian Commonwealth, 1901.
	1903	

MILTON'S EPITAPH TO SHAKESPEARE

*in the 1632 Edition of the Plays
known as the Second Folio*

BY

SIR EDWIN DURNING-LAWRENCE, *Bart.*

On 24th July I received (through Mr. Frank Burgoyne) from the magnificent New York Public Library, Astor, Lennox and Tilden Foundations, the following letter signed

"Wilberforce Eames":—

"Replying to your letter of July 4th, enquiring about the reading of the fourth line of Milton's Epitaph to Shakespeare on page 5 of the second folio of Shakespeare 1632, I would say that I have examined the eight copies [of the second folio] belonging to this library, and find the corrected 'Starre-ypointed' in only one of the eight, being in the copy marked by Mr. Lennox $\frac{A}{1}$ with the imprint Tho. Cotes, for Robert Allot. The seven other copies have the incorrect form 'Starre-ypointing.' The leaf containing the corrected line seems to me to have been inserted in place of a cancelled leaf, as the paper is somewhat thicker. Although the typographical ornament at the head is the same, the ornamental initial letters are different."

Then follows the list of copies of the second folio in the Library, which are in addition to the $\frac{A}{1}$ copy already mentioned, viz.:—

$\frac{A}{2}$	Tho. Cotes for Robert Allot,
B	Tho. Cotes for Robert Allot.
C	Tho. Cotes for Robert Allot.
D	Tho. Cotes for William Aspley.
E	Tho. Cotes for John Smethwick.
F	Tho. Cotes for Richard Hawkins.
Astor.	Tho. Cotes for Robert Allot."

The wonderful New York Public Library seems, therefore, to possess all the known imprint variants of the 1632 second folio of the Shakespeare plays excepting only the one with the imprint "Tho. Cotes for Richard Neighen."

In the British Museum there are three copies only, all of which bear the imprint "Tho. Cotes for Robert Allot."

In my own library, which contains so many special copies of books with engravings printed upside down in order to afford Baconian revelations, there is only one copy of the second folio, viz.:—that with the imprint "Tho. Cotes for William Aspley." But into this copy has been inserted the special leaf upon thicker paper, as described in the $\frac{A}{1}$ copy in the New York Public Library, in which the correct grammatical form "Starre-ypointed" appears. Experts are satisfied that "This page is evidently an original and contemporary print, not a reproduction in any modern sense. . . . The paper is contemporary."

In the 1623 Edition of the Shakespeare Plays, which is known as the first folio, no Epitaph appears, for although William Shakespeare of Stratford had been dead seven years, the real author, Francis Bacon, was still alive. But Bacon died in 1626, accordingly in the 1632 Edition of the Plays, known as the second folio, we read:

AN EPITAPH ON THE ADMIRABLE DRAMATICKE POET, W. SHAKESPEARE.

What neede my Shakespeare for his honour'd bones,
The labour of an Age, in piled stones
Or that his hallow'd Reliques should be hid
Under a stare-ypointed Pyramid?
Dear Sonne of Memory, great Heire of Fame,
What needst thou such dull witnesse of thy Name?
Thou in our wonder and astonishment
Hast built thy selfe a lasting Monument:
For whilst, to th' shame of slow-endavouring Art,
They easie numbers flow, and that each part,
Hath from the leaves of thy unvalued Booke
Those Delphicke Lines with deepe Impression tooke?
Then thou our fancy of her selfe bereaving,
Dost make us Marble with too much conceiving,
And so Sepulcher'd in such pompe dost lie,
That Kings for such a Tombe would wish to die,

I insert here the whole poem because, so far as I have been able to ascertain, it has never been

correctly printed excepting only in my own copy of the 1632 folio of the Shakespeare Plays "Printed by Tho. Cotes for William Aspley" and in the $\frac{A}{1}$ copy "Printed by Tho. Cotes for Robert Allot" in the New York Public Library. In this Epitaph, which is usually ascribed to Milton, we read:—"What neede . . . that his hallow'd Reliques (the Plays) should be hid Under a starre-ypointed pyramid?"

A ball-pointed pen means a pen with a ball upon its point, a diamond-pointed drill means a drill with a diamond upon its point, and a "Starre-ypointed pyramid" means, must mean, and can only mean "a pyramid with a star upon its point" (its apex). But a pyramid with a star upon its apex is a Bacon (pronounced Bacon, "Bacon, great Beacon of the State," just as tea was pronounced tay, sea was pronounced say, etc.) Then Milton further tells us "What needst thou such dull witnesse of thy Name." This is clearly intended to teach us that people ought to have wit enough to perceive that Bacon was the name of the real author without the dull witness of a Bacon (Bacon) being put upon his works. Yes, the Epitaph tells us in the plainest and most unmistakable manner that Bacon is Shakespeare.

But these words of the Epitaph were considered too evident and too revealing by those to whom was allotted the task of preserving Bacon's secrets. Accordingly in all or almost all the other issues of the plays which were brought out in 1632 "Starre-ypointed pyramid" is changed into "Starre-ypointing pyramid." "Starre-ypointing" is an absurd word, grammatically impossible, because "y" like the the German "ge" indicates the past participle as we find in yclept, yclad, ychain'd, etc., etc.

Into this "Booby trap" so carefully prepared for their undoing, all the learned editors of the Shakespeare plays and all the learned editors of Milton's poems as well as Sir Sidney Lee in his

"Life of Shakespeare" have tumbled headlong. For more than a hundred years schoolmasters have set to their scholars the task of "pointing out" the grammatical blunder in Milton's Epitaph, interding that they should "point to" the absurdity of "ypointing" which is quite an impossible word. These worthy pedagogues, however, never seem to have thought of declaring that the learned and accurate author of the Epitaph could not possibly have made the ridiculous grammatical blunder which they attributed to him but must have written quite correctly "ypointed."

When I have put this matter before learned grammarians and asked them whether they really believed it possible that the accurate and learned Milton could by a blunder have written "Starre-ypointing," in every case they have said, "No! We don't! It is impossible." But in *Elementary Lessons in Historical English Grammar* by Rev. Richard Morris, LL.D., 1891, on page 166 we read, "The passive participle in the oldest period had a prefix ge, which after the Norman Conquest was reduced (i, y, e). Milton has yclept=called. He wrongly adds it to a present participle in 'star-ypointing.'" And in the Clarendon Press Series "Milton" by R. C. Brown, M.A. (1873) we read in "Notes on the Nativity Ode" vol i, page 258, "ychain'd." "Here y is the prefix to the past participle, the ge of Anglo-Saxon and modern German and the i in Old English, ibrent, etc. It is wrongly used by Milton in the lines on Shakespeare, being there prefixed to a present participle (Lathom)."

Why had not these worthy men sense enough to perceive that "Starre-ypointing" could not have been an accidental blunder, but must have been purposefully written.

The evidence supplied by Milton's Epitaph is of such enormous value and importance and is so little known that I will not now touch upon any other matter except to refer to the opening

words of "Love's Labour's Lost," which show that the mighty author of the Plays was not, as the Stratfordians so frequently assert, indifferent to the permanent existence of his works, but fully realised that they were immortal. The Epitaph ascribed to Milton in fact almost repeats the words with which the Play of "Love's Labour's Lost" (the first to which the name of W. Shakespeare was attached) commences, which are as follows:—

"Let Fame, that all hunt after in their lives,
Live registred upon our brazen Tombes.
And than grace us in the disgrace of death:
When spight of cormorant devouring Time,
Th' endeavour of this present breath may buy:
That honour which shall bate his sythes keene edge,
And make us heyres of all eternite."

BACON! Thou "world's wonder!" "Deare Sonne of Memorie, great Heire of Fame, What needst Thou such dull witnesse of thy Name" as "that thy hallow'd Reliques should be hid under a starre-ypointed Pyramid" (a Beacon, a Bacon), to tell us that thy hallow'd Reliques, the immortal Plays known as Shakespeare's, were written, not by "the Householder of Stratford," but by THEE!

13 CARLTON HOUSE TERRACE,
LONDON, ENGLAND.

INTERCATION OF FRENCH AND ENGLISH LITERATURE.

SIR SIDNEY LEE ON THEIR MUTUAL INFLUENCE.

Sir Sidney Lee delivered the last of a course of four lectures on "The Literary Relations of England and France" to the Oxford summer meeting of University Extension Students at the Examination Schools, Oxford, recently.

Sir Sidney cited opinions of Voltaire and Walter Pater to the effect that great literatures collectively form a single expanse of territory, in which on critical inspection the dividing lines of nationality lose much of their substance. The classical elements stood to all modern European

literatures in much the same relation as oxygen to the composition of water. From early times to the 18th century England's literary debt to France was continuously large. During the 18th and early 19th centuries France reversed the process by levying immense loans on England. The present theme well illustrated the reciprocal processes at work in literary development. The lucidity and fidelity to fact of the French mind had always fitted France for the rôle of interpreter and tutor to other nations, not merely of her own culture and ideas, but of the culture and ideas which she absorbed from others. The Norman conquerors made French the language of England's ruling classes for more than two centuries, during which English as a literary instrument was threatened with extinction. When, in the 13th and 14th centuries, the literary use of English revived its vocabulary had absorbed French verbs, nouns, and objectives in a ratio of nearly two to one. English literature of the 13th and early 14th centuries consisted of little besides translation of *chansons de geste* or French metrical romances. French prosody, with its syllabic regularity and its rhyme, replaced the old English alliterative rhythms. The device of poetic allegory, which the "Roman de la Rose" perfected, inspired a long succession of English poems. Chaucer, the first English poet of undisputed eminence, was trained in the French poetic school.

The new culture of the European Renaissance, which was born in Italy, blossomed earlier in France than in England. The newly discovered Greek literature gripped the best French intellect with the hold of passion. Nothing in the contemporary annals of the English Renaissance compared with the wide diffusion of French intellectual energy. Through a great part of the century England and France were at peace. The Treaty of Troyes, signed on April 12, 1564, a few days before Shakespeare's birth, long governed the political relations of the two countries. In June, 1564, Ronsard, the poetic leader of the French Renaissance, welcomed, in verses to Sir

William Cecil, the English Prime Minister, the arrival of the *Entente Cordiale*. The humanist movement, which the Oxford scholars, Colet, Linacre, and more initiated at the end of the 15th century, made no immediate impression on English literature. More's *Utopia* was written in Latin and was a contribution to European rather than to the National Literature. No edition was published in England for the first century and a half of its existence, the first translation was into French. Caxton, like all early English printers, chiefly dealt with translations from French prose.

POETRY AND THE RENAISSANCE.

The inspiration of the Renaissance did not reach French poetry till the 16th century was well advanced. The earliest Tudor poets sought stimulus in the crowd of French "rhetoriqueurs"—rhetorical poets in whom the old mediæval tradition was only just tinged with the new humanism. Alexander Barclay translated the French allegory "Le Chateau de Labour," John Skeleton borrowed from France his short metre of four or six syllables, Stephen Hawes adapted a French allegory in his "Pastime of Pleasure." In the next generation Surrey and Wyatt sought direction from Petrarch. But from Marot, their chief French contemporary, they took many metrical hints. Alamanni, an Italian poet, who was a refugee in Paris, inspired Wyatt's satires and Surrey's original experiments in English blank verse. Spenser subsequently accepted guidance from Marot in writing his "Shepherd's Calendar."

To the four great French prose writers of the 16th century, Rabelais, Calvin, Amyot, and Montaigne, Elizabethan writers were under varied obligations. Calvin's doctrinal influence on the religious reform of England was the fruit of his literary power as much as of his theological ardour. Plutarch's "Lives" were only known to the Elizabethans in an English version of Amyot's splendid French rendering, and from that version Shakespeare borrowed much. Few Elizabethans realized their spiritual kinship with Rabelais

but his Elizabethan disciple, Nash, caught his accent. Montaigne, the inventor of the essay, fascinated the Elizabethan intellect. The voice of the Pleiade caught the Elizabethan ear. Spenser began his career with translations of sonnets by Du Bellay. The frequent coincidences between idea and expression in Elizabethan and contemporary French poetry prove on inquiry to be direct debts to the French on the part of the Elizabethans although with the process of borrowing went abundant exercise of creative power. Shakespeare employed much of the Pleiade's imagery, while he turned it to a new purpose. In *Henry V* he shows facility in writing French and he grafts on his English elsewhere many French words, like *gouts* (i.e., *gouttes* drops) in Macbeth's famous "gouts of blood." Numerous Elizabethan sonnets were translated or adapted from the French. Some Elizabethan sonnets and sequences when they are fully analysed are found to be mosaics of French and Italian originals.

The Huguenot movement in France, despite Calvin's illiberal antagonism to secular culture, prompted much original treatment of philosophy and history. The Huguenots, moreover, first turned poetry into sacred channels. Du Bartas, the chief Huguenot poet, penned a long scriptural epic which excited immense enthusiasm in Protestant England. English translations of Du Bartas's work moulded the sacred poetry of Elizabethan England and exerted some influence on the youthful Milton.

FRANCE AND ELIZABETHAN DRAMA.

In Elizabethan drama French influence proved only a subsidiary force. English mystery, morality, and interlude followed lines which France had marked out, France helped Elizabethan drama on its road. Between the classical drama of the French Renaissance and the full-fledged Elizabethan drama the identity of theme and the difference of form constantly arrested the attention. A French tragedy of *Romeo and Juliet* was acted

in Paris a dozen years before Shakespeare wrote his play. Despite the breach with the statuesque classical convention, Elizabethan drama never ceased to take direction in point of topic from French guides. The French domination of English literature from the Restoration to Queen Anne's reign, which was often reckoned an unprecedented feature of England's literary development, was only a new link in a long chain of progress. The marriage of Charles I in 1625 with the French Princess Henrietta Maria reinforced the old literary associations. The new school of heroic French romance of which Mille de Scudery was the mistre had as many English readers as that of Dumas or Victor Hugo later.

With the accession of Charles II, England fell under the full sway of that glorious classic era of French literature of which Racine, Moliere, La Fontaine, Bossuet, and Boileau were the chieftains. Dryden, despite his original genius, fell under the spell. An attempt was made to transpose Elizabethan tragedy into the new French key. No English comic writer of the epoch failed to translate one or other of Moliere's comedies. The theory and practice of French correctness, in poetry were finally expounded by Boileau, who became the literary dictator of Europe. Pope triumphantly championed Boileau's doctrine. Well might M. Fagnet urge Pope's right to burial on the Pantheon. After Pope there slowly came into being in England the great romantic school of English poetry, and although French taste still had many English disciples, French influence steadily declined.

Meanwhile the scene changed. France discovered English literature. Every masterpiece of Queen Anne's age, the *Spectator*, *Robinson Crusoe*, *Gulliver's Travels*, became French classics in French translations. Voltaire planted English ideas deep in French soil. He taught his fellow-countrymen the significance of Shakespeare's work, although at the end of his long life he, in a fit of jealousy, attacked Shakespeare as an

inspired savage. The scientific speculation of Bacon, Hobbes, Locke, and Newton fascinated the French mind. Rousseau's thought was nurtured in English literature—chiefly on Locke and Richardson. Diderot ranked the English novelist with Homer and Sophocles. Anglomania spread to French society, and perfect harmony of custom and ideas long prevailed between the two countries. The Revolutionary War did not destroy French respect for English literary sentiment. The 19th century romantic movement of Chateaubriand, Lamartine, and the rest owed much to Young's "Night Thoughts," to Ossian, to Byron, Shakespeare, and Sir Walter Scott.

With the decay in France of idealism and romanticism, and the progress of realism or naturalism. English influence on French literature diminished. Yet never before has English literature been critically studied by French scholars with the thoroughness which distinguishes the present generation. This movement in France shows daily signs of expansion. Some recent English fiction emulates French impressionism. The English theatre has never refused a welcome to the wit of French comedy or farce. England should always be grateful to France for its earlier lessons in lucid expression and in metrical facility. The *Entente Cordiale* is rooted in the history of the two countries' literature.

THE VALUE OF MUSIC IN EDUCATION.

"The man that has no music in himself,
Nor is not moved with concord of sweet sounds,
Is fit for treasons, stratagems and spoils.
The motions of his spirit are dull as night
And his affections dark as Erebus
Let no such man be trusted."

SHAKESPEARE.

Music is a gentle pastime. It gives pleasure to the agent of music as well as to those that are gathered to hear the sweet melody. Or in other

words "It blesseth him that gives and him that takes."

It gives profit to the musician with pleasure. It is a healthy exercise and offers healthy recreation to those that follow the musician. Even a serpent is bound down by the peerless charms of music. The educational authorities in India have not done much to encourage the study of music among the students. It is generally considered as an agency for providing the musician with the means of livelihood. Music is really an art. Whether with a selfish motive or a selfless patriotism, journalists, public speakers and professional musicians strongly advocate the system of imparting music to students in schools and awarding prizes to them for their efficiency. Much of our time is lost in the futile discussion relating to the art and science of music. Practical arrangements, without frothy rhetoric, should be made by individuals and corporate bodies to advance the cause of music and an humble prayer should be made to the ruling authorities to patronise the study of music. Individual activities and the liberal support of Government would go a great way towards the realisation of the musical millennium.

Among the Muhammadan Emperors Akbar the Great was a staunch patron of music. He issued orders to his officers to the effect that he should hear the sweet music of the morning in his palace before day-break. Abul Fazl gives his hero an exaggerated compliment by writing: "His Majesty possessed such a knowledge of the science of music as trained musicians did not possess."

It is said that European music found favour in the court of Akbar. The soothing influence of music is incalculable. It makes bad children good and a sorrow stricken man finds solace in it. Music teaches patience and kindness.

A TEACHER.

EDUCATION IN THE MAGAZINES. (INDIAN)

Second Language in Schools and Colleges.

Prof K. B. Ramanatha Aiyar delivered a very interesting lecture on "The Second Language in Schools and Colleges" in the Kellett Hall, Triplicane, recently, before a large audience, when the Hon'ble Mr. T. V. Seshagiri Aiyar presided, in the course of which he said:—

If for the greater part of the people there should be a thorough acquisition of a single language of the people and if it should contain all the necessary information that would make it easy for them to be abreast of the progress of the country, that would be the easiest way of equipping themselves for their life career. For the majority of the people a thorough study of a single language was all that was necessary and all that was possible. The lowest strata of the cultured people must consist of those who were well equipped in the knowledge that could be furnished them by the literature. Every man must have elementary education in his mother-tongue, and must have in the lower stages a reasonable and complete study of the mother-tongue and the literature in the mother-tongue. There was no question about the second language so far as the elementary school was concerned. That question might come in at a higher stage. Naturally the second language must be the English language. The first language everywhere had been the mother-tongue. In India English was the first language and the mother-tongue of the people was struggling to be the second language. That unnatural position of the mother-tongue was due to the importance attached to the cultivation of English.

In the secondary stage of instruction also there must be due cultivation of the mother-tongue. In course of time the further study of the languages of India in the High School course must be carried on to a height that would be at least equal to the kind of proficiency that students in European countries had in their own vernacular languages (English, German, French). In High Schools Indian students should be familiar with the best works in Tamil, Telugu, or any of the vernacular languages, as English students of Matriculation standard were able to read and understand Sir Walter Scott's works and works of similar difficulty. He was not at all satisfied with the amount of attention paid to vernacular languages in the High School classes here. The

time devoted to vernacular languages and the time devoted to other subjects like history and geography was vastly disproportionate. That kind of extraordinary disproportion might be redressed. Intense attention might be paid to English. But instruction in History, Geography, Science, etc., might be given in the vernacular languages. If educational authorities favoured such a project, text-books in vernaculars would then be forthcoming and there would be no difficulty in expressing one's ideas in his mother-tongue.

Supposing the young men of High Schools in India attained the same proficiency in their vernaculars as the London, Paris or German Matriculates had in their vernaculars (English, French or German), would it be necessary to have the vernaculars brought up in the University at all? Would not the provision of an alternative course in the University fairly meet all the demands of University culture then? If that ambition was realized, he would certainly be for leaving the University to provide for an alternative course in order not to compel students pursuing higher studies to show further progress in vernaculars. But the actual position at present was different. He was for having something of the vernacular studies further carried on in the University course because young men of India had not studied their vernaculars up to a sufficiently high standard. Therefore the next question was how best they could promote the study of the vernaculars without dislocating the existing arrangements. He said so, because there were very strong supporters of the existing arrangements whose reverence for their cause was so great as Burke's reverence for the British constitution. Bearing that in mind, how to suggest an alteration in the University course that would least dislocate the present arrangements. It was conceded even by the stalwarts on the other side like Rev. Mr. Macphail that the only possible way of writing composition was by writing literature, and that a man must have read fairly widely and acquired a knowledge of grammar formally or informally to write good composition. The standard of composition in the college classes was low. If a knowledge of grammar was also expected, they must have an organised course of studies in vernacular literature in the High Schools and Colleges. The course of instruction in the High School classes must be perfectly organised. With regard to the study of the non-detailed books prescribed for essay subjects in the Intermediate class there must not be any murmur, if the University should prescribe from time to time a number of books to be studied by

boys with a little help from the class teacher. There was a good deal of modern literature in vernacular languages for that purpose, which should only get the recognition of the University. If they had books of the kind for two years more in the University course, the students might possibly deepen their interest in vernacular studies. When they came up to B. A. class they might be supposed to have that equipment in vernacular languages expected of them generally.

In the High School there must be a compulsory study of the mother-tongue and if any parent was eager to have his son educated in Sanskrit, extra time might be devoted to that study or some other special provision must be made. He was for keeping the present arrangements under which students might take up vernacular composition or Sanskrit translation in the University course. He would even go a little further and have a provision for translation in foreign languages like French or German so as to enable young men whose mother-tongue was Malayalam or Canarese in which the literature was not of the same high level of culture as in Tamil or Telugu, for the purpose of further studies. He would therefore say that to make the vernacular composition a real test of the proficiency of a young man in his mother-tongue the themes for essays must be taken out of some one or other of the books. There must also be translation from English to vernacular. To revise the regulations in the manner suggested no Committee was necessary. If that suggestion was adopted, that would go a great way towards the improvement in the study of vernaculars. The style of composition ought to be the style of the cultured class, who were fully aware of the literary traditions of a language and entitled to express an opinion on the style. There should be no violent breaking away from the literary traditions. They should aim at using the language of the cultured class but not of the pedantic kind.

The advantages of the students of the present generation.

A public meeting was held on the 3rd inst. at Madura College Hall, under the auspices of the Madura College Literary Society when Mr. I. Sreenivasa Iyer, Principal, Hindu College, Tinnevely, presided. The Hon'ble Mr. V. S. Sreenivasa Sastriar delivered an address on "The Advantages which the present generation of students enjoy over those of the previous generation." There was a large gathering of students and gentlemen present.

The Chairman introduced the lecturer in a short speech and the Hon'ble Mr. V. S. Sreenivasa Sastriar delivered his interesting address, in the course of which he said that he greatly appreciated the enormous change that had taken place in the conditions of the school, since persons of his age were at school. He gave a vivid description of the kind of houses in which they were taught, the kind of books they studied, the methods employed by the masters to administer justice to those who had done wrong or were considered to have done wrong, the kind of teachers under whom they learnt their lessons and the kind of pupils they themselves were when they were school-boys. When he thought these things now and contemplated similar circumstances to-day, it appeared to him, he said, that there had been a complete revolution in all these respects. The young students of to-day enjoyed great many opportunities which were denied to those of his days and their position was now very much bettered. An admirable change had taken place in the matter of school buildings. In those days, schools were conducted even under cowsheds but now they were held in good buildings built quite in accord with the character of education the pupils received therein; their thanks were due to the Government for the liberal grants which they were yearly providing for the purpose. The books which the students now studied had greatly improved; they contained pictorial illustrations which were sure helps for the easy grasp of the lessons and they were written in interesting style affording variety of reading matter. Again in the new methods of learning geography and studying science by means of practical experiments, the present-day students were considerably better off. Great interest was being evinced now-a-days by students on the art of drawing which those of thirty years ago knew nothing about. In those days athletics or physical culture received little or no attention but it now played a large part in the school work. After comparing the discipline exercised by the teachers over the pupils in those days with that exercised by the teachers now-a-days, he dwelt in detail on the character and manners of the students. If they took the qualities of love of truth, industry, perseverance, courage, helpfulness to those who need help and charity as cardinal virtues, he said, it could not be said that present-day young-men were better than the men of 30 years ago in proportion to the external advantages and opportunities which they enjoyed. He concluded by exhorting the young-men to take advantage of the better opportunities that were now afforded to them by education, so

that they might turn out to be better citizens than those of the previous generation.

Vernaculars in Schools and Colleges.

A public meeting was held under the auspices of the Teachers' Association, Madura, on the 4th instant with Mr. A. Rajarama Iyer, Principal, Madura College, in the chair, when the Hon'ble Mr. V. S. Sreenivasa Sastriar delivered a lecture on "Vernaculars in Schools and Colleges" before a crowded audience. The Hon'ble Mr. Sreenivasa Sastri in the course of his instructive speech said that one consideration should be borne in mind by all in dealing with the question of vernaculars. When they talked of vernaculars in this Presidency, there was apt to arise some confusion between Sanskrit and the vernaculars and what remarks might apply in proper force to the vernaculars were transferred to Sanskrit. This confusion, he said, had justification. The vernaculars of South India whatever independence they claimed in respect of syntax, grammar and original matter, had to depend to a very large extent for their inspiration on Sanskrit. Hence those who included Sanskrit when they talked of vernaculars might well be excused. He then explained the position of vernaculars in the present curriculum of studies in the Madras University as compared with that occupied by them under the old regulations and said that Sanskrit was in a more advantageous position than the vernaculars. One thing that struck him was the argument advanced in certain quarters that sufficient was being done for the study of vernaculars that made it compulsory for any candidate in the Intermediate to study vernacular composition or translation from a classical language. It was quite possible for the students to obtain 40 per cent. of the number of marks in a paper on vernacular composition or translation with the expenditure of a slight effort on his part but it could not be pretended that for the development of a good style in those languages such as would facilitate the assumption of foreign ideas and knowledge through them, any adequate provision had been made for them in the curriculum of studies. As a matter of fact no good prose or poetry in vernaculars was taught to the students except a few stray novels, newspaper and magazine articles just to enable them to score the required number of marks to pass the examination. He then refuted the arguments of those who decried the system of enforcing on the students the study of vernaculars and pointed out that the managers of institutions did not pay particular attention to the study of these languages, had not assigned a

proper place in the subjects of study in the schools, and had not allowed them the same measure of respect which they accorded to other subjects. The remedy for this state of things was not to knock down the vernaculars altogether from the curriculum but to suggest ways and means for their proper study. People who would pay particular attention to teach these subjects should be appointed and he said there were available a number of graduates and Masters of Arts who would be prepared to pursue with zeal not merely in acquiring knowledge of vernaculars for themselves but with great pleasure impart such knowledge to the learner in schools and colleges. How could they call a man fully educated, he asked, if he had not been aware of the rich treasures that his own language and literature could give him. Though it was contended that Tamil had not good literature, the mere poverty of literature should be the reason why it should receive special attention at the hands of the University for the creation and improvement of that literature. He also said that the same facilities allowed for the study of vernacular languages in other provinces were not allowed in this Presidency. Speaking on the grouping of subjects he said that if a candidate desired to take up Tamil or Telugu in the B.A. course he had to study in all three languages including Sanskrit and English but he could not take up mathematics or science which were of great practical value in these times. He then went on to say that provision had not been made in the colleges at Madras for the study of vernaculars even as they at present stood, and pointed out the necessity for making provision for the same. In conclusion he said that though the vernaculars of the South were not given a higher place in the curriculum of studies in the University let it not be said that they did not deserve such a place. He was of opinion that they should be given a compulsory aspect in the Intermediate examination and thereafter optional and if that was not feasible he would even accept as an alternative to have text-books prescribed for the study of vernacular composition or translation in the Intermediate.

How to improve the Tamil Language.

A public meeting was held recently at the Hindu High School, Triplicane, when Mr. P. Sambanda Mudaliar, B.A., B.L., High Court Vakil, delivered a lecture on "How to improve the Tamil language" with the Hon'ble Mr. Justice Sadasiva Aiyar in the chair. The teachers of the Hindu High School and of other schools who take deep

interest in the promotion of the Tamil language were present in large numbers. Mahamahopadhyaya Pandit Swaminatha Aiyar honoured the occasion with his presence. There was a large gathering of students. The whole proceedings were in Tamil.

The lecturer began by saying that the Tamil language had been in existence two thousand years ago. It was at its zenith in the days of Chera, Chola and Pandia. It was not only the language of the country but also the language of the rulers. Poets and authors were encouraged by kings in ancient days. They had *manyams* and had no cares for their livelihood and consequently could devote their whole time to the study of literature and writing literary works. Hence rare and valuable works came to be written in those days. When the ancient kingdoms of Chera, Chola and Pandia were overran by the Maharattas and others, Tamil lost the patronage of kings. However, poetical and other works continued to be written by men who wrote such works for earning their livelihood, if not for the benefit of the people and the promotion of the language. To prevent decay of the language, the University made Tamil as well as other vernacular languages, compulsory in the curriculum of studies. Even when Tamil was a compulsory subject, the knowledge of graduates in Tamil was meagre. In the present University curriculum there was no provision for Tamil. That being so, the knowledge of students in Tamil could well be imagined.

Tamil could be improved in various ways. Old works in Tamil written on cadjan leaves, etc., might be collected and published, as had been done by Mahamahopadhyaya Pandit Swaminatha Aiyar in respect of *Manimekhala*, *Jivachintamani* and several other works. Free libraries should be established in every nook and corner of the Presidency and Matadhipathis, some of whom had excellent works in their possession, should help in forming such libraries. The University should restore Tamil to its former place in the curriculum of studies. Text-books in easy style, on morality and dharma should be written by great men and should be taught in classes. Dramas, novels and stories in easy and elegant style should be written for teaching morals to men and women. Books written in foreign languages must be translated in Tamil. Foreign words might be introduced into the language to express new ideas or words and they might be coined to express the same ideas. It was a mistake to suppose that English would become the universal language for the whole of India and there was

no necessity to take care of Tamil. Tamil had survived after successive foreign invasions and so many vicissitudes and it would never die out, until all the Hindus of the South became converts and adopted foreign customs, habits, manners and language.

A University's Objects.

A writer in the *Bengal Educational Journal* having advocated that Universities should be made stepping-stones to commerce rather than to the professions, the opinions of several well-known men were invited, and Dr. Rash Behary Ghose, whose name has been on everybody's lips in connection with his munificent donation to the College of Science, expresses himself as follows:—

Mental culture, in my opinion, should be the chief end of University training. I do not say that the University should not teach law or medicine or engineering, but this ought not to be the principal aim of a University course. A liberal education does not indeed teach a man the peculiar business of any calling but it fits him, in the words of a distinguished writer, "to perform justly, skilfully and magnanimously all the offices, both private and public, of peace and war." As Cardinal Newman says, a cultivated intellect brings with it a power and a grace to every occupation which it undertakes, and enables us to be more useful citizens. There is a duty we owe to human society as such, to the State to which we belong, to the sphere in which we move, to the individuals towards whom we are variously related, and whom we successively encounter in life; and a liberal education which is the proper function of a University, if it refuses the foremost place to professional interests, does but postpone them to the formation of the citizen.

I should therefore make a course of general culture absolutely compulsory on all the students of the University. I attach the greatest importance to it, because I hold that such culture would be the soundest introduction to a professional training; and I strongly deprecate the modern tendency of converting a University into a place where people should be taught only how to earn their bread.

"To rear up minds with aspirations and faculties above the herd," says John Stuart Mill, "capable of leading on their countrymen to greater achievements in virtue, intelligence, and social well-being; to do this, and likewise so to educate the leisured classes of the community

generally, that they may participate as far as possible in the qualities of these superior spirits, and be prepared to appreciate them, and follow in their steps. These are purposes requiring institutions of education placed above dependence on the immediate pleasure of that very multitude whom they are designed to elevate. These are the ends which endowed Universities profess to aim at; and great is their disgrace, if, having undertaken the task and claiming credit for fulfilling it, they leave it unfulfilled."

In my opinion, the University should be open to men of all castes and creeds. But its scope should be limited to the control and guidance of higher education only.

The provision for research work in Indian Universities at present is not at all adequate. I am of opinion that the higher academic degrees should be conferred only on those who have done some original research work. I would abolish examinations for these degrees; and make research work the only qualifying test for all higher academic distinctions.

I would have both sports and gymnastics. In India, they should be organised by the University authorities. I should make either sports or gymnastics compulsory on all students of the University.

I have no faith in moral text-books. Culture, however, in its widest sense, includes moral training. The personality of the teachers and the tone set by the older students are also important factors in the formation of character.

In my opinion, religion should have no place in the curriculum of the Indian Universities, I mean, Universities that are maintained by the Government. But religion may be taught in Universities founded by a certain sect or a class, e.g., the proposed Hindu and Mahomedan Universities.

I approve of a residential University of the type of Oxford and Cambridge. And the reason is that in these seats of learning the true ideal of a University is zealously upheld, and they have produced and do still produce men who have that power of command which is born of true culture and penetrating insight.

Technical Education in India.

His Excellency the Governor of Bombay came specially from Poona to Bombay on the 5th instant in order to be present at the jubilee celebrations of the Victoria Jubilee Technical Institute,

when he gave an interesting address on technical education:—

When we consider that in every industrial country—you may take Germany, America or England—they are turning out young men every year fully qualified to take important posts, the competition must be keen, but I believe that you will be equal to it. I have heard that the Indian young man has a disinclination for, and thinks it rather derogatory to do, manual labour; he is disinclined to take his coat off and really put his back into hard manual work. I am delighted to say from what I have seen this afternoon that I am able flatly to contradict that. Whether there was a little extra energy put into it on account of the presence of His Excellency I am not very clear. The next time I come I shall come in some disguise and see how things actually are. It is perfectly true that competition is keen, but I do ask you not to be afraid of it. I want you to go forward with high courage and with ambition. And to tell you what I mean by high courage I will tell you a little story. I was going round another form of technical college, the Agricultural College at Poona, and my friend, Dr. Harold Mann, showed me the most admirable system under which they worked. At the end of my visit I said to him, 'How are the students doing?' Dr. Mann replied, 'They are doing very well and work capitally, but when they come to the end of their term and when they have got their degree and should feel competent to go out and take up a job, and when I have six or seven jobs ready to give them, they say, 'No, I don't want that, I want Government service.'

Now I want to say this perfectly sincerely to you. I think that shows a want of courage and a want of ambition, which I regret extremely and which I hope I shall never hear of again. I want you to take your opportunities with both hands; I want you to take every chance which is offered to you with high courage, the high courage of the man who has acquired practical knowledge of his profession, so that at the end of his term of work he may feel with satisfaction that he is honoured and respected by his fellow-citizens. It seems to me that it is a fair thing for me to say if I ask those young men who are just starting in the world to put their backs into it and to work really hard, so that they may be able to do something useful for their country. And I also think it is fair if they say in reply, 'That is all very well, but what are you going to do?' I promise that the Government shall assist you, young men, in every possible way that it can. I am going to make an appeal in your behalf to the great

masters of industry, not only in this Presidency, but throughout India, to give you, young men, a chance. I believe that you will be equal to it and I believe that you will show by your character, by your high principles, and by your practical knowledge, that you are worthy members of the Victoria Jubilee Technical Institute, and that you will be a credit not only to the Institute, but to that part of the world from which you come. What I have said I have said from my heart, let me give this last word to you—it comes from one who has had a good deal of experience of practical work in his life—that the man who whether it is in his work or in his plays puts into his work or play the very best of his ability generally turns out to be clean in mind, clean in body, a useful citizen, and an honourable gentleman.

(FOREIGN)

Barbarian Standards in Education.

In the past the identification of a sportsman with a gentleman has had great weight in the determination of social and educational values. Only in comparatively modern times did the association of "a scholar and a gentleman" seem plausible. Even now, prowess of the mind can seldom compete in glory with prowess of the body. The valuation of achievements current in our public schools persists, though with some abatement, among all sorts and conditions of men. But as mental skill becomes more and more the means of attaining that financial power which is the modern instrument of personal glory, it rises in social esteem. As manners, address, mental ability, and knowledge more and more determine personal success, intellectual studies become increasingly reputable. It might appear at first sight that the highest reputation would attach to those abilities and studies which had the highest immediate ability for money-making. But here the barbarian standard retains a deflecting influence. To possess money which you have not made still continues to be far more honourable than to make money. For money-making, unless it be by loot or gambling, involves addiction to a business life instead of the life of a leisured gentleman. So it comes to pass that studies are valued more highly as decorative accomplishments than as utilities. A man who can have afforded to expend long years in acquiring skill or knowledge which has no practical use, thereby announces most dramatically his possession, or his father's possession, of an income that enables him to lead the life of an indepen-

dent gentleman. The scale of culture values is largely directed by this consideration. Thus, not only the choice of subjects, but their mode of treatment in the education of the children of the well-to-do, is generally speaking, in inverse ratio to their presumed utility. The place or honour accorded to dead languages is, of course, the most patent example. Great as the merits of Greek and Latin may be for purposes of intellectual and emotional training, their predominance is not mainly determined by these merits, but by the traditional repute which has made them the chosen instruments for a parade of "useless culture."

Though some attempt is made in recent times to extract from the teaching of the "classics" the finer qualities of the "humanities" which they contain, this has involved a revolt against the "pure scholarship" which sought to exclude even such refined utilities, and to confine the study of the classics to a graceful, skilful handling of linguistic forms and a purely superficial treatment of the thought and knowledge contained in the chosen literature. It is significant that even to-day "culture" primarily continues to imply knowledge of languages and literature as accomplishments, and that, though mathematics and natural sciences enter more largely into the academic curriculum, they continue to rank lower as studies in the education of our wealthy classes. Most convincing in its testimony to the formation of intellectual values is the treatment of history and modern English literature. Although for all purposes of culture and utility, it might have been supposed that the study of the thought, art, and events of our own nation and our own time would be of prime importance, virtually no place is given to these subjects, history and literature, so far as they figure at all, are treated not in relation to the life of to-day, but as dead matter. Other subjects of strictly vital utility, such as physiology and hygiene, psychology and sociology, find no place whatever in the general education of our schools and Universities, occupying a timid portion as "special" subjects in certain professional courses. Pedagogues sometimes pretend that this exclusion of "utility" tests for the subjects and the treatment in our system of education rests upon sound educational principles, in that, ignoring the short-range utilities which a commercial or other "practical" training demands, they contribute to a deeper and a purer training of the intellectual faculties. But having regard to the part played by tradition and ecclesiastical authority in the establishment of present-day educational systems, it

cannot be admitted that they have made out a serious case for the appraisal of studies according to their human values. Probably our higher education, properly tested, would be found to contain a far larger waste of intellectual "efficiency" than our factory system of economic efficiency. And this waste is primarily due to the acceptance and survival of barbarian standards of culture, imperfectly adjusted to the modern conditions of life, and chiefly sustained by the desire to employ the mind for decorative and recreative rather than for productive or creative purposes. Art, literature, and science suffer immeasurable losses from this misgovernment of intellectual life. The net result is that the vast majority of the sons and daughters even of our well-to-do classes grow up with no trained ability to use their intellects or judgments freely and effectively, and with no strong desire to attempt to do so. They thus remain or become the dopes of shallow traditions, or equally shallow novelties, under the guise of scientific, philosophic, economic, or political principles which they have neither the energy of mind or the desire to test, but which they permit to direct their lives and conduct in matters of supreme importance to themselves and others.

As education is coming to take a larger place in the organised occupations, and more time, money, and energy are claimed to it, the necessity of a re-valuation of intellectual values on a sane basis of humanism becomes more exigent than ever. For there is a danger of a new bastard culture springing up, the product of a blending of the barbarian culture, descending by invitation of the upper classes, with a too narrowly utilitarian standard improvised to convert working-class children into cheap clerks and shopmen. Our High Schools and local Universities are already victims to the *mesalliance* between "culture" and "business," and the treatment of not a few studies, history and economics in particular, is subject to novel risks.—*Nation*.

Indian Students in England.

The report of the work at 21, Cromwell Road, 1st April 1912 to 31st March 1913, has been published.

There has been a substantial progress in the work and usefulness of the house during the year under review.

The number of residents who have come direct to the house from India has greatly increased, but there are many whose friends in this country have already made arrangements for their

accommodation elsewhere. In these cases they frequently visit the house for advice after a few days, and an effort is made to keep in touch with those who remain in London. Opportunities for this work are found in the social evenings held every Friday after dinner. These meetings are rendered attractive by means of games, music, &c., and together with a few English friends, the number present is usually about 20 or 30.

The societies accommodated in the house also afford social opportunities to which students are invited, and the Indian members belonging to these societies number nearly 300. The rooms are often lent to other societies for their meetings and also to individuals for private parties. Two gatherings in connection with the house itself were largely attended, one held in July under the presidency of Lord Amptill, to which visitors from India, distinguished English people and Indian students, were invited and the other a Christmas party given specially for the Indian students who, together with a few English guests, numbered about 2,000.

Among the other organisations connected with Indian students, the work of which is carried on at 21, Cromwell Road, is the Distressed Indian Students' Aid Committee. This Committee has now been established for over two years, during which time about 45 students have actually received financial assistance. It has enabled those responsible for the house to deal with most of the cases of real distress which have come before their notice, although there have been several applications which, owing to the circumstances of the case, have had to be dismissed without assistance.

During the year a Law Library for the use of Indian students has been formed at 21, Cromwell Road. It had its origin in a handsome donation of law books and reports presented by Sir Thomas Raleigh, K.C.S.I., to which have been added other law books, obtained by purchase or from the India Office, calculated to be useful to the students in studying for their examinations and in prosecuting legal researches. Suitable locked book-cases have been erected in the lecture hall, which has been furnished as a reading room but is still available for meetings. The Managing Committee desire to acknowledge gratefully the assistance they have received from the Secretary of State for India in grants (for the purposes of this Library) of which some portion still remains to be expended. The Library was formally opened on the 13th February 1913; Mr. C. E. Mallet occupied the chair on the occasion and Sir Thomas Raleigh addressed the meeting. In

connection with this Library two moots have already been held for the discussion of legal cases. The Managing Committee consider that such opportunities for legal argument should be of great service to the students in the practice of their profession. They hope to continue the moots if the students maintain an interest in them and attend in sufficient numbers. For the charge of the Law Library two Indian students have been appointed librarians.

The Law Library is therefore now an established institution, and represents a substantial attempt to provide the students with facilities for their legal studies. Some complaints had previously been made of the want of such help. It remains for the students to show their recognition of the facilities now afforded by making full use of the Law Library.

Two tennis courts have been acquired during the year in Pelham Place, South Kensington, and as these are hard courts they can be used even during the winter. They have already been considerably used, and it is anticipated that during the summer they will be very popular.

Efforts have been made to find homes for students when they require them, and this has generally been possible.

The total number of different students who have resided in the house during the year has been 221, of whom 124 came straight from India. This does not represent the actual number of visits, as many students returned frequently for a few days, some as many as eight times during the year. Considering that room has always to be kept for new arrivals, the Committee regard it as highly satisfactory that the average number of daily residents throughout the year has been about 11 out of an available accommodation for 15.

Teaching and Examining Universities.

In connection with the present controversy in our country regarding Teaching and Residential vs. Examining and Federal Universities certain observations made by the eminent educationist, Sir Philip Magnus, at the presentation day at London University on the 7th of May last, will be found interesting and useful. The London University Commissioners with the Lord High Chancellor at their head, repeatedly remarked in their report that the external and internal sides of the University 'were dominated by incompatible ideals.' Sir Philip Magnus disagreed with this criticism and said;

They recognised that the highest form of University education was that which students who devoted their whole day to instruction and research, were enabled to receive from University professors, and that the examinations they were required to pass should, as far as possible and under proper safeguards, be based on that instruction. But they also recognised, what experience abundantly confirmed, that there were thousands of students who, for many reasons, could not obtain that kind of education which was ideally the best, and they rightly regarded it as their duty to watch over the interests of these less fortunate students, who generally belonged to the poorer classes, and to take care that, in accordance with the traditions of the University, some other road to the higher education and to a University degree might be kept open to them. To say that the graduates of that University, holding those views, set up examinations rather than education as their ideal was to misrepresent them, and showed that the Commissioners had incorrectly interpreted their views. There was nothing necessarily incompatible between the ideals of the two sides of the University; they were supplemental, and the majority of the members of the former Commission concurred in that conclusion. The University was, and must remain, unique, for the conditions of the higher education in London were different from those of any other city; and they could not hope to attain to the perfect ideal suggested in the Commissioners' report by the endeavour to reconstruct it according to a German or any other model. Indeed, there was nothing to which he took stronger exception than the attempt to germanise our education. But when he saw the vast number of eager students who came there annually to receive the reward of their diligence and progress in their search after knowledge, when he reviewed the long list of eminent teachers under whom so many of them had studied, when, too, he recalled the contributions to the advancement of science and learning which proceeded from their research department and the names of the distinguished men and women now living who looked with pride and satisfaction to the University as their Alma Mater, he failed to recognise their University in the fundamentally defective institution described in the pages of the report.

THE UNIVERSITIES.

MADRAS UNIVERSITY.

Professorships.

The Syndicate of the Madras University is inviting applications for University Professorships in Indian Economics on Rs. 10,000 per annum and in Indian History and Archaeology on Rs. 500 per mensem rising to Rs. 1,000 by annual increments of Rs. 40.

Proposed Buildings.

The Government consider that the University Library should be built on the land immediately to the west of the Senate House and between that building and the Buckingham Canal. The whole of this will be wanted for the library and its appurtenances, and places elsewhere will need to be found for the tiffin rooms, motor garage, etc., which now stand there. A fresh site in another place must also be selected for the Revenue Board's Laboratory which was proposed to be built there. Orders on these points and sanctioning the alienation of the above piece of ground to the University will issue in the Revenue Department. The design of the library building will be separately considered. Its chief frontage should be to the Walajah Road and room should be left for extensions to the northward. The Syndicate is requested to furnish Government with full particulars of the University's needs in the way of lecture rooms, etc., to be attached to the building.

The Grants.

The Government of Madras had forwarded to the Government of India, with remarks, the proposals of the Senate of the Madras University regarding the utilization of the recurring grant of Rs. 65,000 and the non-recurring grant of four lakhs given by the Government of India to the University. The Government of India have now sanctioned the proposals of the Senate for the expenditure of the Imperial grant of Rs. 65,000 recurring and four lakhs non-recurring and the Director of Public Instruction has been requested to report about the transfer of the Government Oriental Manuscripts Library to the University.

BOMBAY UNIVERSITY.

A New Prize.

The following are particulars of the proposal submitted by Rao Sahab Khimji Cooverji, J. P., to the University of Bombay offering to endow a prize in the memory of the late Goswami Shree

Devkinandan Acharya, the well-known preceptor of the Vaishnavite community :—

This prize should be named "The Goswami Shree Devkinandan Acharya Memorial" prize.

(2) The amount of the prize shall be Rs. 100.

(3) The prize shall be given away every year to the best writer of a thesis on any subject within the province of metaphysical reasonings embodied in "Anubhashya" compiled by Shriman Vallabhacharaya.

(4) The subject of the thesis shall be selected by a Committee appointed by the Syndicate and shall be advertised at least 6 months before the latest time allowed for the sending in of the papers.

(5) The competition shall be open irrespective of caste and creed and in order that Sanskrit Pandits not familiar with the English language be able to compete for the prize, option of writing the thesis in English or Sanskrit shall be given to the competitors.

(6) All papers received from competitors shall be examined by an examiner nominated by the Syndicate and the candidate recommended by such examiner as deserving of the prize shall be awarded the above prize.

(7) The prize may be given in the form of books or purse, at the option of the recipient.

(8) Should there be no competitors in a certain year for the above prize or should the papers received be, in the estimation of the examiner not deserving of any merit the amount of the prize payable for that year shall be held over and paid to the successful competitor in the succeeding year or years together with the amount set aside for the year in which the prize is given.

(9) Government Promissory Notes of the nominal value of Rs. 4,300 bearing interest at 3½ per cent. shall be endorsed by Mr. Khimji Cooverji in favour of the Registrar or Chancellor of the University of Bombay for the aforesaid prize, who will collect the interest accruing on the said Notes every year and out of the sum of Rs. 150 collected therefrom Rs. 100 shall be utilised towards the awarding of the above prize and Rs. 50 or any portion thereof may be utilised to defray advertisement expenses and examiner's fees and other incidental expenses as the Syndicate may deem fit.

CALCUTTA UNIVERSITY.

An Appointment.

Professor William Henry Young of Liverpool, has been appointed Hardinge Professor of Mathematics at the Calcutta University.

Examination Results.

In the Preliminary Examination in Law held in June 1913, 7 students passed in the First Division and 252 in the Second Division.

TECHNICAL EDUCATION.

TYPEWRITER TOPICS.

THE REMINGTON OFFICE AT NASHVILLE.

There is a new manager for the Remington Type-writer Office at Nashville, T. C. Malone, the former manager, was recently promoted to the managership of the Remington branch at Jacksonville, and Mr. Russell, his successor, is no chicken at the typewriter business.

Russell began with the Remington in 1892, as a mechanic at their Chicago office, under Silas W. Crandall, and a few months later he went to Omaha as a mechanic under F. E. Van Biskirk, now a Vice-president of the Remington, then manager of the Remington office at that point. Then followed four years, from 1900 to 1904, as head of the mechanical department of the Milwaukee Remington office, and a short period as resident salesman at Madison, after which Mr. Russell went to Atlanta.

THE UNDERWOOD.

The Underwood typewriter is ever winning, and we herewith refer to the splendid results obtained by that machine in the Pavia Competition held under the patronage of H. M. the King of Italy. The contests were for the Royal prize to the Meccanographic Industry, the Italian championship, the stenodactylographic championship, the lombard championship, Operating from Dictation, Copying, Diplome for accuracy, and Record of speed.

In all the contests very high speed records were made, such as have never been obtained in former competitions.

THE MADRAS SHORTHAND WRITERS' ASSOCIATION.

A Correspondent writes—With the publication of the last issue of the *Fort St. George Gazette*, which contains the results of the advanced grade in the shorthand examination the results are complete, and it is therefore time that the shorthand public are made aware of the result

Reviews and Notices.

LITERARY SELECTIONS FROM NEWMAN: EDITED BY A SISTER OF NOTRE DAME (LONGMANS, GREEN & Co.) 1s. 6d.

This volume of selections from Newman is one of the best books in *Longman's Class-Books of English Literature*. A study of Newman's writings is of the utmost value to every student of English style, and we are glad to see Messrs. Longmans, Green & Co. afford a very good opportunity for it by this handy volume of selections. We are immensely pleased with the passages that have been selected, as all of them have a fine literary flavour and are eminently suited to the kindling of a genuine taste for literature in the young student. The volume includes some of the best portions of the *Idea of a University* and the *Historical Sketches*. The editor has steered clear of the great temptation there is in dealing with Newman, of entering into the religious controversy with which he is inseparably associated. The notes are judicious and to the point and we should urge with great pleasure its introduction as a text-book for the Intermediate Examination of our University.

COMPOSITION FROM ENGLISH MODELS, PARTS I & II:

EDITED BY E. J. KENNY. (EDWARD ARNOLD & Co.) 1s. & 1s. 6d.

Mr. Kenny has followed quite a new method in his treatment of the subject of composition. Taking the well-known classification of prose-writing in relation to its aim, persuasion, narration, exposition and description, he gives specimens under each of them, the specimens themselves being followed by a number of valuable exercises. There are also selections devoted to dialogue, oratory and letter-writing. The study of models, with special attention to the aim they pursue cannot but be productive of very good results, in giving a practical knowledge of composition.

FATHER GREGORY, BY PERCIVAL WREN, M.A. (LONGMANS, GREEN & Co.) 2s. 6d.

Mr. Percival Wren has succeeded in writing a very entertaining novel in his *Father Gregory*. The prelude to the central story is strikingly emotional and deals with a tragedy of great pathos. There are a large number of chapters in the book devoted to a delineation of a number of undesirable types in Anglo-Indian society. It

of the Association in the three grades, Elementary, Intermediate and Advanced. Of the 10 that were sent up for the Elementary 6 have come out successful with four in the first class. In the Intermediate, 14 have succeeded out of 20 sent up, with one in the first class and that one heads the list of successful candidates in Madras. In the Advanced two have succeeded out of 13 that sat for the examination. Though the Advanced results are somewhat disappointing still it is a matter for congratulation that out of three successful candidates in the Madras centre, two are of the Association.

YOUNG MEN'S COMMERCIAL UNION.

An ordinary meeting of the 'Young Men's Commercial Union' attached to the Government School of Commerce, Calicut, was held on Wednesday, the 3rd September 1913, with Mr. S. S. Gopalakrishna Aiyar, B.A., L.T., Lecturer, B. G. M. College, Calicut, in the chair. Mr. N. M. Rama Aiyar, Assistant, Government School of Commerce, delivered a lecture on 'The Shorthand Alphabet.'

After a brief opening speech by the Chairman the minutes of the previous meetings were read and passed. Then followed the interesting lecture by Mr. N. M. Rama Aiyar. The lecturer divided his discourse into three main divisions, viz., a brief account of Sir Isaac Pitman's life, his remarkable personality, and his untiring efforts to spread his new system, then in its babyhood, and how he was ahead of his times; secondly the alphabet proper wherein he dwelt at some length, going into the various requisites of an ideal alphabet, and established the superior claims of the phonographic alphabet over the English alphabet as being more simple, rational and scientific than the latter and thirdly, a few hints and pieces of advice which specially appealed to beginners. Then three of the student members of the Union came forward, each with a short speech.

The fifth item of the programme, the Chairman's concluding speech, was as long as that of the lecturer's and was of an absorbing interest to the audience. The Chairman had quite a large store of information, the serious part of his speech being tempered with many a choice piece of humour.

is hoped that the author's love of caricature has got the better of truth, otherwise the reader will be justified in holding rather a low opinion of Anglo-Indian society as a class. There is a sweet moral ideal dominating the story, the ideal of love in the first part and that of sacrifice in the second. We have no doubt the novel will prove interesting reading to all acquainted with the social conditions of Anglo-India.

We had to draw attention in our review of the author's last volume of fiction, *Dew and Mildew*, to his lamentable want of sympathy with Indian life. The author's restriction of his theme to Anglo-India has saved him from that danger in this book, but one could see traces of it in the only chapter in which Indian characters are introduced, at the very beginning of the book. Mr. Wren ought to learn the very desirable lesson of not offering gratuitous insults to Indian feeling, if he expects to flourish as an author in this country. It is difficult to see what pleasure he derives in imagining Indians with an impossible hatred of Europeans. The B.A. book-keeper of Kondah, we are told, 'entertained a most bitter hatred of those who had given him a free (!) education and then omitted to see him suitably rewarded for accepting it.' He does not know "why God made panthers, Pathans and Sahibs." And when he closes his eyes he 'resumes his favourite day-dream of wrecking a train full of Europeans—all gazetted civil officials for preference.' We should like to assure Mr. Wren that such monsters of Indian graduates, exist only in his imagination. And the sooner he is disillusioned of such provoking beliefs, the better will it be for himself and his readers.

THE BRITANNIC QUESTION, BY RICHARD JEBB.
(LONGMANS, GREEN & Co.) 1s. 6d.

The author, a well-known writer on Imperial problems, discusses elaborately in this volume the real meaning of the term *Imperialism*; and shows how there are various aspects of it which sometimes cross one another. There are imperialists of various shades—men who urge forward the ideal of Britannic equality as against those who believe in the necessity of maintaining the ascendancy of England. Again we find an opposition between centralisers and autonomists, and between the respective upholders of the military and economic conceptions of the proposed union of the Empire. The place of India in the schemes of re-organisation is also dwelt on at length; and the incompatibility is well brought out between Morley's proclaimed purpose of

bringing the Government of India more and more under the influence of native opinion; and the policy adopted by the Ministry of tightening the imperial reins over the Viceroy.

The ideal of Britannic union has had a wondrously rapid growth, during the last two decades and more specially since the union of South Africa. A discussion of the various phases which this ideal may assume, must have some practical force in shaping its future. We commend this book for careful study by all students of British politics.

ELEMENTARY ALGEBRA, VOL. II, BY GODFREY AND SIDDONS (CAMBRIDGE UNIVERSITY PRESS).
3s. 6d.

This volume deals with the following topics:—Logarithms; Ratio, Proportion, Variation; Surds and Irrational Equations; Progressions; Gradient of a graph, Rate of change, Derived Functions; Integration. "Limits" and the ideas connected with a converging geometrical series have been treated with great care, so that a student going through this book cannot carry away incorrect notions of infinity and limits which will have to be got rid of afterwards. The book also provides a gradual and leisurely approach to the elements of calculus. This subject, viz., 'the elements of calculus' is considered in this country, as was done in England some ten years ago, to be too difficult to be taken up in the High School nay even in the Intermediate course; whereas one, who goes through this book, cannot fail to realise how easily and successfully the first notions of calculus can be taught to an average boy of fifteen or sixteen. The authors say in the Preface that 'Vols. I and II of Elementary Algebra cover as much of the subject as is likely to be learnt by the pupil of average ability during a full school course.' This implies that in England, 'first notions of calculus' are included in an ordinary school course. How different is the situation here, in Madras, where even logarithms are considered to be too much for an ordinary student of the secondary school who specialises in Mathematics?

(a) A JUNIOR COURSE OF ARITHMETIC, BY SIDNEY JONES. (MACMILLAN & Co. LTD.) 1s. 6d.

(b) EXAMPLES IN ALGEBRA, BY H. S. HALL. (MACMILLAN & Co. LTD.) 2s.

These two books contain merely selections of exercises from the respective authors' bigger books, viz., 'Modern Arithmetic', Part I and 'A School

Algebra, Part I.' The bigger books are well known as good school books, and teachers, who prefer to give their own oral explanations and to place in the hands of students only a mere book of exercises, will find these useful as students' books. The books are also priced cheap.

GEOMETRY FOR SCHOOLS, VOL. I—VI, BY BOURCHARDT AND PERROTT. (BELL & SONS). 4s. 6d.

Volumes I—V have been reviewed in a previous issue of this magazine. The book before us contains in addition only Vol. VI which deals with solid geometry and plan and elevation. The treatment is not in the stereotyped Euclidean order; but easy and instructive methods of proof are given and the subject itself is developed in a new and interesting manner. There are many practical exercises under plan and elevation; and students are recommended to make actual models with folded paper, pins and pencils.

TWO BOOKS ON ZOOGEOGRAPHY.

i. EARTHWORMS AND THEIR ALLIES, BY FRANK E. BEDDARD, F. R. S., F. R. S. E., PRO-SECTOR OF THE ZOOLOGICAL SOCIETY OF LONDON, pp. vi+150, WITH 13 ILLUSTRATIONS. (CAMBRIDGE UNIVERSITY PRESS, 1912). 1s.

ii. THE WANDERINGS OF ANIMALS, BY HANS GADOW, F. R. S., LECTURER IN ADVANCED MORPHOLOGY IN THE UNIVERSITY OF CAMBRIDGE, pp. vi + 150 WITH 17 MAPS. (CAMBRIDGE UNIVERSITY PRESS, 1913). 1s.

These books belong to the excellent series of cheap Manuals of Science and Literature issued by the Cambridge University Press, and deal with the geographical distribution of animals, the first of the Earthworms only and the second of all animals in general.

1. This contains a *resumé* as it were of the author's great Monograph on the Oligochaeta, viewed in the light of recent researches in that group made by himself and by Continental, American and Australian helminthologists. The book opens with a clear account of the general features, variability in external characters and the internal anatomy of the terrestrial and aquatic Earthworms, and this portion of the work is copiously illustrated with several excellent figures. This is followed by a few chapters on the mode of life of the fresh water and marine species of

Earthworms, and on the relation of the external features of these worms to their habits and environment. Then a small chapter on the sense organs and senses of the Earthworms is followed by chapters on their 'Ranges,' 'the perigrine Earthworms' and the Earthworms of 'Oceanic islands.' In these chapters are distinctly shown that Earthworms were all originally aquatic forms, that terrestrial forms originated more or less from these, and that some of aquatic worms in existence now, are more or less a reversion as it were to the original type, and we note herein that Mr. Beddard has changed his original view that the 'Perichoetes' were the most archaic forms, whereas here he holds them to be the most modern forms of the Earthworms. Chapter VIII gives an account of the most important barriers for the dispersal of Earthworms, and the facilities of their migration to fresh regions. The last chapter of the book deals in a general way, with certain problems in zoogeography, as illustrated by the distribution of the various families, genera and species of Earthworms; of which, the presence of terrestrial Earthworms in some of the widely separated islands of the Southern Hemisphere, the hitherto considered 'Oceanic' islands, throws immense light, on the probable non-volcanic origin of these islands; and from the curious relationship existing between the worms inhabiting S. America, Africa, Indo-Australia and New-Zealand, Mr. Beddard asserts boldly, in spite of the views of others, of the former existence of a wide northward extension of the Antarctic continent, connecting together all the existing zoogeographical areas, and this land is held by him to be the original home of the Oligochaeta. Though scientifically accurate, the book could be of use to advanced students of Zoology only. A ready referencer in the form of a synopsis showing the classification of the Oligochaeta, with the names of the chief families and genera would have greatly facilitated the quick understanding of the text, and a zoogeographical map or two of the Earthworms would have been a valuable addition to the text.

2. It is not possible to do justice to such an extensive subject as the geographical distribution of animals within the small limits of a pocket book of 150 pages of large type, and Prof. Gadow has to be congratulated on the able way in which he has brought out clearly all the salient features of such a vast subject in his 'Wanderings of Animals.' The general plan of the work is as follows:—The first chapter is about the history of geographical distribution, showing the gradual progress made in the study of geographical distri-

bution by various zoogeographers, a consideration of the lines along which they worked and the views propounded by them, and Prof. Gadow adopts in the main the 'Scaeler-Wallace' regions. Chapter II deals with the 'Oecological' study of animals, a study of the chief homes, and how such homes with their various effects of climate, etc., influence their inhabitants, and the interdependence of animal and plant life there. Then follow two short chapters one on the needs for spreading, on the modes, means and rates of spreading and the other on the chief causes that bring about the rich or scanty faunas of various localities. Chapter V is on the ancient geography of the Earth—the former configuration of land and water in various periods of the Earth's history. This chapter is well and originally illustrated with a series of diagrams and maps indicating the hypothetical configurations of land and water in successive geological epochs. Chapter VI deals with the distribution of a vast number of various groups of animals in space and time, and being one of the author's specialities attention is strongly directed to the vertebrate fauna. The author has succeeded to a remarkable degree in his attempt "to trace the animals back to their original home, to follow their wanderings, successes and failures, and the changes they have undergone by adaptation to new and altered environments, and to account for the composition of faunas of various countries and seas." The book is clearly and well written and possesses the merit of being concise and complete, and forms an admirable introduction to Zoogeography and we strongly recommend it to all students of Biology. A geological time-table, a good Index and a bibliography add to the usefulness of the book.

REGIONAL GEOGRAPHY OF THE WORLD IN TELUGU;
PART II, ASIA, EUROPE AND BRITISH ISLES;
PART III, AMERICA, AFRICA, AUSTRALIA, ETC.,
By M. SITARAMARAO, B.A., L.T., HEADMASTER,
Veerasingam High School, Rajahmundry.

It is a matter for congratulation that to meet the growing demand for geography text-books written on rational lines in vernacular, teachers are beginning to supply the market with good books. The treatment of the continents in the volumes before us is based on natural divisions. The author has also taken sufficient pains to make the subject interesting. In spite of these merits, we are sorry the books are not quite satisfactory. To start with, the book contains many statements that are wrong. We are not

able to follow the author when he says that "Europe is, in size, the smallest of all the continents" and that "it is in the midst of the land portion or surface." A reference to the table given in page 10 of the book itself will show that Australia is the smallest continent. Every school boy will laugh at the statement that Europe has the ocean all round (పట్టున నముద్ర ముండుటచేత, page 63 of Part II). It has recently been proved by Dr. Swen Hedin that Tibet is not a plateau. Though the author refers to this great explorer in his book, he has failed to note his discoveries. The description of the relief of North America is far from satisfactory. The western mountainous area of this continent is known by the name of Cordilleran area and consists of three distinct mountain ranges. The author fails to note that the Pacific ranges are divided into the outer and inner ranges. The names might have been avoided while the build of the country ought to have been accurately described by a reference to the orographical map. We looked in vain in the book for the natural divisions or regions of Australia. In speaking of political divisions of this continent there is absolutely no reference to the "Northern Territory."

Want of distinct "human element" in the treatment of the subject is another sad feature of the book. It is impossible to interest children if this element is neglected. Again what children in the lower classes want is not the mass of details but the statement of general principles explained by inductive methods. With the translation of technical terms again neither the "modern" school nor the "classical" school would be pleased. The author speaks of ఉష్ణోగ్రత పట్టిక (table of temperature and rainfall but prefers to treat వాతమయము (climate) ఎక్స్ప్లోరు (explore), మాన్యుఫ్యాక్చరు (manufacture) as words which have passed into currency in the Telugu language. Trade winds are called వ్యాపారపవనము though years ago it was shown that the word *trade* in "trade-winds" means steady or constant and has nothing to do with వ్యాపారం. The maps in the book are a disappointment. The pupil can learn nothing from the map of Asia on page 10. Some of the maps have no key to explain the shading (page 133.) The shading in some of the maps gives ideas different from what the author intended (maps on pages 16a and 16b). We mention these things, not with the view to smother honest attempt on the part of

indigenous agencies to bring out better class of text-books in vernacular for children in the lower classes of our schools, but to show the men engaged in the work that if they do want to successfully compete with English firms they must bestow more care in writing the text-books. We wish also that writers in Telugu will try and avoid the broad final ending common among the Telugus as మాన్యుఫ్యాక్చరు క్లయమేటు, ఆధిపత్య (Athens), హార్బరు (harbour), గ్రీసు (Greece), etc.

EASY STORIES FROM INDIAN HISTORY (TAMIL AND TELUGU EDITIONS) BY E. MARSDEN, B. A. (MACMILLAN & Co. LTD.) 10 as. & 8 as.

Mr. Marsden's English edition of the Easy Stories is a book very popular with school children and we are glad that Messrs. Macmillan & Co. have now brought out Tamil and Telugu editions of this book. There are about 50 stories of persons and events prominent in Indian History told in very pleasing and attractive manner. One redeeming feature of these stories is that in the characterization of persons, the author is to a large extent impartial. Aurangzeb and Sivaji for example are described in their true colours. Their virtues are more pointedly described. The Tamil edition is far more satisfactory than the Telugu. The language is very charming and the book does not appear to be a translation. We are sure that this book will be widely read in the schools, more for the sake of the language than for the history contained in the stories. The Telugu edition reads in some places more as a translation than an original book. The books are profusely illustrated and the illustrations are very good. We wish the books were issued in two parts.

Indian Educational Notes.

MADRAS.

Training of Teachers.—In June 1912, Government approved the proposal to train an extra batch of students of the lower elementary grade in certain Government training schools for masters and sanctioned the employment, in each of them, for a period of twenty-two months from 1st June 1912. In a letter to the Government, dated the 26th June, Sir Alfred Bourne, the Director of Public Instruction, pointed out that the demand for elementary teachers on account of the large increase in the number of elementary schools, under the management of Local Boards, to meet which the above proposal was sanctioned has been increasing and it will, it is expected,

become greater year after year. The supply, he said, required consequently to be increased. He requested that a similar provision be made with effect from or after the 1st July last, in certain Government Training Schools, for the training of a further additional batch of about 695 lower elementary students, and for the admission into the Government training school at Nellore, of an extra batch of 40 higher elementary students for a course of twenty-two months. The Director also strongly supported a proposal to open a temporary additional training school of the higher elementary grade at Amalapur. In their order upon the proposals Government state that the Government approve the proposals of the Director of Public Instruction—(1) to train an extra batch of 695 students of the lower elementary, and forty students of the higher elementary grade at selected Government training institutions for a period of twenty-two months, and (2) to open a temporary training school at Amalapur in the Godavari district for a similar period to train eighty students—forty of the higher elementary, and forty of the lower elementary grade. They further state that as it will not be possible to begin regular work before the 1st September next, provision for six months, viz., Rs. 60,374 will be sufficient for the current year. This amount will be met from the special Imperial grant of 23 lakhs for education provided in the Civil Budget Estimate for 1913-14.

Sarah Tucker College.—The ladies of the Sarah Tucker College, Palamcottah, and their friends and the well-wishers of the College, assembled in front of the College where a long and interesting programme of songs, drills, recitations, etc., was gone through. The Rev. E. S. Carr of the C.M.S. presided, while Mrs. Loane kindly distributed the prizes, which were numerous and handsome. The very first item was a greeting song which was followed by a reading and prayer by the Rev. Mr. Devadoss.

The Principal, Miss Lalford, then read the Annual report.

The Chairman in concluding his remarks thanked Mrs. Loane for so kindly distributing the prizes and those guests who had availed themselves of the opportunity for showing their interest and sympathy with the College by their presence.

The interesting and pleasant function came to a close with the singing of the National Anthem.

Physical Training Classes.—A circular has been issued to the Correspondents, European Schools, Madras, by Mr. J. H. Melville, Inspector of European and Training Schools, Madras, intimating to them that physical training classes will be held separately for male and female teachers daily and that teachers should attend at least twice a week. The building rented for the purpose is fitted with electric light and fans. It is proposed also to provide bathe. The classes will commence as soon as possible after receipt of the names of those willing

to attend and will probably continue until the end of March. At the end of the course a practical examination will be held, at which the candidate's instructional powers will be tested. Certificates will be issued to teachers who have attended the classes regularly and who satisfy the Inspector at the end of the course. The instruction will be based mainly on the syllabus of physical exercise for schools issued by the English Board of Education. The Instructor engaged has had considerable experience in training both male and female teachers. No fees will be charged, the object of starting the classes being to enable teachers to receive practical instruction on modern lines in this important subject.

The Teachers' Association, Madurai.—Under the auspices of the above Association, a lecture was delivered by Mr. A. Govindaraja Mudaliar, B.A., L.T., Headmaster of the Sourashtra High School, on Wednesday, the 17th September 1913, at 6 p.m. There was a large attendance of teachers. Owing to the unavoidable absence of the Hon'ble Mr. Srinivasa Sastriar, who was to have presided on the occasion, Mr. R. Ry. C. Narayanasami Aiyar, B.A., Headmaster of the Sethupathi High School, was voted to the chair.

Introduced by the learned Chairman, Mr. Mudaliar delivered his address on "The Place of B Group subjects in the S. S. L. C. Scheme." In the course of his eloquent address Mr. Mudaliar said that it was a truism that pupils of the Sixth Form took no interest in the study of Indian History and Geography, inasmuch as they were not compulsory subjects under Group "A" and that even Headmasters winked at the low marks obtained by their pupils in those subjects in the class and terminal examinations. Headmasters could not be unduly severe with their boys lest the latter should seek admission into other schools, and thereby diminish the strength as well as the fee income of their institutions. Further, how could a teacher make his pupils take interest in a subject when they had sworn, as it were, to take no interest in that subject. Mr. Mudaliar, therefore, suggested that Indian History and Geography could well be omitted from the timetable of the 6th Form; for, grinding in these subjects from the Fourth class of a primary school to the 5th Form of a High School for a period of six years should be enough to give a boy a sound knowledge of these subjects for all practical purposes, and the time thus saved could well be devoted to the teaching of English or any other subjects in the study of which the boys take a genuine interest. A year's further study of Indian History and Geography in the 6th Form could not add much to a pupil's knowledge, especially as under the present S.S.L.C. scheme the time spent on these subjects was simply wasted. Moreover, self-interest would induce no pupil to prefer the "B" Group subjects to the "A" Group ones, or to pay at least equal attention to both. He would certainly devote all his attention to the study of "A" and "C" Group subjects, and try to score as many marks as he could at the public examination

in those subjects. Mr. Mudaliar also suggested that the much maligned vernacular could, for reasons pointed out by him, be transferred to the subjects of group "A."

The address over, there was a lively discussion of the subject by some of the teachers present. The Chairman then made a few remarks. With a vote of thanks, proposed by the Secretary, to the lecturer and the Chairman, the meeting came to a close at about 7.15 p.m.

Pittapur Rajah's College.—The Hon'ble Mr. P. S. Sivaswami Aiyar, C.S.I., C.I.E., presided at the prize-distribution at the Pittapur Rajah's College. The function began with the reading of the Committee's report on the work of the College in 1912-13 by the Principal and Secretary, Mr. R. Venkataratnam, which showed that there had been a considerable rise in the numbers on the rolls during the year. The income from fees amounted to Rs. 32,766. The total expenditure was about Rs. 44,870. The excess expenditure of about Rs. 7,000 and Rs. 4,450 invested in buildings were generously provided by the Rajah, the Trustee and Manager.

The President distributed the prizes to the several students and made a speech in the course of which he said that the Rajah's College was a premier institution worthy of location at the headquarters of the district. There was hardly any institution in the Presidency comparable in strength or other respects with this among those maintained by indigenous agency. Cocanada owed much to the Rajah, for there was not a public institution which he had not laid under deep obligation by his generosity and assistance. He had a doubt, whether it was fair to throw all the burden of the College on the Rajah. Surely, the citizens of Cocanada had to recognize the claims which this useful institution had on their liberality and he was sure they would do it if the Rajah would only permit them. The public might institute scholarships to enable students to carry on their studies for the degrees, found chairs, afford better accommodation to the increasing number of students and so forth. It would be a wise generosity on their part to help students to pursue scientific study or acquire proficiency in any special branch of learning. The Principal referred to the proposal to start technical classes as a secondary course in the institution. It was desirable that students should be encouraged to take up such courses of study which would give them good scope not only for earning a decent livelihood but also for being useful to their country. It would be worth while, if the public, the merchants, the lawyers, and the landlords awarded scholarships and sent students to the Bombay College of Commerce, the training in which would be helpful for work in banks and in co-operative credit societies which were fast springing up. As regards moral culture of students in this institution he said that students had the undoubted advantage of the influence and example of their Principal, Mr. Venkataratnam Naidu and the Rajah of Pittapuram,

who was its Manager and Trustee. He hoped students of this institution who had so many advantages of moral and intellectual culture would grow to be good citizens of the world.

The Viresalingam Public Library.—The Anniversary of the Viresalingam Public Library, the best of its kind in the Telugu districts, was celebrated with great pomp in the local Town Hall on the 9th and 10th instants. Mr. G. V. Appa Rao, B.A., Private Secretary to the Maharaja of Vizianagaram, occupied the chair. All the elite of the town graced the occasion with their presence. Messrs. S. Kameswara Rao, M.A., L.T., and V. V. Sarma, M.A., L.T., read learned and instructive papers on "the Present Condition of the Telugu Stage," the "Ancient Hindu Chemistry," respectively. The proceedings were brought to a close by the President's thoughtful speech on 'Gramya Style.'

Sourashtra High School.—The Managing Committee of the Sourashtra High School are making vigorous efforts to collect funds for the erection of a new building to meet the growing needs of the institution. The Building Fund now amounts to Rs. 31,000 and the Committee hope that before the close of this month the collections will reach Rs. 50,000. The High School has already a permanent endowment of Rs. 25,000.

Classes in Domestic Economy.—The Government of Madras have approved the proposal of the Director of Public Instruction to rent a building at Rs. 175 per mensem for two years for the purpose of holding classes in domestic economy, physical and manual training for European Schools. The Director has been requested to expedite the nomination for the appointment of Instructor of Physical Training, which is still pending with the Inspector of European and Training Schools. As regards the menial establishments proposed for the domestic economy and physical training classes, the Government consider that one peon should suffice for both the classes since they are to be held in the same building and that it will be enough to pay him Rs. 8. They accordingly sanction the employment as a temporary measure for a period of two years, of a kitchen boy on Rs. 10 per mensem for the domestic economy class and a peon on Rs. 8 per mensem for both the domestic economy and physical training classes.

A Teachers' Guild in Masulipatam.—A meeting of the teachers in Masulipatam was held in the Noble College Hall under the presidency of the Rev. W. C. Penn, M.A., Principal of the College, on the 13th instant, for establishing a "Teachers' Guild." The Association is intended to include all the teachers of the place serving in the various local institutions. The attendance was fairly large, considering the state of the weather.

The proceedings commenced with the introductory remarks of the President who dwelt upon the need

of such an Association, in order to focus the opinion of the teachers upon the various educational topics and to better the material prospects and status of the teachers, by representations to the Government or other authorities when necessary. There were a number of other speakers who spoke upon the objects of the Association. The aims of the Association are the same as those of the South Indian Teachers' Association.

The meeting thereupon proceeded to adopt a constitution and to elect office-bearers for the current year. The proposal to affiliate it to the South India Teachers' Union was put off to a subsequent meeting. The meeting then terminated with a hearty vote of thanks to the Chair for conducting the proceedings with sympathy and success.

Pachaiyappa's College Historical Association.—Under the auspices of the above Association, the inaugural address was delivered in the Pachaiyappa's Hall, by Mr. A. Rangaswami Aiyangar, B.A., B.L., with the Hon'ble Mr. B. N. Sarma in the chair. The subject of the lecture was the "Evolution of Council Government."

The Chairman in introducing the lecturer said that he was well-known in Southern India. Being in the newspaper office he must have studied the subject with great care and deliberation.

The lecturer, who on rising was enthusiastically cheered, gave a very interesting description of the growth of Council Government in the Colonies and in India.

With a vote of thanks proposed by Mr. K. Ramana Chariar, President of the Historical Association, to the lecturer for his luminous lecture and to the Chairman for his practical suggestions, the meeting terminated.

The Pandithorai Thevar Tamil Library, Salem.—The opening ceremony of the above Library was celebrated recently in the Salem College Hall with Rai Bahadur T. N. Sivagnanam Pillai, in the chair. Among those that graced the occasion with their presence were the Hon'ble Mr. C. Vijayaragavachariar, the Hon'ble Mr. B. V. Narasimha Aiyar, Mr. Spencer, A. Shutie, the President of the Pandithorai Memorial Committee, and several other gentlemen. Mr. T. S. Nataraja Aiyar, Secretary of the Committee and Tamil Pundit, Salem College, made an eloquent speech in Tamil acknowledging the help given by several gentlemen both in the form of donation of money and in the shape of gifts of books, appealing to the munificence of the Salem public for a further collection of books. The Library at present consists of over 400 volumes including both standard works and light literature and is at present lodged in the Salem College for want of a proper accommodation. It is to be hoped that the Library will be given a local habitation in the near future and the public more freely admitted to the full use of the volumes contained therein.

The Victoria College Hostel.—The Victoria College Hostel constructed at a cost of Rs. 32,000 and odd is now ready for use and the Principal addressed the Council submitting certain schemes for the working of the institution. The Council at its last meeting appointed a Sub-Committee comprising Messrs. S. K. Ramaswamy Iyer, K. Natesa Iyer, V. Raman Menon and the Chairman to consider the scheme and Mr. Davey, the Principal, was asked to assist at the Committee's deliberations at an emergent meeting on the 6th instant.

The Chairman announced that as a result of the sitting certain rules were drawn up. It was resolved to appoint a Warden, a Deputy Warden, two cooks, two assistant cooks, two Nair servants, one porter, one gardener, and one scavenger. The Committee fixed the rental of each of the fifty rooms at Rs. 24 a year to be paid in two instalments in the months of June and November. The Deputy Warden's pay was fixed at Rs. 25 per mensem exclusive of free boarding.

Pachaiyappa's Hostel.—The Government of Madras have sanctioned a grant not exceeding one-half of the actual expenditure, or Rs. 99,000 towards the cost of construction of a hostel with subsidiary buildings for the Pachaiyappa's College at Chetput, Madras.

Taylor High School, Narsapur.—The thirteenth anniversary of the Taylor High School Debating Society was celebrated in the School Hall on Wednesday, the 17th inst., with M. R. Ry. M. Kameswara Row Pantulu Garu, B.A., Inspector of Schools, Second Circle, in the chair. The elite of the town including some of the European residents graced the meeting with their presence. The President of the School Committee and Revenue Divisional officer, A. Mc. G. C. Tampoe, Esq., I. C. S. who has been taking a very active interest in all that relates to the school sent a telegram from his camp in circuit to express his regret at his not being able to attend the function of the evening. After a few introductory remarks from the Chairman, the Secretary read his annual report which showed how the Society after a long period of slumber was whipped into activity by the present Headmaster, M. R. Ry. A. Jaya Rama Row Pantulu Garu, B.A., L.T., and how some private gentlemen of the place and the members were evincing great enthusiasm in the work of the Association and concluded with an appeal to the Taylor High School Committee to give the Society a small annual grant to make it more useful and popular.

M. R. Ry. S. Krishnamachariar Avl., B.A., B.L. District Munsiff, Narsapur, then delivered a short, eloquent and impressive address to the students giving valuable advice. The members then put upon boards a Telugu drama and a few comic scenes which provoked rounds of laughter. With a vote

of thanks to the Chair, the proceedings were brought to a close.

BOMBAY.

A distinguished educationist.—A social gathering of the past and present students of the Elphinstone College, was held recently in the College premises. The hall of the building was gaily decorated. The Hon. Mr. W. H. Sharp, Director of Public Instruction, was among those present.

When Professor Dastur retired after a service of thirty years, for twelve years of which he was connected with the Elphinstone College, it was decided to commemorate his memory in a permanent form. A Committee was formed, funds were collected, and Mr. Seesodia, a young artist, who has recently returned from Home was commissioned to execute an oil painting of the Professor. There is still a balance of Rs. 750 with the Committee and when the sum of Rs. 1,000 is reached it is proposed to found a prize in Mathematics.

Principal Covernton, who performed the unveiling ceremony, paid a warm tribute to the work of Professor Dastur, both as a teacher of Mathematics, and as the Registrar of the Bombay University. Principal Covernton said that throughout his career of 30 years as a teacher of Mathematics, Professor Dastur's work had always been regarded as admirable by his pupils as well as his colleagues. He could not find adequate terms to express his opinion of his character and work. Professor Dastur had always thrown himself into his work, and he was not only a great mathematician, but an earnest, sympathetic and kind teacher. The portrait of Professor Dastur would be hung in the Library just opposite to that of Sir Pherozeshah Mehta.

The portrait, which is an excellent work of art, was then unveiled amid loud cheers.

CALCUTTA.

Government and education.—The following official communique has been issued:—

There appears to be some misapprehension as to the appointment of an additional Secretary in the Bengal Secretariat. The appointment of an additional Secretary to Government is not connected in any way with education, nor does it mark any change in the policy of Government in regard to education. This appointment is primarily connected with Revenue subjects and is the direct result of the revision of the constitution of the Board of Revenue which has been reduced from two Members with two Secretaries to one Member with one Secretary and of the consequent transfer to the Bengal Secretariat of a considerable portion of revenue work now imposed on the Board of Revenue by statute. Whereas one Secretary has hitherto been in charge of the Revenue and General Departments, it has now been found necessary to have a Secretary for the Revenue Department alone. The consequent re-distribution of the departments of the Secre-

tariat, other than the Public Works Department, amongst four Secretaries instead of three will be that the General Secretary, whose department includes education, will also have charge of Local Self-government and Municipal subjects. The Financial Secretary, being relieved of these latter subjects, will have charge of several branches of work connected with commercial subjects which have been transferred from the general and other departments.

ALLAHABAD.

Meerut College.—The good work of Principal Jesse at Meerut College has been recorded in the columns of his annual report for 1912-13 and we are glad to say that it shows an advance in every direction. On the question of the University examination results, Principal Jesse makes the following observations:—

The public is apt to judge of the work of a college by the exceedingly deceptive method of percentages and any one who examines these figures without fully understanding the conditions is likely to regard them as hardly good as they should be. While not for a moment saying that I am perfectly satisfied with our results, I maintain that under the conditions we could hardly be expected to obtain a very high percentage of passes.

The numbers in the arts and science classes rose from 173 in 1911-12 to 222 in the year of report. The number in the present year would be larger still. The fee-income shows how the college has grown and increased in popularity. It was Rs. 12,059 in 1908, Rs. 12,269 in 1909, Rs. 13,000 in 1910, Rs. 14,500 in 1911 and Rs. 20,500 in 1912-13. The general income rose in the same period from Rs. 36,900 to Rs. 85,000. We are glad to learn that the numbers attending the business department rose considerably during the year.

The 'demand for biology' became 'insistent' and a class was opened. Thanks to special grants, we shall be able not only to have a well-equipped library, but a properly furnished room in which to house it. We are particularly glad to read under discipline, that while every care is taken to warn young men of the dangers of immature thought and action, the students are given all the freedom possible, and that they have not abused the trust reposed in them, and the general tone of the institution has been most satisfactory. This is as it should be. Discipline ought never to be made the cloak for undue and needless restraint on individual liberty.

MYSORE.

Sri Lakshminarasimhaswamy Dharma Patasala, Bangalore.—The object of Mr. Janopakari Dodanna Setty in establishing this institution is, as explained in the previous year's reports, to educate the poor and deserving boys, irrespective of caste or creed to which they belong, free of cost, in

such a manner as to make each one of them fit for some definite walk of life.

The standard of general education imparted in this school extends from that of infants to that of the Mysore English Lower Secondary. The course of practical instruction given in the industrial section also begins from the infant stage. The future course of each individual boy is marked out in the Canarese 2nd Standard. At present carpentry and rattan work are the only optional branches of industry that can be chosen by the boys. In the handicraft classes pupils are at present trained for the Madras Government Technical Examinations up to the elementary grade.

Science Teaching.—As for the teaching of science in the State, we recognise that, with perhaps a single exception, the Central College can boast of the best equipped laboratory in all S. India and that it has equal advantage in the matter of the professorial staff as well. But what about the fitness of those who enter the college? Are they prepared to receive what is to be taught there? We have personal knowledge of how science is being taught in a few High Schools in the Province and our honest opinion is that the subject has to be placed in far better hands if all the trouble about it is not to end in mere make-believe.

One feasible remedy seems to be to ferret out antiquated or 'raw' teachers of science and set them to a course of revision of studies in the Central College under the guidance of the accomplished principal Professor of Physics. We hope this suggestion will not be discarded simply because it finds expression in these columns. The equipment and manning of at least those High Schools that are supposed to provide for special, advanced courses in science, should be improved immediately so that scientific education might be a reality and not an empty name.—*Karnataka.*

The Mysore Educational Association.—A meeting of this Association was held in the hall of the Government High School with Mr. M. Shama Rao, I.-G. of Education in the chair. There was a fairly large attendance of professors and teachers. The draft constitution and rules prepared by the provisional Committee were discussed and adopted after some modifications. Membership is open to all interested in the educational progress of the country and the annual subscription is fixed at Rs. 3 for the resident members, and Rs. 2 for non-resident members, a reduction of Re. 1 being allowed in the case of those whose monthly income is less than Rs. 50.

TRAVANCORE.

Vernacular education.—The following notification appears in the *Travancore Government Gazette*: His Highness' Government resolve to appoint a

Committee consisting of the following persons, to enquire into and report on the condition of vernacular education in the State:—

Dewan Bahadur Mr. A. Govinda Pillai, B.A., B.L., Chairman.

Members.—Mr. A. R. Raja Raja Varma, M.A., Professor of Sanskrit and Dravidian Languages, H. H. the Maharajah's College, Trivandrum; Mr. P. K. Narayana Pillai, B.A., B.L., High Court Vakil, Kottayam; Mr. M. Rama Varma Tampan, B.A., L.T., Head-Master, Higher Grade Secondary School, Parur; Mr. C. P. Thomas, B.A., L.T., Headmaster, M. T. Seminary, Kottayam; Mr. N. Kumaran Asan, Secretary, S. N. D. P. Yogam, Trivandrum; Mr. S. Parameswara Iyer, M.A., B.L., District Munsiff, Kuzhuthurai; Srimati K. Chinnamma, Assistant Inspector of Girls' Schools, District III, Quilon; Mr. K. Venkateswara Iyer, B.A., L.T., Vice-Principal, Teachers' College, Trivandrum, (Secretary). The Committee will specially report on the following points:—(i) Whether any of the changes introduced by the Education Code have operated against the development of vernacular education, and if so, how? (ii) Whether, under existing conditions, it is practicable to raise the standard of vernacular education and if so, on what lines? (iii) Whether it is necessary to introduce a separate higher examination in the vernacular, after a pupil secures the Elementary School Leaving Certificate, and if so, what should be the scope and method of that examination, and how it should be conducted, and whether, in that case, the present Elementary School Leaving Certificate should be retained? (iv) Whether the text-books in use in the elementary schools are suitable, and if not, how they could be improved; whether suitable text-books for imparting instruction of a high standard, solely in the vernacular, exist at present, and if not, how are they to be supplied? (v) Would it be possible to find suitable and remunerative employment for those who may pass a high standard examination purely in the vernacular? The Committee should submit their report within three months. The non-official members who are not residents of Trivandrum will be given travelling allowance at the rates fixed for first class officers in the Service Regulations for all journeys in connection with the business of the Committee and detention in Trivandrum. The official members who are not residents of Trivandrum, will draw such travelling allowance as they may be eligible for under the Service Regulations.

Leaving Certificates.—The Travancore Durbar has ordered, as a matter of concession, that the Public Service Endorsement be appended to all Travancore Secondary School Leaving Certificates of 1911 and 1912, the holders of which have obtained not less than 40 per cent. of the number of marks in English and also not less than 40 per cent. of the total number of marks. The holder of a certificate with the minima specified above may obtain the endorsement on his certificate,

provided he produces the certificate before the Director of Public Instruction, Travancore, "within six months from the date of this Notification," after which period, the special concession hereby given will cease.

St. Joseph's High School.—The prize distribution at this institution took place recently at the Jubilee Town Hall under the presidency of Dewan Bahadur P. Rajagopalachari, the Dewan. The programme was opened by the St. Joseph's Band playing the March, "Teddy O'Neal." Then songs of welcome were sung in Sanskrit and Tamil.

The reading of the report over, the Dewan distributed the prizes to the students. A scene from "Julius Cæsar" was staged, and it was gone through with much credit to the amateurs, followed by some music. The Dewan next delivered a short but interesting speech, which was full of wise and practical hints to the students who are to make future citizens. The programme of the evening wound up with the singing of "God Save The King."

COCHIN.

Text-Book Committee.—The following gentlemen are appointed members of the Text book Committee for the year 1913:—(1) The Principal of the Ernakulam College, (2) The Dewan Peishcar, (3) The Chief Inspector of Schools, (4) Messrs. C. Achutha Menon, B.A., (5) S. K. Subramaniya Aiyar, M.A., L.T., (6) R. Devaraja Iyer, B.A., (7) Rev. Fr. Dominic, (8) S. Ananthakrishna Iyer, B.A., (9) P. A. Stephen, B.A., (10) Rev. Sister Beatrice, M.A., (11) Miss D. H. Reilly, B.A., (12) Mr. T. K. Krishna Menon, B.A., M.R.A.S., F.R.H.S. and (13) His Highness Rama Varma, the 12th Prince.

LITERARY NOTES.

Some new books of the University Tutorial Press: The Fundamentals of Psychology, by B. Dumville, M.A., F.C.P., Master of Method and Lecturer on Education in the Islington Day Training College, 4s. 6d. Senior Geography, 1914-1915, including Principles of Physical Geography, the British Isles and Europe, adapted from *The Text-book of Geography* for the Oxford and Cambridge Senior Local Examinations, by G. C. Fry, M.Sc. 2s. 6d. Junior Magnetism and Electricity, by R. H. Jude, D.Sc., M.A., and J. Satterly, D.Sc., M.A. 2s. 6d. Junior Sound and Light, by R. W. Stewart, D.Sc., and J. Satterly, D.Sc., M.A. 2s. 6d. Junior English Grammar with Parsing and Analysis, by A. W. Walmsley, M.A., Senior English Master at Middlesborough Boys' High School. 1s. 6d. Junior English Composition, by E. W. Edmunds, M.A., B.Sc., Senior Assistant Master at Luton Modern School. 1s. 6d. Junior Geography, by G. C. Fry, M.Sc., late Master at Devon County School. 2s. 6d.

The following are amongst new books announced by Messrs. W. & R. Chambers:—"Chambers's Concise Gazetteer of the World," entirely new edition, with the latest available census orders, 6s. net.; "Adam Bede," by George Eliot, a presentation edition of this masterpiece of fiction, with 16 beautiful illustrations in colour and 40 dainty pen-and-ink sketches by Gordon Browne, size 10½ by 7½, 10s. 6d. net.; "Lorna Doone," by R. D. Blackmore, a very fine edition of this romance, with 14 illustrations in colour and a series of pen-and-ink sketches by Gordon Browne, size 8½ by 5½, 6s. net.; "Madrigali," by T. A. Daly. This volume of poems has achieved a great success in America. The author has been described as the "Poet of the Streets," and his verses in the Dago dialect depicting Italian life in America show a very close and sympathetic study of that interesting class. 5s. net.

Messrs. Williams and Norgate have just issued a new set of five volumes in their Home University Library, making 75 volumes in all. The following are the titles:—"Germany of to-day," by Charles Tower; "Plant Life" (Illustrated), by Prof. J. B. Farmer, M.A., D.Sc., F.R.S.; "The Writing of English," by Prof. W. T. Brewster, M.A.; "A History of Freedom of Thought," by Prof. J. B. Bury, D. Litt., LL.D.; and "Ancient Art and Ritual," by Miss Jane E. Harrison, LL.D., D. Litt.

Messrs. W. and R. Chambers have announced five coloured picture books. Amongst them we notice a "Buster Brown," which is ever a laughter-raiser, not only with children but their parents too. The titles of these Christmas books are: "Buster Brown, the Fun-Maker," by R. F. Outcault. Size 15½ by 10. The only book for 1913, containing new illustrations by R. F. Outcault, the originator of the inimitable "Buster." "Airships that Glue Built," by C. A. and G. A. Williams, Size 14½ by 10½. A cut-out book that will give intense enjoyment to the children. "Kiptin Kiddo's Speriences," by Grace G. Drayton, author of "Kitty Puss" series. Size 16½ by 11½. A similar volume to "Buster Brown," with equally humorous pictures. "Larder Lodge," a new book by B. and N. Parker, authors of "Frolic Farm," "Funny Bunnies," etc., etc. Size 13 by 9½. Full of splendid coloured pictures, and gay and humorous verses. "Bunnykins." By Grace G. Drayton. Size 15½ by 8½. The new "Kitty Puss" volume. This is the stamp of book that the little ones should thoroughly enjoy.

The fiction in *August Novel Magazine* is exceptionally strong, and includes the following:—"The Transformations of Johnson," a Humorous Story, by Robert Barr; "The Amazing Quest of Mr. Ernest Bliss," by E. Phillips Oppenheim; "The Scribbler," a Strong Human Story, by Laurence Therval; "The Joy of the Open Road," a Tale of an Amateur Tramp, by E. R. Punshon; "Told by the Stage Door-keeper," by F. Howell Evans; "A Deal and a Shuffle," by

H. Collinson Owen; "Meek Miss Mattie," by L. N. Shearon; "The Password," by Samuel Gordon; "Nemesis Disarmed," a Parisian Romance, by Clive Holland; "The Surprising Mr. Jones," by Dorothea Converse; "The Shell," a Story of a Strong Man's Love, by W. G. Litt; "Strong's Composition," by Gilbert Blane; "The Better Man," by Reginald Wright Kauffman; "Glitter of Gold," by Armiger Barclay; "A Sleeping Dog," by Scudamore Jarvis; "The Dam," a Canadian Story, by Lloyd Roberts; and "Bumps and Bruises," by Brinsley Moore.

Wessely's Dictionaries: T. Fisher Unwin. 2s. each, are not only convenient in size, low in price, and thoroughly up-to-date, but also remarkably complete. They are not mere dictionaries of technical terms, or of conversational phrases, but combine the advantages of both; and they also contain useful lists of geographical and Christian names which differ according to the languages, and tables showing the conjugation of irregular verbs. The type, though necessarily somewhat small, is very clear, and in all respects the dictionaries are admirably adapted to the needs both of students and of travellers.

Messrs. Jack are adding rapidly to their "People's Book" series which continues to gain in popularity. Twelve new volumes are announced for September. Amongst these volumes may be noted "Biology," by Professor W. D. Henderson, "Kant's Philosophy," by A. D. Lindsay, M. A., of Balliol College, "England in the Making (before 1066)," by Professor Hearnshaw; "Goethe," by Professor C. H. Herford and "Spiritualism," by J. Arthur Hill.

The East India Association, London, will publish shortly a volume entitled "Truths About India," being a compact and useful reprint of leaflets issued by the Association, with Foreword by the Right Hon. Lord Ampthill and Preface by Messrs. J. B. Pennington and J. Pollen. The volume will be priced one shilling (with Postage 1s. 2d.) net, and is obtainable from the Office of the Association, 3 Victoria Street, S W.

Five Centuries of British Verse. In these two volumes Mr. William Stebbing gives his impressions of the value, the beauty and the influence of the poetry of English writers from Geoffrey Chaucer to Alfred Tennyson. (Henry Frowde, Oxford University Press). In the survey, Mr. Stebbing includes American writers like Edgar Allan Poe, R. W. Emerson, J. R. Lowell Bryant and Whittier for whose mention he thinks he needs no excuse. Mr. Stebbing disavows any intention of sitting in judgment on the poets, seventy-one in number, whose compositions he notices. His object in preparing the two volumes is merely to pay a debt of gratitude for the illumination of his own intelli-

gence by writers, the magic of whose verse has been to him a liberal education. Each poet is separately treated with a delicacy of appreciation and informed discrimination which it is a pleasure to read.

Messrs. Chapman and Hall have in preparation "The First Editions of the Writings of Charles Dickens, and their Values, a Bibliography," by John C. Eckel, with a portrait of Dickens, and 36 illustrations and facsimiles.

Messrs. Hutchinson's autumn list will include "Unknown Mongolia," by Douglas Carruthers, containing the narrative of the explorations for which the author received the gold medal of the Royal Geographical Society, filling two illustrated volumes, with an Introduction by Earl Curzon of Kedleston, and three chapters on Sport by J. H. Miller.

Sir Robert Ball has revised his book on "Star-Land" and brought it up-to-date for a new edition which Messrs. Cassell have in preparation, with additional illustrations.

Messrs. Methuen and Co. will issue at once "Motor Ways in Lakeland," by Mr. G. D. Abraham and "The Avon and Shakespeare Country," by Mr. A. G. Bradley.

Among the autumn books to be published by Mr. Milford for the Yale University Press will be "Some Questions of Modern Government," by W. H. Teft.

School and College Sporting News.

Cricket at Bangalore.

The boys of Bishop Cotton's played the Baldwin High School on the 6th instant on the Cottonian ground and beat their opponents by the respectable margin of 119 runs.

Cricket at Mysore.

BISHOP COTTON'S v. URSU BOARDING SCHOOL.

An interesting match was played on the Maharajah's College ground on the 30th ultimo between teams representing Bishop Cotton's School, Bangalore, and the Ursu Boarding School. The teams proved to be very evenly matched, the home players only winning the game by the narrow margin of two runs.

The visitors went in first and scored 75 runs, the highest scores being 15 and 14 by C. Johnson and C. Combes, respectively. Puttaraj Urs being the Ursu's most successful bowler with six wickets for 31 runs. The Ursu team just managed to exceed their opponents' total by two runs, scoring 77, of which 20 was obtained by D. C. Nanjaraj Urs and 20 by Niranjanraj Urs. Price was Cotton's most successful bowler with five wickets for 22 runs, a splendid performance. The weather was ideal throughout the day, and the match was witnessed by a large number of spectators.

M. C. A. Association Cricket League.

Under the auspices of this Association, cricket matches were played. One of the most interesting matches in connection with this tournament was played on the Medical College ground between the Medical and Engineering Colleges. The match ended in an open draw.

The match between the Wesley and Law teams played on the Pickwick Club ground, Island, was productive of a very exciting finish, the Wesleyans eventually winning by the narrow margin of 2 runs.

In the match between Presidency vs. Pachiapas played on the Presidency College ground the visitors who took first tenancy of the wickets put up 100 runs. The Presidency easily knocked up the required runs for the loss of 5 wickets thus winning the match by 5 wickets.

The Medical vs. Pachiapas teams met on the Medical College ground. The visitors who elected to bat on winning the toss, gave a wretched display, being all dismissed for a total of 52 runs in little more than an hour.

The match between the Wesleyans and Engineering teams was played on the Engineering College ground. The Engineers who took first tenancy of the wickets were all out for 60 runs. The Wesleyans knocked up the required runs for the loss of only 2 wickets, thus winning the match very easily by 8 wickets.

The Teams, Presidency vs. Law, met on the Presidency College ground. The match ended in an easy win for the Presidency by 8 wickets and 10 runs.

Madras Athletic Association Football League.

One of the most interesting matches in connection with this tournament was played on the Engineering College ground between the Presidency and Engineering Colleges. The Engineers ran out winners of the match by 8 goals to 1.

The teams, Law College vs. The Teachers' College, Saidapet, neither of which has a proper ground of its own, met on the S. I. A. A. ground. In this match, the Lawyers were left winners of the match by one goal to nil.

The teams, Medical College vs. The Royapuram Medical School, met on the Medical College ground. Great interest was centred in this match, as neither of the teams had so far been beaten in this tournament. The match ended in a draw one all, the teams still keeping their unbeaten record.

The Presidency vs. Medical met on the Medical College ground. Though the play was not particularly fast, it was none the less quite interesting to watch, the teams being very evenly matched. Presidency were left winners of the match by the odd goal in three.

One of the most interesting matches in connection with this tournament was played recently between the Pachiapas and Christian Colleges on the S. I. A. A. grounds. With both sides at very nearly full strength, the play took a fairly fast and quite interesting turn right through. The Pachiapas were left winners of the match by 2 goals to nil.

The Educational Review.

The importation from England of a Director of Public Instruction for Bengal and an expert adviser on University teaching for Bombay means that in the opinion of responsible men the Indian Educational Service either lacks men of talent or men with up-to-date knowledge of educational organization. Either alternative does not reflect credit on them. If the members of the Educational Service are, in the eyes of Government, men not endowed with talent enough to do the work, it means that the Government displays a lack of discretion in choosing them in the first instance. We do not believe that this is true. The men chosen for the educational service are Honours men and are in no way inferior in brains or education to those of other services. We are driven to the other conclusion, viz., that once they come to India, they begin to degenerate, at least, do not keep themselves abreast of the times—at least in the matter of educational organization. So much the action of the Government of Bengal and the University of Bombay above referred to implies. Now what is the cause of this? One cause of the degeneration of educational officers is their frequent transfers from one end of the Presidency to another. An Inspector takes a few years to understand his Circle, to master its vernacular, to acquaint himself with the defects of the various schools under his charge, when, presto, he finds himself a thousand miles off, new men, a new vernacular, new schools, facing him. It must be a very hardened enthusiasm for educational work that can stand such a strain. A Judge or a Collector can leave a case half-heard or a question half-disposed, and his successor may

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take it up and go on, but a Professor or an Inspector cannot take up another's work midway, for in educational work, each man has his own way, his own plan, his own methods, his own favourite subjects, and one man cannot take up another man's burden just when the latter has thrown it down. The possibility of having to leave one's work half-done or quarter-done cannot stimulate any one to do it well. Another and a greater evil is the transfer of men from the Inspectorate to the Professorate and *vice versa*. In these days of the rapid march of knowledge, when no one can hope to be a specialist even in one main branch of one subject, no one can be worth his salt, unless he devotes all his time just to the one aspect of one subject that he is apt to specialize in. How could he do so if he is see-sawed from inspecting work to lecturing work and back again from the latter to the former?

But the greatest defect of our educational organization is that it has to be a one-man show. The D. P. I. has to be a phenomenon—expert in developing primary education, expert in directing the growth of secondary education, an expert in University matters, in that he influences the Senate and the Syndicate in all their decisions and he is also the educational conscience of the Government, expert in spending money—he scarcely knows how much he is going to be asked to spend any year—and above all expert in shaping round men to fit square holes at one minute's notice so as to suit the exigencies of the public service. Doing all this, he has also to shape new policies and so it happens that an expert from England is found necessary once in a way to recharge with life-giving oxygen the stagnant departmental atmosphere. And the Inspector is a D. P. I. in his own

way. He has his own portion of the budget to spend—his great anxiety is not to let his share of the budget grant to lapse,—his own pawns to move backwards and forwards on the departmental chess-board; he has besides to keep primary teachers and secondary teachers up-to-date, for which he has himself to be up-to-date in the methods of teaching a dozen subjects. He has besides to unwind miles of red-tape.

The Educational Department requires to be thoroughly overhauled; elementary education ought to be placed under a set of officers who thoroughly understand the vernaculars and who are well acquainted with the organization of elementary schools in Germany and France and England and whose express duty will be to start primary schools and develop the work of existing schools on modern lines. Similarly secondary education ought to be conceived as deserving of existence in its own right and not as mere intermediate link and of development on lines suited to the needs and present circumstances of the country and be directed and fostered by officers who understand the immediate wants of the people and possibilities of the country and who, at the same time, are intimately acquainted with the organization of this work in the advanced countries of Europe and America. We do not deny that there are now several officers who are quite capable of such work and do it well as far as departmental exigencies permit. But we hold that these exigencies overwhelm their enthusiasm and crib, cabin and confine them in their work. So the three spheres of education ought to be separated and elementary and secondary education placed under separate set of officers. Not till then, shall we have Indian experts on educational affairs and

shall Indian education develop sufficiently fast to meet the necessities of this land. But it requires a great statesman to take up this question boldly and solve it. Tinkering with reform, such as we have watched in plenty in recent years is but a new way of marking time and not likely to lead to lasting results.

It is rumoured that the Committee which has

A Professor of Comparative Dravidian Philology.

been asked by the Senate of the Madras University to report on the appropriation of the permanent grant of 36,000 Rs. is going to recommend that the first charge on the fund ought to be a Professorship of Comparative Dravidian Philology. We heartily support the idea. The Dravidian languages have been so far almost completely neglected. Excepting the rather primitive studies in Dravidian Comparative Grammar by Caldwell, who worked at it half a century ago, when the Science of Linguistics was itself in a crude state, no one has touched the subject. The grammars of the various Dravidian languages, though the Madras University that professes to be modern requires their study and conducts examinations in them, are worthless, being merely attempts to foist the grammatical analysis of the inflectional Sanskrit language on languages of a quite different build. Thus Dravidian comparative philology is absolutely virgin soil. The University cannot appoint any one to lecture straight off on the subject, for there is no one in Europe or in India who is qualified to do it. But we believe it will be possible to find, if the University will search for them, one or two men who have received a sound training in general linguistics and who have devoted some time to an investigation of the

facts of Dravidian grammar and the roots of the Dravidian languages. If such a man is found and he is given facilities for work, in time a Madras School of Dravidian Philology is sure to be founded, worthy of a modern University. But before this can be done successfully, the Professor of Dravidian Philology will have to conduct a thorough linguistic survey of Southern India, collect word-lists and prepare a preliminary scientific grammar of the various dialects of Tamil, Telugu, Canarese and Malayalam, and of Tulu, Kui, Koyi, and other out-of-the-way tongues that have been evolved out of the original Dravidian stock. We fear this work will require an additional grant and we cannot think of any worthier purpose on which the Madras Government, whose patronage of scientific work has not been over-generous, can spend a small part of its revenue. The Dravidian languages being practically confined to the districts of the Madras Presidency, it is but right that the Government of Madras should share a part of the cost of the scientific study of those languages.

The report of Sir Theodore Morison's Committee for reporting on the working of State technical scholarships for Indian students established by the Government of India in 1904, pleads for the necessity of a better training than the Indian student gets now. It recommends that the students sent should be of quite exceptional capacity. The average man, who can never be expected to more than carry on well-known industries by well-known methods, need not go to England for training, and if he did, the State would not be justified in paying his way. On the contrary, the

Government should send men who have shown capacity for scientific work and acquired some knowledge of science and who are to some extent familiar with the industry they propose to study. For instance, a student of mining must have had a year's experience down an Indian mine. Besides the University, business men may be asked to find young men who are likely to benefit by a technical scholarship. Having found the man, the next thing ought to be not to stint in the way of providing him with the best training that it is possible for him to receive. For the object of the State in training these men at its cost in England, is not to enable a few more men to earn a few more Rupees, but to enable them to develop the resources of the country, to further industrial development without which no country can in these days stand the strain of the furious competition that is at the basis of modern trade. Hence "the expense of technical scholarships cannot be defended at all, unless they give the best preparation possible for the highest kind of industrial work." To secure this, it is considered that practical training in a business firm should form an integral part of the technical scholar's education. Therefore the period for which scholarships should be tenable is recommended to be not less than three years and not more than five years. This will ensure a long spell of continuous practical training. The Committee also thinks that the facilities for industrial and technological training have not yet been sufficiently enquired into and proposes that some representative of the Secretary of State visit such centres as Sheffield, Liverpool, Bradford, and Newcastle, where it appears probable that special facilities exist for the study of particular subjects.

The King and Queen have expressed their appreciation of the value of the teacher in national life by holding in July last, a garden party, to which all the heads of teaching institutions in London were invited. This is an example which their representatives in the various provincial capitals of India may very well follow. At present our Governors never have a chance of meeting Indian educationists. What with the semi-contemptuous depreciation which the world has always meted out to the teaching profession and the consequent self-effacement which has characterized the life of teachers, their influence on public life has been, so far, *nil*. Nor are the Councils, Municipal or Legislative, so organized that it is possible for them to find their way into them. Democracy will not seek them out, nor are they proficient in the arts that charm votes. And yet they are the people who have benefited most by Western culture, that read and think and are hence least swayed by the cants of the platform. Yet, they never come into touch with, they have no chance of discussing even their own professional problems, not to speak of other public questions, with the powers that rule the land. It is not right that Governors and others should yield so completely to the fascinations of the more talkative public men and so completely ignore the large body of cultured, dispassionate workers in the field of education. We believe European educationists in India have opportunities of meeting high Government officers provided by the amenities of social life. But that Indian teachers should have absolutely no such chance is not right. Of them, as of teachers in other countries, it is true, to quote the words of the *London Times*, that "drudgery and failure, real or apparent,

is the inevitable lot of all who teach.....The teaching profession, throughout history, has pursued its high calling under the shadow of some degree of hostility, or even contempt, on the part of men unwilling to content themselves with its immaterial rewards." It is said that our Governor takes much interest in educational questions and has much sympathy with educationists; if this is true, he can best prove it by following the noble example set by the King whom he represents and arrange to meet teachers in social functions and discuss with them informally questions, educational or otherwise, to the benefit of his administration.

The great question that is now agitating the English educational world and which will be made the pivot round which the Education Bill of next year will turn, is the one of the nationalization of secondary education. The main demand is this—that the State should bear a fair portion of the cost of teaching in private secondary schools. The great principle of reform advocated is that in the case of all schools the expenditure under salaries of teachers should be borne by the State and that the cost of maintenance, building and equipment should be borne by the school authorities. This, it is expected, "would tend to raise the standard of school efficiency throughout the country. This plan would have the advantage of focussing attention for some time at least, on essentials. It seems imperative for the sake of educational progress that for a few years the efforts for betterment should be concentrated on teaching power, and that the first place should not as hitherto be held by the far less important items of building and equipment." It has been calcu-

lated that if the State should contribute an amount equivalent to that now spent on teachers' salaries and other emoluments, the charge on public funds in England and Wales on education will rise from about £13,000,000 to £19,000,000. One turns with a sigh from this to a contemplation of the miserable pittance called teaching grants given here to our secondary schools. Whereas in England they demand an increase of grants by about 50 per cent., in Madras, the D. P. I. has been pursuing the policy of steadily cutting down teaching grants till, in many schools, it is dangerously near the freezing point. Whereas in England they want the whole of the salaries of teachers to be paid by the State, in Madras *not even ten per cent.* of the salaries is, in the case of several schools, contributed by the State. If all teachers' salaries were paid by the State, and that according to a fixed scale, how much will our teaching staff be strengthened and how good will the equipment of our schools become if all that is now given by the management as salaries be turned to account for this purpose? Will any member of our Legislative Council have the hardihood to propose this in one of its meetings? If he will, we should like to be there to watch the sympathy of our D. P. I. when such a proposal is passed.

We have great pleasure in reprinting from **Professor Bose's Researches.** the *Modern Review*, by their kind courtesy, an account of the researches of Professor J. C. Bose of the Calcutta Presidency College. It is the first of a series of accounts of original work done by Professors of Indian Colleges and we commend the enterprise and enlightened patriotism of our contemporary, for nothing can stimulate Indian

workers so much as recognition in the land where they work. In the article is enumerated 80 papers and books by Prof. Bose. The great contribution of the Bengalee Professor to the cause of the progress of scientific thought is that he has driven one more nail in the coffin of metaphysical physics. In every generation science makes a supreme effort to wrest from metaphysics a part of the region of the unknown and when it rests after the exertion, metaphysics returns to the fray and invents new expressions which seem to be illuminating but are really confessions of ignorance in gilded phrases. One such is the so-called theory of vitalism. Vitalism says that the activities of living beings are guided by a life-force which is outside the region of the causes and laws studied by physics; in other words life is a metaphysical something, which can never be understood. Such a confession of impotence the true physicist rejects with scorn and devises experiment after experiment to prove that the division of matter into living and non-living is false in its essentials, that all matter is governed by the same laws. From the side of chemistry the boundary between living and non-living matter has been very much effaced; and from the side of physics much work is being done in this direction. Of such work, Prof. Bose's is the most prominent. In his *Response in the Living and the non-living* (1902), he proved that responses in plants and metals are modified in the same way as in animals. In his *Plant Response as a means of Physiological investigation* (1906), he built up a living functioning plant from three factors, *i.e.*, stimulation or transference of external energy to the plant, contraction or direct response and expansion or indirect response. In his *Comparative Electro-physiology* he correlated the electrical changes in the neuro-

muscular apparatus of animals with less known changes in the plant world. Thus has he helped to break the artificial boundaries between biology and physics and contributed to the march of human thought.

The Mathematical Association has just published a general mathematical syllabus for non-specialists in public schools. The syllabus is in two parts—one for “rotters” including Arithmetic, Geometry, Algebra and Elementary Trigonometry. Our S. S. L. C. Board may very well take a hint from this, reduce the Geometry and Algebra included in “Elementary Mathematics” and include some numerical Trigonometry. The second is for the non-specialists who yet have more than average ability. This includes (1) Mechanics, in teaching which advantage can be taken of the pupil’s general knowledge of bicycles, engines, motor-cars, lifting tackle, cranes, etc., the course being experimental and the examples numerical. Such a course will be very useful to pupils taking our S. S. L. C. Group C, Physics. (2) Algebra, in which the idea of a function, the meaning of limit, rational and irrational numbers, the binomial theorem for a positive integral index, finite and infinite series, compound interest law, and the exponential function, will all be treated in a very elementary fashion. (3) Calculus, *i.e.*, explanation of the ideas of rate of change and of integration applied to the determination of

areas, volumes, centre of gravity, &c. (4) Analytic Geometry—the application of the methods of analysis to curves with which the student is acquainted. (5) Trigonometry, including such a convention of signs as the resolved part of a vector R is $R \cos A$ at any angle A , limits as sine X when X is made very small, periodic functions and functions with multiple values, as illustrated by the direct and inverse trigonometrical functions. (6) Geometry, including one to one correspondence between two figures (similarity, projection or inversion), the principle of duality considered as the interchange of point and line, not necessarily as reciprocation, together with the ideas of properties (harmonic, etc.) surviving such transformation. Solid Geometry such as would take the place of Euclid Book XI and mensuration of the ordinary solids and a certain amount of descriptive geometry (plan and elevation). Such a syllabus would be considered absolutely impossible in an Indian High School, but we must remember that in English High Schools pupils study till they are eighteen or nineteen years of age, whereas our High School pupils are urged by their parents to go on to the University when they are barely fifteen. We quite like the sub-division, implied in the above scheme of non-specialists in mathematics into two classes, those of average ability and those below par and wish that our syllabus in Elementary Mathematics of the S. S. L. C. could be separated also.

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THE RELATION OF THE UNIVERSITY TO THE HIGH SCHOOLS IN THE BOMBAY PRESIDENCY.*

I AM sure I will not be guilty of any injustice or disrespect to the University if I take it as my starting point in this paper that the relations of our University with the High Schools are of a very meagre and therefore unsatisfactory character. Beyond publishing a list of what are called recognised High Schools and examining the students sent up by these schools for the Matriculation test, the University hardly has any other important point of

contact with the High Schools. Perhaps to be strictly accurate it should be added that the University prescribes a syllabus of subjects for Matriculation and this year has actually prescribed a text-book in English! For many years the University rigidly placed a bar upon the appointment of schoolmasters, however highly qualified and competent, as Examiners at the Matriculation examination and, thus, while briefless barristers, newspaper editors, junior professors at colleges and members of business firms were appointed as Examiners, Headmasters of good University qualifications and wide experience in teaching were shut out from fear lest they might not hold the balance even between school and school and candidate and candidate. Thanks to saner counsels—which though belated have come at last—the University for the first time took a new departure last year by appointing two well-known and experienced Headmasters as Examiners in English at the Matriculation examination. This brief recital practically exhausts the enumeration of the relations at present obtaining between the University and the High Schools. I shall endeavour in this paper to show how larger and more hopeful relations may be developed between the University and the High Schools to the better

* A paper read by Mr. N. G. Welinkar, M.A., LL.B., before the Educational Conference held in Bombay under the auspices of the Teachers' Association,

advantage of secondary and even collegiate education.

Let me begin by showing what can be done in this direction by reforming the conduct of the Matriculation examination. The serious disadvantages inherent in the conduct of a large public Entrance Examination by the University were clearly and forcibly shown by educationists of long standing and recognised position during the prolonged debates that took place in the Senate of the University about three years ago when the Senate was moved by His Excellency the Chancellor to reform its system of examinations in the Faculties of Arts and Science. There is no need to recount those discussions here; but assuming that the Matriculation examination stands in need of reform as we are well entitled to assume, I ask: Cannot the University delegate to the High Schools the work of examining and certifying their pupils for Matriculation? I feel sure after continued and careful consideration of this matter that this can be done and, if done with the necessary safeguards for efficiency, and fairness will be attended with much advantage to schools and colleges. We should thus escape the evils of crowding a very large number of students and making them do their examinations under conditions of great discomfort, trying to body and mind alike. Our students would also have their work carefully and sympathetically examined, whereas under the conditions existing at present it has to be examined with great hurry, frequently by men who have little or no personal knowledge of work in a High School and are thus in danger of being unduly lenient or unduly severe in assessing the papers submitted to them. And—what is from an educational standpoint even more

important than these considerations—we should be rid of the vicious system of certifying the fitness of students from the mere results of an examination without regard to the record of their work at school affording guarantee of their having undergone some satisfactory moral and intellectual discipline. In this connection it will not be out of place to point out that the Madras educationists influenced by these and allied considerations have practically abolished their Matriculation examination as a University test. In the certificates issued by the Board under whose control the examination is now placed is included a careful statement of the student's behaviour and work in his school for three years preceding the issue of the certificate; the Principals of the Colleges are further given discretion on the consideration of each student's certificate to grant or refuse him admission to College. These changes had the effect of reducing the number of candidates at the Matriculation examination last year to 821, the number in previous years being about 8000. I have cited the instance of Madras to show that the idea of abolishing the Matriculation as a University examination has already materialised in a sister Indian University and that there is therefore no excuse for regarding the idea as merely Utopian or academic.

But I am not content with advocating the mere transfer of the Matriculation examination from the University to the High Schools—of course, with proper guarantees of efficiency and fairness as I have already said. I am going to suggest a further step in the direction of more closely associating the High Schools with the work of the University. Let us look for a moment at the condition of the first year classes in our Arts' Colleges

From the latest University Calendar I get the following figures of the students studying in the first year class in the Colleges of Bombay: Elphinstone College 163, St. Xavier's College 263, Fergusson College 316, Wilson College 320. These figures tell their own tale! Is the least degree of individual attention to the student possible in classes of these dimensions, even if they are divided into two? I am sure I am not singular in asserting as I do that the "teaching" given in classes of such numbers can be called "teaching" only by courtesy and does not really deserve that name. I will not waste the time of the Conference in discussing the question whether any "teaching" in the strict sense of the term should be expected to be given in College classes. The fact is that the junior classes in our Indian Colleges are really not College classes at all; they are merely High School continuation classes and the vast majority of the students are not prepared to intelligently follow mere lecturing as distinguished from teaching, which former is what goes on in our colleges. I am sure this unsuitability of the lecture system to our freshmen is at the bottom of the lack of method and intellectual grasp which is so generally noticed in the graduates of our University. This evil is further accentuated by the fact that on account of the exigencies of the situation our junior classes are dealt with mostly by Fellows, Lecturers or Junior Professors, who are only fresh graduates of Indian, sometimes English and American, Universities and are absolutely ignorant, almost without exception, of the principles or practice of teaching. Now I ask would it not be infinitely better for our students to be doing their first year's work of the University course in manageable classes in schools under the care and tuition

of able, experienced and cultured Headmasters, than to be huddled up in unmanageable classes with an inexperienced and often talkative Fellow or Junior Professor lecturing away to them or rather at them without caring a cent whether or not his hearers are intelligently following him?

I can foresee a crop of objections being brought forward to the two measures I have here suggested—the transference of the Matriculation examination to the authorities of the High Schools and the entrusting of the first year's work at College to the heads of High Schools to be done in the High School after Matriculation. I regret that the scope and purpose of this paper will not permit of my entering into the consideration of objections. I must not however omit to make one important explanation to guard myself against being seriously misunderstood. I have nowhere said and I certainly do not wish to suggest that this dual work should be entrusted to the High Schools independently of the control and supervision of the University; nor do I wish to imply that this duty should be entrusted to all High Schools as such. Far from it; on the contrary to make the scheme of real benefit to education the University must actively exercise its supervisory powers and rank the High Schools according to the quality of their educational equipment and the qualifications of their teaching staff, granting the power of examining students for Matriculation and conducting College classes only to such High Schools as may be considered to be adequately manned and equipped for the carrying out of these very important functions. That there are High Schools in Bombay and other cities in the Presidency which in all essential respects are fit and able to discharge these duties is to my mind

certain. When this is done I am sure High Schools will be brought into much closer touch with the University, the heads of schools will become responsible representatives of the University and as all past experience has shown with added responsibility thrown on them they will rise to their privileges.

I pass now to my next point. Our University is the solitary University in all India which enjoys the unenviable distinction of having no examination for conferring a Degree or a License in Teaching. The Universities of Madras and Allahabad grant the Degree of Licentiate of Teaching; the Punjab grants the Degree of Bachelor of Teaching; and Calcutta has two examinations, one for the Degree of Licentiate of Teaching and another for the Degree of Bachelor of Teaching. Surely the Bombay University as the trustee of the higher culture of this great Presidency owes it to the cause of secondary education which is the threshold so to say of academic education to make it possible for those who have obtained high proficiency in the theory and practice of education to obtain the hall-mark of a University qualification. There is no other means by which the University can so unmistakably show that it acknowledges the claims of education to be placed among the sciences as by instituting a degree in teaching. If the University deems it right and proper to test and confer degrees for proficiency in a dozen sciences, surely it cannot be seriously argued that Education is not worthy to be ranked with these and to be honoured with the institution of a degree to mark high attainment in that subject. I feel that I shall have the full sympathy of this Conference in urging the authorities of the University with all the earnestness I can command to fill up at the

earliest possible time this discreditable gap in the system of its degree examinations.

Unfortunately no Indian University has yet risen to the appreciation of the value of a Faculty of Teaching (or Pedagogy as it is technically called) as one of the essential organs in the constitution of the Senate of a University and we are perhaps not entitled to complain if the Bombay University does not do what no sister University in India does. But until the movement of educational opinion in India leads to the creation of a Faculty of Teaching in the Senates of the Universities the interests of Secondary education will never find the opportunity of full expression in the government of our Universities. That day is, however, not yet, and in the meantime we can only trust that Teachers' Associations like our own in Bombay will steadfastly urge upon the Provincial Governments the claims of High School teachers to be represented in the University Senates and that the Governments recognising these just claims of Secondary education will nominate a sufficient number of schoolmasters to the Senates of the Universities.

With one other suggestion I will bring this paper to a close. It is an indisputable fact that practically all the teaching of English in the High Schools for Indian students is now in the hands of Indian teachers, the vast majority of whom have never had any instruction in the clear and correct pronunciation of English, not to talk of expression, tone, gesture and the other things that belong to the art of elocution. It thus happens that the English lesson in most of the High Schools is indescribably dull and lifeless and is absolutely devoid of the moral and cultural value which belongs

by right to the teaching of literature. I have heard a stirring passage of Scott or a humorous piece of Dickens delivered by teacher and pupil alike in a way that sounded like an anthem from the Zend-Avesta or a hymn from the Rig-Veda! The foundation subject in Secondary education is thus being ruined because our teachers are ignorant of the elementary principles of elocution, that fine art which makes simple reading or recitation a delight to hear and conveys to the learner the spirit and suggestion of literature in a manner which no amount of commentary or explanation can possibly do. Now in this direction I think it is in the power of our University to render valuable help to High School education by providing for High School teachers practical courses in the principles of elocution; And if the University organises some systematic teaching of elocution by competent lecturers, the instruction will be welcomed by High Schools and will be eagerly availed of by Secondary teachers. We have lately had an expert lecturing on phonetics under the auspices of the University. Why should that course not be the precursor of a course on elocution? Phonetics is an excellent thing in its way; but when its principles are expounded in the interests of spelling reform it is apt to become academical, something in the nature of a luxury. If, however, it should prove to be the preparation for a course on the principles of elocution we all will have good reason to rejoice, for then it will have been the means of leading the University to bear a valuable boon to the High Schools and it would thus mark an epoch in the evolution of closer and more fruitful relations between the University and the High Schools.

A TECHNOLOGICAL INSTITUTE FOR CALCUTTA.*

I MAY confess at the outset that on the details of Technical study embraced by the reports I cannot speak with any authority as my knowledge and experience have been entirely in the Department of Arts. I must therefore content myself with a treatment of the subject from the somewhat lay standpoint of the general educationist.

The Government of Bengal deserve the highest commendation for elaborating this scheme of Technological Education for the Province. The need for prompt attention to this branch of Indian Education is no longer a matter of debate and there can be no doubt that the sooner steps are taken for its effective improvement, the better will it be for the material advancement of the country. Taken as a whole, the scheme represents an instalment of reform, calculated to confer invaluable benefits on the Presidency. When it is put into operation and the Technological Institute is a realised fact, there is sure to be a strong impetus to the commercial and industrial life of the people. It covers several new fields of practical instruction and strengthens those which already form subjects of study in several institutions. It is gratifying to see the Committee have taken note of the peculiarly backward conditions which an institution of that nature will have to deal with in this country. In their zeal for a Technological College, they have not launched themselves upon visionary ideals which cannot come within the range of practical politics. Special

* A review of the scheme, relating to the proposed Technological Institute for Calcutta, by Mr. P. Seshadri, M.A., of Pachaiyappa's College, Madras,

praise is due to the report for its comprehensiveness and attention to details, for its recognition of the limitations of the present and the possibilities of the future.

The question of a site will have to be decided in favour of Calcutta, in view of the possibility of securing the Imperial Secretariat Buildings for the purpose and the undoubted need there is for a Technological College to be in intimate touch with a busy and populous metropolis. As it is not to be a Research Institute for the benefit of a handful of advanced students, embarking upon a post-graduate course, but a Technological College intended to train up hundreds of students for various walks of industrial and commercial life, it seems best to situate it in Calcutta and not in any out-of-the-way suburb. On an examination of the list of departments sought to be created, it will be evident that the scope of the Institute will suffer considerable limitation if it is not to be established at the capital. The association of the theoretical teaching with practical training in the industries in the form of apprenticeship, on which the Committee deservedly lay emphasis, can be carried out effectively only in such circumstances. The prospect of bringing all the subjects together must weigh in the decision to remove the Engineering Classes also from Sibpur—the objections raised by Principal Heaton have to be dismissed though with some reluctance. The difference in climate between Calcutta and Sibpur is too small to deserve any consideration, and lectures on Engineering are not likely to suffer seriously by the slight distractions of neighbouring traffic. It will not certainly be difficult to ensure the silence necessary for the students' attention.

I should like to express my emphatic disagreement with the suggested hours of work

and the scheme of night classes. I feel it absolutely necessary to curtail the proposed period of work—9 A.M. to 5 P.M.—which is too long for the Indian climate even with the hour's interval for tiffin. The courses in the majority of departments contemplate a real strain on the physical energies of the students and it must be disastrous to inflict a seven hours' working day on them. A six hours' day with five hours' work must be looked upon as the proper regulation. There can however be no doubt that anything beyond 10 A.M. to 5 P.M. ought not to be allowed. It is difficult to imagine again why the Committee did not consider the possibility of splitting the day into morning and afternoon classes. The proposal of holding night classes does not seem to be very promising in its effects. As has been pointed out by some members of the Committee, it is hardly possible to do any kind of strenuous intellectual exercise in the enervating climate of Bengal, after the day's work is over. The classes are bound to be spiritless, the want of energy in the teacher being matched by the inability of the student to bestow any attention on his work. Some of the subjects demand expenditure of physical energy and there are others again which are bound to involve a severe strain on the eyes, if conducted under the light of the lamp. It is difficult to conceive of the effective teaching of subjects like Mechanism, Practical Mathematics, Machine Drawing, Motor-Car Mechanism and Printers' and Decorators' work in night classes. It is true there are numerous industries injurious to particular organs of the body, but it is strange that a system of education should afford any scope for the operation of such a defect.

It is worth while paying special attention to one or two recommendations of the Committee in connection with the Engineering Classes. It is eminently desirable that Professors should be lent from time to time from the Engineering Department for that will ensure practical knowledge and experience of Indian conditions on the part of the teacher. It has often been observed with regard to the existing Colleges of Engineering that the instruction imparted in them has not a very direct bearing on the work which the Engineer is called upon to do in India and the defect is sure to be remedied under the new arrangement.

It would seem desirable also to have a class for Higher Grade Engineering, though the immediate demand for it may not be very pressing. That will alleviate to some extent the necessity for Indian students to go to Universities like Glasgow for advanced instruction in Engineering. It is difficult to write seriously of the Hon. Mr. Nathan's suggestion for a special residential college for Indians of good social status, for training in higher Engineering. Nothing can be more ill-advised than the separation of students in accordance with social status, a step so inconsistent with the highest traditions of England to-day. The Zemindar's son who considers it beneath his dignity to sit in the same classes with the somewhat less-favoured educated young men of his country, does not deserve the slightest sympathy or consideration from the Government, nor is such a strange being likely to undergo the manual training necessary for the making of an Engineer. Instruction in higher Engineering will only be wasted on him and the experiment is bound to be a failure.

A word on the proposed staff for the Department of Engineering in the Technological College. It is quite unnecessary to have a member of the Indian Educational Service for Mathematics; an Indian in the Provincial Educational Service will be found eminently fit for the place. The Professor of Mathematics in the local Engineering College has long been a member of the Provincial Educational Service and his has been one of the most successful departments in the College. It is not possible again to get Europeans of any ability or distinction as Assistants on salaries of Rs. 400 to Rs. 700 and the three such proposed appointments may therefore be assigned to Indians in the Provincial Educational Service. They will otherwise be wasted on fifth-rate and sixth-rate Europeans. I find it difficult again to approve of the suggestion that the Professors may be allowed to have some consulting practice. It will mean a possible neglect of work in the College and the undesirable association of academical life with the distracting concerns of commercial practice.

It must be mentioned in connection with the Department, that there is a very good future for the Telegraph classes, if only the Government will make more adequate provision for the admission of Indians into the higher ranks of the Telegraph Service, without making it almost the monopoly of the European and the domiciled community, as it is at present.

The Textile Department must receive more attention than it seems to have got at the hands of the Committee as it is connected with one of the most widespread and long-standing industries in the land. One of the causes of the failure of Indians who have

returned from a course of technical study abroad is probably their having spent all their attention on industries which cannot thrive in this country. The Textile and Jute Departments will enjoy the great advantage of teaching subjects intimately connected with the living industries of the land.

I should like to add a few more remarks on some of the subsidiary departments of the Technological College. The Committee deserve to be congratulated on the happy idea of opening a department for printing and another for women. With the rapid advance of journalistic and other publishing activity in the country, the need is keen for men trained in printing. I remember the Editor of a leading Anglo-Indian daily of this part of the country complaining to me that he has not been able to get a single proof-reader of ability during all his Indian experience. He was willing to pay salaries attractive enough for University men, if only he could find among them, any with practical experience of printing work. As has been pointed out by Mr. Dening, there is no reason why, with its cheap English-speaking labour, there should not be a great future for the printing industry in India. Those who have had experience of Indian binding establishments will have noticed the absence of trained and artistic work, the results never being commensurate with the expenditure of money. The Committee have therefore done well in not dropping the subject out of the list.

There can be no doubt again, that a number of women, especially of the Anglo-Indian community, will take advantage of the classes intended for them. In a recent book on the *Position of Women in Indian Life*, Her Highness the Maharani of Baroda has

suggested various careers of industrial and commercial life for her Indian sisters, most of which are impracticable without a course of special training in colleges of this description. The Government have been trying the experiment of granting scholarships to deserving Hindu widows for purposes of general education, and it is probably worth while making a similar beginning in connection with this department of the Technological College.

The Department of Commerce must be made as comprehensive as possible, affording instruction in a much larger number of subjects than those dealt with by technical schools at present. The available supply of young men with a commercial training is utterly inadequate to the large demand that exists to-day and the department is likely to be the most popular in the college. The excellent suggestion that text-books on commercial subjects suitable to Indian conditions should be prepared, deserves to be adopted forthwith. It is rather a sweeping statement to say that the teaching of English in the commercial classes will suffer by being in the hands of an Indian, when the highest kinds of University work in English have been handled successfully by Indians, throughout the country. The Indian Principal of one of the most popular Commercial Colleges in Western India is the author of an excellent Manual of English, which was for a long time a widely-used text-book in this Presidency. In selecting the Principal, care must be taken to see that he has sufficient knowledge and experience of *Business* methods. The objection urged against the employment of low-paid Europeans in the Department of Engineering will hold good with regard to the appointment of European Lecturers to the commercial classes on Rs. 400-20-600. It will

be distinctly better to appoint in their places Indians of ability from the Provincial Educational Service.

I am glad to see that sufficient attention has been paid to the social life of the college. I feel it necessary to point out however, that in addition to the swimming bath and the physical training under the Superintendent of the Gymnasium, adequate provision must be made in the college for games like Foot-ball and Cricket.

Before closing, I am anxious to draw attention to some of the excellent suggestions of Mr. Dening: (i) An annual commercial audit will prevent the kind of financial muddle in which the Tata Institute of Science now finds itself. (ii) Every attempt should be made to encourage private benefactions in favour of the college. (iii) A museum is very essential. (iv) A big lecture hall, available for meetings of general interest to industry and commerce, will be the means of linking the college with public activity of a kindred type.

I will only hope in conclusion that any differences of opinion with regard to the details of the scheme will not hinder the immediate establishment of the Institute. I must confess it is a melancholy reflection to me, that in our own Presidency, we are not anywhere near the practical fruition of such a scheme, though in the year 1908, much was heard of a similar project for this part of India.

A PLEA FOR THE USE OF SOURCE-BOOKS IN THE TEACHING OF HISTORY.

"THE kernel of all sound teaching in historical matters is the doctrine that no historical study is of any value which does not take in a knowledge of original authorities." This dictum of Professor Freeman has found ever-increasing acceptance in the teaching world, and recent innovations in educational methods have repeatedly insisted upon the desirability of imparting to students historical knowledge direct from the original sources. It is now thought eminently feasible to place in the hands of students both young and old, selections from the original texts which form the basis of the writings of historians. It might indeed be deemed difficult to carefully estimate the value of each source-book and to present to the student that part of it which would be most illustrative of its scope and views. But when once this difficulty has been overcome by experience, and proper compendia of documents and contemporary narrative have been made ready, the application of the method becomes easy. And the student in summarising and deducing salient points from the extracts is led to compare events and characters, to form his own opinion of them and to cultivate and strengthen his critical and discerning powers.

Such a careful and systematic study from the original sources is sure to serve as a basis for the proper understanding of the spirit of the heroes and of the significance of the movements of history. The study of sources brings or at least helps to bring the reader into direct contact with men who have moulded history and serves to present

them as real personages who lived and acted in their own times. Froissart's description of the Battle of Crecy reads like a picture drawn by one who was in the thick of the fight himself and who was swayed by all the emotions which must have throbbed within the hearts of the conquerors. Who would not be moved by the force and reality of Sir Simonds d'Ewes' description of the famous attempted arrest of the Five Members by Charles I? The reader seems to walk among the warriors and statesmen, to hear them talk and to see all their actions through their own eyes. Another effect of a direct study of original sources is that it generates in the mind of the boy, a strong and deep impression about the most significant and epoch-making events in each period. He is helped to understand and catch the import of the development of events and to form his own opinion about them. He is not made to depend for his judgment on the writings of men who living in other ages and ruled by other ideas, could not naturally extend to their works a fulness, a clearness and a reality which must be the characteristics of an ideal history. He is taught to depend for his conclusions upon his own judgment and study, and is better able to develop a discerning faculty which may in time lead to a capacity for impartial observation and healthy criticism.

"He is unconsciously forced to abandon his prejudices, to weigh evidence, to consider probabilities, to see that right and wrong are often separated by a very narrow line that the good are not all on one side, and the bad all on the other..... And as he thus studies the men of the past, striving to realise their point of view, he is fitting himself to take a sounder view of the conditions of to-day."

As Lecky says "he who has learnt to understand the character and tendencies of many succeeding ages is not likely to go very far wrong in estimating his own."

Of course the text-book is not to be discarded. Summaries of the fundamental facts, of sequence of events, etc., have to be got in by exercise of memory; and for this basis of memory-work the text-book is indispensable. But to complete the work of the text-book the apparatus of documents and extracts can be brought in, partly to illustrate the facts, partly to expand them, but mainly to give exercise to and strengthen the capacity for analysing, for reasoning and for sifting internal evidence.

In the case of the History of England, we have got an abundance of handy volumes of original material suitable for the use of schools and colleges. Gardiner and Mullinger's "Introduction to the Study of English History," Colby's "Selections from the Sources of English History," Kendall's "Source-book of English History," the series of *English History by contemporary writers* edited by York-Powell, the series of *English History illustrated from Original Sources* published by A. & C. Black and the precious collections of documents by Stubbs, Prothero and Gardiner are some of the great number of volumes of original extracts. Reprints from original chroniclers like William of Malmesbury and Froissart are easily available and afford greatly valuable material. Poems contemporary with the events they treat of, like the song of Maldon, are accessible and they form living and instructive pictures whose value cannot be too easily overestimated. Private memoirs and biographies, letters and diaries, possess, apart from their literary value an amount of sterling historical worth and they

are all the more useful in shedding light upon contemporary movements, since they are less formal in tone and more personal in their observations than chroniclers and professional historians. The invaluable Paston Letters form perhaps the best picture of fifteenth century life; while the inimitable Diary of Samuel Pepys throws a halo of charm round our study of the social life of the Restoration. These being more readable than the ordinary dry-as-dust narratives of historians, would appeal better to the imaginative interest of the student.

Of course great care ought to be taken in our estimate of the value of each original authority. Meagre annalists may come side by side with statesmen and soldiers who narrate elaborately their own actions. But a cautious indication of the value of each extract and a general introductory treatment of the scope and value of the whole collection may prove to be substantial correctives against the formation of mistaken ideas and hasty conclusions. There is also ever present the danger that the material available for the student may be insufficient for a complete study; but here again a supplementary reading of higher books may be expected to remedy the defect.

It is a matter of deep regret that up to now practically no effort has been made to present original extracts for the various periods of Indian History in such a way as to attract students. Well-directed efforts at the production of suitable source-books on Indian History are certain to remove that indirect aversion to study their own history which now exists in the minds of our school-going lads. These might consist either of collections of official papers and documents or of volumes of

extracts from contemporary chronicles, or of both. And it would prove a great step in advance towards the accomplishment of this task, if teachers and lecturers familiarise their students with the most important of the original sources of our history.

C. S. SRINIVASACHARI.

HENRIK IBSEN.

FOREIGNNESS has a glamour for humanity, irrespective of intrinsic merits. Perhaps, the greatest admirers of French, German or Norwegian literary work are found in England; and it may be said that English literature finds some of its warmest and most eloquent admirers in India. Such admiration would seem to be due to the natural human tendency, expressed in the adage: "Distance lends enchantment to the view." Much of the admiration which falls to Ibsen's share, at the present day, cannot be traced to any other cause.

Ibsen's fame rests chiefly on his social dramas. One thing, at least, becomes patent on a study of these plays—the author's extreme sincerity and the nobility of his ideals. There is, however, room for doubting his wisdom in his choice of the dramatic form for the expression of his ideas.

The adoption of a particular literary form imposes serious restrictions upon a writer. The ideas themselves must be capable of being put into that form; and then, the writer must be capable of the task. The nobility and grandeur of Ibsen's ideals cannot be doubted. The spirit of his writings is the same as that breathed in the works of such ardent reformers of humanity as Ruskin or Carlyle, or in a less ostentatious way, of Thackeray

and Dickens. Their main purpose is to war against lies—social, political, or moral—which present-day society is steeped in. The dramatic form is by no means, inadequate for the expression of such feelings; but one is often compelled to conclude that Ibsen would have done better to follow in the wake of Ruskin and Carlyle. Dramatising is an art by itself and Ibsen is far from having acquired it to perfection.

Our author always keeps his main end in view, but his productions do not convey his feelings to the full. One of his most noted dramas, "The Pillars of Society" is devoted to the task of exposing the conventional lies on which society is built. The effect intended, however, is not produced. Though the reader cannot fail to see that society is supported on lies, no deep sense of resentment is roused in him. That modern social life is built on a far-from sound basis is patent to most men. What is not quite clear is whether society is any the worse off for being founded on falsehood. Evidently, Ibsen does not consider it a satisfactory state of affairs; but that he so considers it is by no means made plain. Consul Bernick maintains his position throughout by a series of lies; yet it is not clear how his position is worse than that of a persistent lover of truth. As long as the desired object is gained (maintenance of a high position, in this case), what matters it whether it has been got by fair means or foul? It might be said that the nature of the enjoyment might be affected by the nature of the acquirement; ill-gotten wealth never lasts. Indeed, this is what our customary moralists would say; and this, in all probability, is the lesson which Ibsen wants to inculcate. If so, he lamentably fails to make himself clear. The play, as it stands, may be construed as a

defence of conventional lies on the plea that they constitute the foundation of society. The drama, as a whole, is flat, stale and unsubstantial. So much have we got ourselves accustomed to our present social life, that though we know its false basis, we do not much mind it. The phenomenon is very familiar and seems to need no Ibsenite comment. The more need for reform, it might be urged; for a society composed of such reckless members is bound to fall. The question here, however, is "Does the play itself inculcate the lesson?" Far from it; the premises alone are given; the conclusion must be drawn by the reader, according to his individual temperament.

The same charge applies to Ibsen's other social plays. The 'Ghosts' is remarkable for nothing but its extreme weakness and its spectral effect. The theme of the play seems to be the very familiar scientific truth, the sins of the father are visited upon the children. All the characters are weak and sentimental. None of the *dramatis personæ* deserve the reader's sympathies, except, perhaps, poor Oswald who is visited with punishment for no fault of his own.

It cannot be denied that Ibsen possesses several of the minor perfections of a dramatist, to the full. A strong hold of the main conception and the adequate expression of it in dramatic form, he is, however, incapable of. His plays by themselves are expressionless. One can never know by a bare study of the "Folkfiende" whether Ibsen regards his hero as really a 'fiende' or a friend of society. His sympathies, for aught we know, may as well be with the Burgomaster Stockmann as with the Doctor. The reader has to supplement the study of the play with an indepen-

dent knowledge of the author's views derived from his other works. The 'Enemy of Society' labours under serious difficulties. There is no *denouement*. The author tries to obtrude his own personality into the play and miserably fails. The play ought to begin with Dr. Stockmann as the teacher of ragamuffin children and end with him as medical officer of the reformed baths. It is the latter half which is more important and expressive; and it is this which is most neglected by Ibsen.

"Rosmersholm" may be said to be in many respects a better play. The 'spiritual tragedy' as the translator Dr. William Archer calls it is finely worked up. It, nevertheless, fails to appeal. There is something palpably unsatisfactory and unreal (if the compound be permitted) in the sudden *denouement*. There are, indeed, some fine touches as where Rosmer (Othello-like, but for a different purpose) cries out for proofs of Rebecca's love. This love, again, is sprung upon us all of a sudden. The reader is from the beginning led to expect a scheming heartless woman (like Thackeray's Becky Sharp). He is, in the end, presented instead with a woman who can love and has learnt to do so. The transformation is supposed to have been effected by her having lived with Rosmer and imbibed the Rosmersholm view of life. What that view is, we are not allowed to know definitely. It is difficult to conceive of a transformation of selfish passion into love, effected purely by views of life, however exalted they may be. What makes the transformation more absurd is that it is attributed to Rosmer the weakest character that can be met with in any play.

This play is supposed to possess the further merit of accurately depicting party-feeling.

In this respect, too, it is a failure. Party-feeling does seem to have been pretty strong at the time. We are introduced to it, however, only indirectly, but for the short extract from the 'Country News,' which cannot seriously be said to exhibit artistic ability. The only lesson that a reader can learn is what Brendel calls "the mighty secret of action and of victory,"—to be capable of living a life without ideals.

Ibsen, if he is respected as a reformer, must base his reputation on his other writings and speeches. But for these, the identification of Ibsen and Dr. Stockmann would be impossible. His plays do not satisfy the principles of true dramatic art. He leaves his hero (Dr. Stockmann) in a distressing strait with no help but that of poor Horster. It might, perhaps, be said that such a picture is most true to life, and such an end, possibly, the most appealing to men. Nothing, however, can be more erroneous. One need only compare the impression produced by any of Ibsen's plays with a simple novel like Nicholas Nickleby or Oliver Twist to convince oneself of the error. The heroes of these two novels do not perish miserably nor do the authors of mischief triumph in their evil. Yet English society was not long in opening its eyes to the evils in its midst. Do-the-boys Hall was not allowed to flourish, because its founder eventually perished; nor was the mismanagement of the poor houses tolerated, because Oliver escaped and got into a fortune. If the theory of the Ibsenites were true, the writings of George William Reynolds should have been most effectual in rousing popular indignation against social evils, whereas they only concentrated popular indignation on the author himself. Ibsen follows neither the principle of the Romantic drama (following up the develop-

ment of a character to its final triumph or defeat) or that of the classic drama (wherein the effect of the body of the play must always be mitigated towards the end). Perhaps, Ibsen's whole life might be the basis of a good play, as would Dr. Stockmann's, if presented properly. His writings, however, judged as drama, have little or no merit.

S. S. SURYANARAYANAN.

EDUCATION IN MYSORE.

THE Report on Public Instruction in Mysore for 1911-12—a review of which appeared in the *Educational Review* of August last—is a belated document and does not give us correct ideas of the progress of education in this “Model” State. It is to the financial statement of the Government of Mysore for 1913-14 and to the proceedings of the last Representative Assembly that we should turn our attention to understand how affairs stand.

The Government in their review on the report of the Inspector-General of Education for 1911-12 say that “the year was one of study and substantial progress in education.” The number of educational institutions and of the pupils in them have risen and in spite of the plague havoc, the percentage of boys and girls under instruction to the total male and female population of school-going age is now 80.1 and 6.2, respectively. The expenditure on education has increased to Rs. 19,50,000 and the average expenditure on education per pupil was Rs. 0.5-8. Educational buildings have increased in numbers, and arrangements were made to equip the colleges in accordance with the requirements of the University Regulations. Progress both in Secondary and Primary education was encour-

aging. Female education continued to increase in popularity. Muhammadan education has also progressed though not to such an extent as it is desirable it should. The Government note with regret that there has not been any appreciable increase in the number of Muhammadan boys in the College and High School classes which continued to be small. Backward classes have taken to education and it is satisfactory to note that during the year under review seven *Panchama* students passed the Kannada Lower Secondary Examination with five in the first class, that a League for the express purpose of advancing *Panchama* education was formed and that the League pays fees, etc., to *Panchama* boys. Technical education is advancing and Sloyd which is so excellently adapted to train and give a practical turn to the youthful intellect has made good progress. The school for the deaf-mutes and blind is maintained in a high level of efficiency.

So far everything is satisfactory. But there is good deal to be done before Mysore can set an object lesson to other Native States and the British Provinces and there is every indication that the Government is in right earnest about the progress of education. The Mysore Legislative Council has recently passed the Elementary Education Bill—a bill drafted more or less on the same lines as the, now historic, bill of the Hon. Mr. Gokhale. The bill is a modest one as the Dewan has observed, it is a measure full of possibilities and the experiment will be watched with very keen interest all throughout India and it therefore behoves the Mysore educational authorities to so work the provisions of the Bill as to obtain the best results. They will doubtless bear in mind that real progress could be achieved in

Primary education only, in the language of the Government of India, “where teachers in Primary schools will receive considerably higher remuneration, when all teachers will be trained and when it will be possible to introduce more modern and elastic methods in Primary schools.” No primary teacher in Mysore Government schools draws a salary less than rupees ten per month. Even this is low. Might it be suggested for the consideration of the authorities that this amount might be raised to Rs. 12?

As for training of teachers, we feel provision is very inadequate. The Government maintains one Normal School in Mysore town and two schools in the districts—at Kolar and Shimoga—for the training of male teachers. There are in addition the training classes of the Maharani's College, Mysore, and the Wesleyan Mission Girls' Normal School, Bangalore, for the training of mistresses. The Mysore Normal School is the most important of these and is at present under the care of a very enthusiastic and experienced B.A., L.T. It has an English training class for Matriculates and S. L. certificate-holders. It also trains teachers for the Pundits' and Moulvis' examination, the Upper Secondary Examination, the Upper and Lower Secondary Training Examinations, the Madras Technical Examinations and the Examination for Practical Agriculture. The Kindergarten Department and the Drawing Section are in a very efficient state. The school has many wants. It is now housed in an old and inconvenient building. The Library consists of mostly old and out-of-date books. It needs better equipment. In these respects it compares very unfavourably with the Training Schools of the Madras Presidency and of Travancore.

We find that in the budget estimate for 1912-13 Rs. 20,816 was allotted for this school but in the revised estimate the amount was cut down to Rs. 14,900 and for 1913-14, the amount budgetted is only Rs. 16,092. This is deplorable. The District Normal Schools too did not fare better. The budget estimate for last year for these two schools was Rs. 25,570 and in the revised estimate it was cut down to Rs. 19,520 and the amount provided for the current year is about a thousand rupees more than the revised estimate. It is clear that the Education Department has not found it possible to make full use of all the grants placed at its disposal and it has evidently no clearly defined programme. Primary schools without trained teachers and trained teachers without schools are an anomaly and the aim must be to provide both side by side. Upon the teacher rests the grave responsibility of being in some ways the most important factor in educational progress. The Royal Commission on Secondary Education (London) have expressed “Educational reformers have long recognized that of all improvements that can be made in schools, none are more important, none perhaps so important as those which lead to secure a supply of able and skilful teachers.” School houses, equipment are matters of secondary importance. It is very regrettable to note that neither in the speech delivered by the Dewan to the Representative Assembly on Saturday the 11th instant, nor in any of the speeches of the Representatives, the important question of the training of teachers was so much even as made mention. The Mysore Government will, we think, be well advised if it should concentrate its present resources to the improvement of existing institutions before venturing on such costly schemes as

the Mysore University and compulsory technical education.

Turning now to the actual progress of Elementary education, in recent years, we learn from the Report of the Inspector-General that there were in the State 1955 Primary schools for boys—Departmental, Municipal, Aided and Un-aided—and about 222 schools for girls. The number has increased during 1912-13 by nearly 90. The Dewan in his recent speech said that the percentage of boys at school to the male population of school age rose from 30.1 to 31.3 and that the girls at school to the female population of school age from 6.2 to 6.8. The number of pupils under instruction in comparison with the population of the State gives a percentage of 2.9.

The Government of His Highness state in the Financial Statement (para. 67, Mysore Gazette Extraordinary, 6th August 1913): "Another minor head under Education, the increase under which is very noticeable in the Budget for the current year is Grant-in-Aid under which a sum of Rs. 3,97,000 is provided. This includes a special grant of one lakh to the Village School Fund for Elementary school buildings. A sum of 50,000 is provided for this purpose in the Budget of the Village School Fund from the resources of the fund itself, the amount that will be available this year for the better housing of primary schools will be 1,50,000. A similar amount was also available last year and arrangements were made by the Inspector-General to utilize the amount by building masonry school houses according to type designs in about 75 large villages through the agency of the Public Works Department." It will thus be seen that the Government never

stinted money for education with its means limited as they are. As the Dewan said to the Representative Assembly: "A special grant of two lakhs and a half—one lakh for opening new Primary schools and improving the existing ones and a lakh and a half for the construction of village school buildings was sanctioned during the year and a similar special grant of 2½ lakhs has been sanctioned in connection with the current year's Budget." We cannot but regret that even these small doles were not utilized fully. It seems to us either that these amounts are budgetted without any definite programme or that the wheels of the departmental machinery move too slowly to utilize these amounts for the specific purposes for which they are ear-marked. In the revised estimates for 1912-13, the Government observes (para. 18): "The reduction of Rs. 1,61,000 under education is due to partial lapse of large lump sums, grants sanctioned in the budget for opening new schools and improving existing ones and for promoting technical education in the State generally. In spite of the best endeavours of the Department, schemes for the extensive operation designed to utilize the grants to the utmost advantage took some time to mature and could be introduced only gradually." Looking at it from the point of view of the people, it is most unfortunate that the Department should have allowed these large amounts to lapse. The Dewan has observed that no village should be considered as maintaining a fair standard of enlightenment which does not keep 5 to 10 per cent. of its population under education. This is a consummation to be devoutly wished in the immediate future. But what has the Government done last year? In Madras the Director himself

is on special duty developing schemes for the extension of elementary education. In Mysore the hands of the Inspector-General of Education are always full. The Government when allotting special funds ought to have deputed a special officer *with excellent capacity for organization* to the work of maturing plans for the improvement of Elementary education. We are glad that this has now been done. The Dewan in his speech to the Representatives announced: "In view of the growing Educational activities of the State and the need that is felt to ensure that the increased grants given are utilized to the best advantage the appointment of a Deputy Inspector-General of Education has been sanctioned. This officer will be entrusted with the direct charge of Vernacular education both Elementary and Secondary in the State."

One brilliant feature of the Mysore system with reference to Primary education and which ought not to escape our notice is the School Committees constituted by the Government in the rural tracts to supervise the work of schools. The Inspector-General in his report says: "The School Committees continued to do good work during the year. In the majority of cases they were helpful in checking unauthorized absence on the part of teachers and in regulating school attendance. Several of them took steps to provide accommodation for schools and teachers and to collect funds for executing small repairs to buildings that were in need of them. They also rendered useful service in bringing to the notice of the Department the urgent needs of the schools entrusted to their supervision." It is curious that the Government review makes no mention of the working of these Committees. Clause 7 of Elementary Education Regulation

(Regulation 5 of 1913) runs as follows: "For the purpose of enforcing the provisions of this Regulation and rules framed thereunder one or more School Committees may be appointed for each specified area with such powers and in such manner as may be prescribed." Clause 12 lays down that the Government may, by notification in the Gazette, makes rules to provide for the appointment of School Committees and to define their powers and duties and to regulate in what manner they shall be exercised. Though this applies to areas where education will be made compulsory, still it shows that the Legislative Council and the Government have confidence in School Committees. The existing School Committees of whose good work the Inspector-General makes special mention in his report might be utilized to select the areas where new schools may be started and to suggest schemes for improving existing schools. It is also curious that no one has till now urged on the Government the appointment of a mixed Committee of officials and non-officials to devise schemes for the utilization of the special grants to improve Elementary education. The Government of Mysore have in the Education Sub-Committee of the Economic Conference a body of officials and non-officials competent to go into the question. The report of a Special Committee will be of immense value to the Inspector-General of Education. It is the concern of every one interested in the progress of education in Mysore to see that the tale of last year is not repeated and that funds allotted for the spread of education are not allowed to lapse. The Dewan observed in speaking of these special grants that the "Government have no doubt that the Department of Education is fully alive to the responsibility resting upon

it for giving practical effect to the various important schemes that are being sanctioned from time to time."

Reference was already made to the Mysore Elementary Education Bill. We are glad that it received the assent of His Highness the Maharaja on the 11th day of October, 1913, and that it will be brought into operation immediately in selected areas. We do not expect much good from it immediately. As Mr. H. V. Nanjundayya, the Councillor in charge of the Bill, observed, the Government "will begin with some of the larger towns here and there. The unpreparedness of the people is not the only restraint that will operate on the extension of this measure. The means of the Government to enforce it have also to be taken into consideration. We have already begun by making primary education free throughout the State and if we are to create schools in all the places in the State so as to enable people to resort to them and to educate all their children, it would mean enormous expense. The elasticity of our revenue is not very great." We regret to find that in the course of the discussions in the Representative Assembly, the income-tax which was specially introduced "by way of a small contribution" for the spread of Primary Education was objected to and the Dewan, in deference to popular opinion, announced that this tax, unpopular always, would not be introduced for one year. We believe it is not intended to put back the hand of progress. The Dewan was glad to notice that some of the non-official members thought that the measure was not sufficiently strong. Mr. K. P. Pattanna Chetty was, we think, perfectly in the right when he said "whenever there is a school, let us make the attendance thereat compulsory. If you make it compulsory,

you will double or treble the numbers attending them. When new schools are established, it would be a pity if you don't make the conditions somewhat rigorous. If you excuse a parent from sending a boy to school on account of seasonal conditions I fear the very object of the school would be frustrated." The Government of Mysore deserves our warm congratulations for having ventured on compulsion. The working of the scheme will, we once more assert, be watched with interest throughout India and we have sufficient confidence in the Educational Department of Mysore that it will work the Regulation with commendable success.

(To be continued.)

K. A. VIRABAGHAVACHARIAR.

EDUCATIONAL SERVICE IN INDIA.

INSPECTORS AND THEIR APPOINTMENTS.

ANY one who reads the history of Education at the present day cannot but be struck with the fact that there is universal discontent felt all over the civilized world with the results achieved in recent years in the field of Education. At the meeting of the Educational Science Section of the British Association held at Birmingham on 11th September 1913, E. H. Griffiths, Sc.D., LL.D., F.R.S., President of the Section, delivered a most thoughtful address on "Educational Retrospect." He opened his address in the following terms:—"We have now had forty years' experience of compulsory education and more than ten years' experience of the working of the Education Act of 1902. We are spending at the present time out of our rates and taxes about 34 millions per annum upon

education. It seems reasonable as a nation of shop-keepers that we should ask if we are getting value for our money." He started certain inquiries and the result of his inquiries "had been the discovery, if discovery it was, that dissatisfaction with our present system was the prevailing sentiment." Dissatisfaction with the education in the school is as widespread in Germany as it is in England and complaints are often repeated of the unsatisfactory results obtained for the money spent on schools. The American has the same tale to tell. There is no end to our complaint in India; our budget is a very long one and our only consolation is that we are not alone in this respect.

One of the serious complaints we have in this part of our country is the way in which our Inspectors of Schools are appointed, their qualifications and claims for the place. That the Inspectors play a very important part in the development of our educational system is a fact recognized by all. The number of Inspectors has increased in recent years. We have at present ten, including the newly-created one for Bangalore and Coorg. Two of these ten appointments only are held by Provincial Educational Service men. We understand—we cannot say this with any authority, for not even members of the Legislative Council are taken into confidence in such matters—that the Director of Public Instruction has sent up proposals for nearly doubling the number of Inspectors and adding these new appointments to the cadre of Indian Educational Service. If such a proposal is really before the Government, it is time that the question of Inspectors is examined from every point of view.

It has been remarked and with great truth that the Department of Education in Madras

suffers considerably from the rule of mediocres. The Indian Educational Service has ceased to offer increasing attractions to the best educational talent, be the cause for this whatever it may. Not only do the present day men—barring a few honourable exceptions—lack the scholarship and erudition of Dr. Miller, Messrs. Powell, Porter and Kellett, they are also wanting in those characteristics which made the educationists of the former generation a power in the land. The Indian student in the College classes has a keen intellect and he has his eyes wide open. What respect will he give to his Professor who is not able to stand up for the independence of his University? He reads that eminent educational experts all over the civilized world are loudly proclaiming that complete control of education by bureaucratic state is very inexpedient. Just the other day it was that Dr. Griffiths was making the pronouncement at the meeting of the British Association that "it was necessary that Universities should be State-aided but that there was the danger that the blight of uniformity and official control might descend upon them and that the freedom of the Universities was one of the highest educational assets of this country and that it was to the advantage of the community as a whole that each University should be left unfettered to develop its energies, promote research and advance learning in the manner best suited to its environment." He knows also that the Calcutta University as a body—official and non-official, Indian and European, missionary and non-missionary—entered an emphatic protest against the interference of the State in University affairs. He knows that in Bombay, a similar proposition will have fate far different from that at Madras. Will not the student of the Madras Christian

College be right when he exclaims: "Oh! what a fall since the days of Dr. Miller!" His disappointment will be the keener when he learns that the proposer of the proposition is one nurtured in the best traditions of his college, that the voting in which his missionary teacher took part went on racial grounds and that a large number of European Fellows left the meeting soon after the voting as if they were there by a mandate just for this proposition!

Just one more proof to show the kind of men we have at the helm of the Educational Department. One of the questions discussed the other day at the Senate meeting was the removal from the L. T. Curriculum of the History of Education. Much has to be said on both the sides of the question and the outside world would expect the Fellows to agree to differ. The Hon'ble Mr. V. S. Srinivasa Sastriar moved an amendment and one European Fellow was heard to ask Mr. Sastriar whether he read any books on the History of Education, although these two gentlemen sat in the same board and though he knew Mr. Sastriar well. How shall we characterize this attitude of mind on the part of the European Fellow concerned? By a strange irony of fate this European gentleman has many Indian friends and admirers who have great confidence in him and is reputed to be very sympathetic and broad-minded.

The truth of the matter is that we have very few educational experts who deserve the esteem and confidence of the people, and this reflects itself in every department of education, be it the work of teaching or of administration. The impression is gaining ground steadily in this country that the governing race thinks that any gentleman with a degree of any obscure University—

European or American—is fit for any kind of educational work, provided the gentleman belongs to their race. To-day a third form teacher in an out-of-the-way Grammar School in England, to-morrow the Principal of a Second-grade College in Calicut, Tinnevely or Coimbatore, and the day after, Inspector of Schools, sitting in judgment over scores of teachers who are intellectually and morally much his superiors but who labour under the great misfortune of being the natives of the soil.

Matters are no whit better in our University. The Syndicate appoints Inspectors to inspect Colleges seeking affiliation. Recently Mr. F. E. Corley was appointed to inspect the Trivandrum College which sought affiliation for B. A. Honours in History. Mr. Corley is no doubt a distinguished English scholar and though not a specialist in History, happens to fill the post of the Chairman of the History Board of Studies, by the mere accident that he lives in Madras. But the Professor of History in Trivandrum is a young man of rare attainments and of unquestioned authority in the subject. He is senior to Mr. Corley both as University M. A. Examiner and as a member of the Board of Studies. He is amongst the authors of the scheme of studies for the History Honours Course. No one could complain if Mr. Sturge of the Nizam's College had been appointed to report on the affiliation. Would Mr. Allen of the Presidency College and Mr. Macphail of the Christian College have allowed their junior to inspect their respective colleges. But the Trivandrum Professor is an Indian and this means a great deal.

Now let us turn our attention to the work of the "beardless boy Inspector of Schools." He has no special qualifications for the

office. He has not undergone the requisite training for the new work. If he is a specialist in one subject he has his fads and neglects the other subjects. He does not know the requirements of the Indian schools and their limitations, nor does he understand the language of the people. He picks up the tricks of the trade and remembers stock-words, correlation, concentric, heuristic method, etc., sits for ten minutes in one class and for fifteen minutes in another class, hears the specialist teach, at the same time examining the pupils' note-books, takes notes, leaves the class and five or six months after the inspection sends in his report with some such remarks as "syllabus is not concentric, this teacher did not use the spoken or the modern Tamil in explaining his ideas in vernacular, there was no correlation of Drawing with History; space work is not attempted in Arithmetic, the teacher does not believe in marking system, the boys played at Tennis well and on enquiry it sometimes happens that no Tennis Club is attached to the school." The Indian school-master in the meanwhile studies idiosyncracies of the Inspector, understands his fads, gets up a show for the Inspector's inspection, throws dust in his eyes by producing concentric syllabuses, with long lists of books for reference, heaps of exercise books carefully written to order, relief models, weather charts, brush drawings, line of time in History, etc. The Inspector is easily satisfied and his knowledge of most of the subjects taught being surface deep, never bothers himself with details to understand if the work turned out was real and substantial. Soon the Gazette announces his transfer as the Principal of Rajahmundry College or as a Professor in the Presidency College. A new

Inspector comes and the humble school-master has once more to adjust his mechanism to suit the caprices of the new comer. To add insult to injury the Department drafts to colleges gentlemen like Messrs. Mayhew and Yates who have shown to possess special aptitudes for Inspector's work. In the Indian Policy issued by the Curzon Government in 1904, mention is made of the fact that "in order that the members of the Indian Educational Service may keep themselves abreast of advances which are now being made in other countries in the science of education facilities are given to them while on furlough to study the theory and practice of all branches of education both in England and in other parts of the world." How many of the European Inspectors have taken advantage of the facilities given to them and what is their contribution to the literature on the subject? Where are the special reports of our Educational Department? Where are our Matthew Arnolds, Joshua Fitches and Aclands? It cannot be denied that a majority of Inspectors fall far short of our ideals and that the Indian school-master is much dissatisfied with them, though he does not express himself so openly for fear of consequences.

Such is our European Inspector. But education is bound to progress in the land. Free and compulsory education will become an accomplished fact at least in ten years. Our schools, Elementary and Secondary, whose number is already increasing, will further rise in number and in efficiency. The curriculum of Elementary schools will be made more and more to approximate to the needs of the community. We have to profit by the experiences of other nations. The Secondary schools must be allowed freedom to develop along the lines of their capacity and instinct

and to build up a character and tradition quite their own. Our University ought to be made an independent centre of culture. It must become national and Indian, with large endowments, satisfying the aspirations of students in the dominion of learning and research, under the control not of a caucus but of the best talent available consistent with its resources. In the words of the Government of India "the problems to be solved are so complex and the interests at stake so numerous that India is entitled to ask for the highest intellect and culture that either English or Indian seats of learning can furnish for her needs."

It goes without saying that the increase in the number of schools, the introduction of the School Final Examination and the gradual raising of the educational standard demand a substantial strengthening of the inspecting staff. The State which aids schools with grants from public funds has a right to insist on its Inspectors inspecting the schools. The School Final system allows the teacher a certain amount of freedom. He can draw up his own syllabuses in many of the subjects, vary them according to the requirements of his pupils or the means at his disposal. He can lead pupils to acquire knowledge by their own independent work without drilling knowledge into them, and to cultivate self-reliance. He can combat also the attitude of mere passive listeners on the part of his pupils. He will determine to a large extent which of his pupils are fit to go up to the College course. There is thus a great deal entrusted to him. In this very difficult task he needs all the help, sympathetic guidance and judicial control that a well-qualified Inspector can give him. There is also the danger that even the most capable of teachers may in the

course of a few years become fossils incapable of new ideas. Inspection is one of the contrivances by which this may be avoided. It is also a guarantee against indolence or perversion of trust. Here as elsewhere there is doubtless the danger that the teacher may be fettered by regulations and bothered by fads of individual Inspectors. This can be easily provided against. A really good Inspector will realise that he is part and parcel of the school and will be prepared to allow sufficient freedom of self-development to the school within the limits of doing justice to the children taught therein. But we want the best men available for the work.

What is wanted to meet the present requirements of the situation is the sympathetic recognition on the part of the Government of the just claims of Indian graduates to important posts in the Educational Service. Sometime back in reply to a question put in the Legislative Council re the appointment of Indians as Inspectors of Schools, the Government replied that there were in the Department none competent for the place! It is hard to expect the Englishmen in India to say anything else. There is reason to fear that vested interests will once again raise the cry of inefficiency on the part of Indians in the evidence before the Public Service Commission. Indians in the Educational Department owe a duty to themselves and to their country at the present juncture. They should protest against such a view gaining ground. We have Inspectors, good, bad, indifferent, both among Europeans and Indians. The Government appoints an Indian Sub-Assistant Inspector at the fag end of his service as an Inspector, and comparison is instituted between his work and that of a young man full of enthu-

siasm appointed straight to that work, with the result that the Indian suffers by comparison. Indian Inspectors of the type of the late Messrs. Williams Pillay and Raghunathachariar were more or less ideal men. At the present day, we have in Rao Bahadur A. C. Pranatharthihara Aiyar one of the very capable of our Inspectors. He may have faults, but has done far more for education in his circle than other Inspectors can lay claim to. The schools in his circle are in a very efficient condition. He knows every school thoroughly, its teachers and managers as well. He is a man of ideas and keeps himself in touch with the latest phases of thought on the subject of education. He guides the courses of study as well as any specialist. While aiming at uniformity and a higher standard he encourages teachers to work out their own system. Above all he is tactful and is never offensive, moves with the teachers as if he is one among them and stands by them to better their pay and prospects. The progress of education in Bangalore of which so much was written in the editorial columns of the *Madras Mail* recently is due to his powers of initiation. To him again we owe the organization of special lectures for the benefit of primary school teachers. This is a record of which any Inspector might be proud. It is idle to assert that Indians are not qualified to be Inspectors. Both in and out of the Department we can name hundreds of persons who, with opportunity afforded and with special training, can make themselves extremely useful as Inspectors.

I lay before the readers of the *Educational Review* the following proposals for consideration. The purpose of the present article

will be served if these proposals stimulate thought and discussion. It is high time that the Council of Native Education, the South India Teachers' Union and the premier Association of Teachers, the Madras Teachers' Guild, rouse themselves to a sense of their responsibility. My proposals are:—

(1) That for the Presidency there must be fifteen Inspectors of Schools, districts with a larger number of schools being allowed one Inspector;

(2) Three of these only to be Europeans and their pay sufficient to attract men of superior qualifications;

(3) That ten of the fifteen Inspectors be appointed from the ranks of Lecturers and Assistant Professors of our educational institutions and from among our B.A. Honours men or Masters of Arts and that the pay of these Inspectors be Rs. 400—25—700.

(4) That the men so appointed be under probation for a period of two years under the senior Inspector of Schools and do visit Europe and America to study methods of teaching.

EDUCATION.

THE HIGH SCHOOL TIME TABLE.*

THE Time Table is every-body's dread in the High School. It takes up a considerable part of the headmaster's time and he avoids nearing it for an alteration as if it were bramble. The assistant-master spouts forth his lips at it as if it were something incorrigible and intended as a means of annoyance to him. The school-boy himself,

* A paper read by Mr. N. Venkatachariar, B. A., L. T., History Assistant, High School, Tirucattupalle, at the meeting of the District Teachers' Association, Tanjore.

with his usual candour, characterises every time table he may have to follow as 'worthless,' prescribing as it does, History and Geography for two consecutive periods, or combining drawing, Tamil composition and drill for a whole afternoon. And yet who does not know what a scientific time-table ought to be like? The qualifications and strength of the staff, the number of divisions in a form, the provision made for special class rooms, and the manager's own crippled resources have all more than a lion's share in the shaping of the time table and leave very little scope to the headmaster for the exercise of his scientific inclinations in the framing of it. In how many schools are there not teachers owing special permissions—very deservedly of course—to come to the school every day at the beginning of the second period, or to be off during all the last periods in the evenings. All these conditions are sure to affect the time-table in the most unscientific and irregular manner, and the headmaster is not after all the most responsible for a bad time-table.

There are other aspects of the time-table however which we may consider more usefully this night. The allotment of periods amongst the various subjects should satisfy the ends of the curriculum, and conduce as much as possible to the drawing out of the powers of the children. I fear, however, in this as in many other things we are more or less guided by external considerations such as the results in the public examinations or the departmental 'tendencies' even when there are none.

9 or even 10 periods for English, 1 for translation, 1 for Tamil composition, 3 or 4 periods for Elementary Mathematics (14 or 15 periods for the subjects in the A group alone), out

of the 30 periods in the week is what obtains in many schools. 8 periods are also devoted to the two subjects in group C. This leaves only 7 periods for the 5 subjects under group B.—Elementary Science, Indian History, Geography, Drawing and Physical Training. There is, certainly some discussion at the beginning, when the time-table is being framed, about the merits of these 5 subjects themselves, and some settlement ensues after a show of due consideration for the merits of the subjects 'Drill extra' is very often the verdict. Drawing gets 1 period. The rest of the periods 6 in number are divided amongst Elementary Science, Indian History and Geography equally. The Science teacher may get an additional period for Elementary Science by his kaleidoscopic presentation of Physics and Chemistry. This additional period is sometimes got from the 15 periods devoted to the subjects under group A. But such treatment, the other subjects do not seem to deserve.

Most of us believe that the changes that have been made in our Secondary educational system have been beneficial in many respects. But the time-table as is in force in many schools is not responsible for any such good. The allotment of the periods amongst the various subjects has very little regard to the merits of the subjects themselves and tends to frustrate the aims of the promoters of the scheme.

When the Matriculation examination obtained the schools had almost uniform time-tables and the allotment was thus—8 or 9 periods for English as now. 1 for translation 1 for Tamil composition (done along with Tamil) 6 or 7 periods for Mathematics. Indian History, Geography, Physics, Chemistry and English History had each 2 periods. Drawing and Drill

had never more than 1 period each and often came out of time. A vernacular or Sanskrit was taught for 4 periods. Carefully comparing this with what obtains now in many schools we find that the past and the present are shoulder to shoulder in many respects and the difference is slight and that not in the most desirable direction.

English, Translation, Tamil Composition, Indian History, Geography, Drawing and Drill are exactly in the same condition still. Physics and Chemistry appear in the new guise of Elementary Science and have nearly the same number of periods. The change observable is that the second language or its alternative, Sanskrit, has disappeared altogether, and Mathematics is very much reduced in size. The 11 periods formerly devoted to Mathematics and second language are now distributed amongst Elementary Mathematics, usually getting 3 periods, and two optional subjects (8 periods) which may be Mathematics and Physics, Physics and Chemistry, English History and Tamil or Sanskrit, but not Mathematics and Tamil or Sanskrit and Tamil. Reducing the time allotted to Mathematics or giving an opportunity to abandon the Vernacular cannot be calculated to tend to progress.

By fiction we retain certain things as good for us and are loath to part with them. Thus the five prose books in English and about 500 lines of poetry prescribed can easily be taught in the V and VI Forms with only 7 periods a week. But we must still devote a third of the whole week for the teaching of English alone. It is by a fiction again we consider the study of books to be much more necessary in the schools than the bringing up of children in the most healthy and robust condition. Although the study of Sanskrit is

not at all incompatible with the study of Tamil, still no provision is made in the schools for students wishing to take up these two subjects as their optionals.

The objects of the School Final are praiseworthy, and the tyranny of set-curricula, and external pressure not yet so great as to frustrate all attempts of the headmaster to make the time-table as useful as necessary.

A few periods now devoted to the teaching of English may be given to Elementary Science and Geography. Only then these subjects could be taught as well as desired. The 45-minutes-period-system may be adopted and the whole day divided into 7 periods instead of 6. The last period every day should be given to organised games and sports. Cramming need not be encouraged in schools by allotting to the subjects under group C, a large number of periods every week. The syllabus itself may be more leniently interpreted by the teachers as well as the examiners. 3 periods would be quite enough for the teaching of English History, Chemistry and Physics. The periods thus saved may be used for bettering the condition of drawing. Library periods must be provided. The boys may be asked to read, then their non-detailed or some other books, for themselves, the teacher only guiding them.

Thus a great deal may be done to impart real education to the children in the schools, and it requires the careful consideration of the heads of institutions and their assistants. Sufficient time should be given to each of the subjects and the aims of the promoters of the School Final scheme realised to the best of our abilities.

OV STUDIZ.

(BACON.)

Studiz surv for diliet, for ornament, and for abiliti. Thair cheef yuus for diliet iz in prievaitnis and ritiëring; for ornament iz in discors; and for abiliti, iz in the jujment and dispoezishon ov bizines: for eespert men can eesciyut and perhaps juj ov particyulërz, wun bi wun; but the jeneral counselz, and the plots and marshaling ov afairz cum best from thoez that ar lurnid.

Tu spend tu much tiem in studiz iz sloth; tu yuuz them tu much for ornament iz afec-taishon; tu maic jujment hoeli bi thair ruulz, iz the hyumor ov a scolar; thai purfect naityur and ar purfectid bi eespirians.....Crafti men contem studiz; simpl men admier them; and wize men yuuz them; for thai teech not thair oen yuus; but that iz a wizdom without them wun bi obzurvaishon.

Ræd not tu contradict and confyut, nor tu bileev and taic for graantid, nor tu fiend taac and discors, but tu wai and cunsider. Sum boocs ar tu be taistid, uthërz tu be swoloed, and sum fyū tu be chund and dijestid; that iz, sum boocs ar tu be red oenli in parts, uthërz ar tu be red but not cynrinsli; and sum fyū tu be red hoeli, and with dilijens and atenshon.....Reeding maiceth a fool man; and confurens a redi man; and rieting an egzact man; and thairfor, if a man riet litl, he had need hav a grait memori; if he confer litl, he had need hav a prezent wit, and if he reed litl, he had need hav much cuning, tu seem tu noe that he duth not.

Historiz maic men wiez; poets, witi; the mathmatics sutl; natyural filosofi, deep; moeral, graiv; lojic and retoric, aibl tu cuntend.

K. JOGAYYA.

EDUCATION IN THE MAGAZINES.

(INDIAN)

Female Education.

Presiding at an ordinary meeting of the Pachai-yappa's College Literary Society, Srimati G. Paru Kutty Ammal, B.A., addressed the students on Female Education. She thanked them for the honour done her in asking her to take the chair. Although the Madras University had been in existence for more than half a century, only within the past few years had Indian, especially Hindu, ladies been induced to take to higher education and their number to-day was so small that it was hardly worth mentioning. There were no first-grade colleges for women, and among the second-grade colleges beyond the Girls' Colleges in Mysore and Trivandrum, both maintained by the Governments of these States, there were no Government institutions of the kind anywhere in this Presidency offering special inducement for women to enter on a University course.

Indian women taken as a whole, are uneducated, illiterate and practically mute, which meant that half the population of India did not form an active agency in its progress. None would say that Indian women exercised no influence whatever. Within the domestic circle they were a power to be reckoned with; far from helping the cause of progress they were with honourable exceptions, an obstacle to it, and the blame did not lie on them. The rigid and inelastic social system under which they were brought up, was responsible for it. Every person, man or woman, had almost a natural right to be given that training which would enable them to use their minds, so as to adopt themselves to the environments and to improve, if need be, the environments themselves in harmony with what was called the fine-spirit.

In educating the women of India they were introducing no innovation. They were only following the best and noblest traditions of Arya Vartha, India called for the services and sacrifices of all

her children; they would be proving untrue to themselves if they did nothing to dispel the darkness that enveloped one half of her children and made them unable to move onward with the progress of the times.

Womanhood should be developed on purely and strictly Indian lines. Indian women would be making a great mistake if by aping the manners and fashions of the West, they imagined that they were helping the cause of progress. With what was external and non-essential they should have nothing to do. It was the heart, the mind and the soul that required to be educated and guided and when those seats and sources of all that was good in man and woman were properly well-adjusted and taken care of, then the outward expressions of them would surely correspond with what is inside.

After all the best education was that which made the mind to educate itself, everything must be studied, not at haphazard, but in a regular systematic and methodical manner imbibing the spirit of what had come down to them from the past and adding to it if possible.

Education in Elementary Schools.

The prize-distribution to the pupils of the V. Subramaniam Free A. V. Elementary School, Mint Street, Madras, was held in the school premises. The Hon'ble Mr. T. V. Seshagiri Iyer spoke on Elementary Education in the course of which he said:—

With reference to the nature of instruction that should be imparted in such schols, he was of opinion that they should pay more attention to the industrial side of it. He was accused by some as being against literary education. He wished to point out in this connection that he did not depreciate literary education. He believed that they should have literary education. What he desired was that in cases where the students were not likely to go up for the higher course, and where the students were poor, they should not go in for literary education. There was an agitation at present in England to put a stop to literary education as far as possible, and that the education should be given in such a way that it would enable them to earn their livelihood. That ought to be the end and aim of education. He therefore asked the management to impart to the students some knowledge in arts, carpentry, etc., which would enable them to earn an honest livelihood.

Vernacular in Indian Education.

In the course of his speech at the prize-distribution, Trichinopoly, Mr. Gardiner, Principal of the S.P.G. College, Trichinopoly, spoke as follows about the Vernacular in Indian Education:—
“I am glad to note that the original seed of the institution, its growth, and its fruit have all been “Anglo-Vernacular” in character. That designation expresses combination and co-operation, although attempts have been made to set “Anglo” and “Vernacular” in opposition as if their interests could be antagonistic. That is a false patriotism which asserts that whatever is purely Indian is therefore better for India, whereas true patriotism claims that everything that is better for India must be made Indian, if not already Indian. Japan recognised the folly of her boycott of Western knowledge and Western ideals, and as a consequence rose to the position she holds in the world to-day. In India the English tongue cannot be replaced even if we regard it simply as a bond of union among the educated whose vernaculars vary widely. But it is much more than that. It is also the medium for the exchange and assimilation of common sentiments and ideals between Britons and Indians. Until the educated classes are thus united by a common inspiration, they can never lead public opinion as the educated classes ought to do in every land. Can it be denied that to-day in India the educated classes are still in many cases contented to be led by those of less enlightenment and wisdom? But much more is required. The vernaculars are indispensable—not simply as an end in themselves, valuable as they undoubtedly are, but as a means of communication between the educated and others—the wires, so to speak, for electrifying and energising the nations of India. The educated classes can no more dispense with the vernaculars than the uneducated, and those educated only on vernacular lines, an important section of society, can dispense with leaders and guides who have assimilated and naturalized, not merely borrowed or assumed, the learning and ideals of the West in the best way in which they can be assimilated in India, i.e., through the medium of a language of the West. Spiritual, moral and physical truth and wisdom are universal in character, and it would be folly to attempt to localise them, or any of them as national in any land. In these days of enlightenment, however, nearly all men are as ready to learn from others as they are to teach,—‘to prove all things,’ whether of foreign or indigenous origin and to hold fast that which is good, wherever they may find it and in whatever form it may appear.”

Industrial Education.

While declaring open the Fifth Industrial and Agricultural Cochin Exhibition, His Highness the Maharaja gave out his views on Industrial and Agricultural Education as follows:—

The present occasion recalls to my mind the small gathering five years ago at the Viyyur Park, Trichur, in which I had the pleasure, as I have to-day, of taking part. I refer to the opening ceremony of the First Agricultural and Industrial Exhibition held in my State. The British Resident very kindly performed the opening ceremony of the three following Exhibitions, and it has been a great satisfaction to me to have been able this year to be present at this interesting gathering. I can assure you, Gentlemen, I have watched with pride as well as satisfaction, the gradual development of this movement which my Darbar has inaugurated, and I myself have, at each successive Exhibition gained many a lesson of the immense possibilities of agricultural and industrial progress which Cochin possesses. These Exhibitions afford useful means of comparison and stimulate emulation, and to them we owe to a great extent, the progress that has been made of late in agriculture and industries.

Agriculture which must be the main pursuit of every nation, may change its principles and methods with the advance of time, but it will ever continue to hold a fundamental position in the country. I have it as my constant aim and endeavour, as the ruler of my State, to promote those bonds between the different classes amongst my subjects whose occupation is agriculture, that will keep them closely united in a common understanding of good-will and mutual co-operation.

Science and technical improvements are the order of the day. Capital, machinery, industry and skill require to be combined harmoniously to preserve and maintain, in a condition of prosperity in these days of keen competition, the vast population that live by agriculture, and I am giving my anxious consideration to the introduction of those schemes of reform which will promote amongst my people higher efforts and a higher intelligence; for these alone can bring about such combination.

I sincerely hope that they may be initiated before long with the loving co-operation of my subjects. The account my Dewan has given of the Darbar's general policy and their past labours, will not, I hope, fail to convince my people of the deep personal interest I take in their agricul-

tural and industrial prosperity and my determination to do everything in my power to advance it.

Technical and industrial education is a thorny subject for experts, but, as a layman, I may be permitted to say that, so long as a higher standard of industrial education is not introduced, step by step, in the public schools of the State, and the general education given to the population at large is not made less literary and more practical, I, for my part, do not hope for any material change or improvement. While, therefore, on the one hand we must encourage the industrial population to acquire a higher intelligence, we must, on the other, afford adequate incentives to those amongst the higher orders of society, who command capital and confidence, so that they may be able to acquire the art of co-operation and business organization. For some time yet we may have to depend on foreign countries for high technical skill and experience. I am closely watching this interesting movement, and, with the small resources that my State possesses, I am endeavouring to establish gradually a sound system of education which is best adapted to the requirements of the different grades of caste and calling amongst my people.

(FOREIGN)

An Apology for Pure Mathematics.

At the Mathematical and Physical Science Section of the British Association, Dr. H. F. Baker read an address which was devoted to an explanation of the justification of the pure mathematician.

He admitted that the mathematician, as such, had no part in those public endeavours that arose from the position of our Empire in the world, nor in the efforts that must constantly be made for social adjustment at home. He was shut off from inquiries which stirred the public imagination; when he looked back the ages over the history of his own subject, the confidence of his friends who studied heredity and taught eugenics aroused odd feelings in his mind; if he felt the fascination which came of the importance of such inquiries, he was also prepared to hear that the subtlety of nature, grew with knowledge of her. It was not logical to believe that they who were called visionary because of their devotion to creatures of the imagination, could be unmoved by such things. Nor was it at all just to assume that they were less conscious than others of the practical importance of them, or less anxious that they should be vigorously prosecuted.

INTRINSIC VALUE OF THE STUDY.

Why was it that their systematic study was given to other things and not of necessity, and in the first instance, to the theory of any of these concrete phenomena? The reason was very much the same as that which might lead a man to abstain from piecemeal, indiscriminate charity in order to devote his attention and money to some well-thought-out scheme of reform which seemed to have promise of real amelioration. One turned away from details and examples, because one thought that there was promise of fundamental improvement of methods and principles. But more than that. The improvement of general principles was arduous, and if undertaken only with a view to results, might be ill-timed and disappointing. But as soon as we consciously gave ourselves to the study of universal methods for their own sake, another phenomenon appeared. The mind responded, the whole outlook was enlarged, infinite possibilities of intellectual comprehension, or mastery of the relations of things; hitherto unsuspected, began to appear on the mental horizon. However the fact was interpreted, our intellectual pleasure in life came not by might nor by power—arose, that was most commonly, not of set purpose—but lay at the mercy of the response which the mind might make to the opportunities of its experience. When the response proved to be of permanent interest—and for how many centuries has mathematical questions been a fascination?—it was well to regard it. Further, in our time old outlooks had very greatly changed; old hopes, disregarded perhaps because undoubted had very largely lost their sanction, and given place to earnest questioning. Could any one who watched doubt that the courage to live was in some danger of being swallowed up in the anxiety to acquire? Might it not be, then, that it was good for us to realize, and to confess, that the pursuit of things that were beautiful, and the achievement of intellectual things that brought the joy of overcoming, was at least as demonstrably justifiable as the many other things that filled the lives of men? Might it not be that a wider recognition of this would be of some general advantage at present? Was it not even possible that to bear witness to this was one of the uses of the scientific spirit?

THE SOUL OF THE SCIENCE.

After referring to some of the broader issues with which pure mathematics was concerned—the calculus of variations, non-Euclidean geometry, the theory of groups, the theory of algebraic functions, the theory of functions of complex

variables and differential equations, and the theory of numbers, he remarked that each of these was large enough for one man's thought; but they were interwoven and interlaced in indissoluble fashion and formed one mighty whole, so that to be ignorant of one was to be weaker in all. Pure mathematics was not the rival, even less was it the handmaid, of other branches of science. Properly pursued, it was the essence and soul of them all.

Our life was begirt with wonder, and with terror. Reduce it by all means to ruthless mechanism. If that could be done, it would be a great achievement. But it could make no sort of difference to the fact that the things for which we lived were spiritual. The fact remained that the precious things of life were those called the treasures of the mind. Dogmas and philosophies, it would seem, rose and fell. But gradually accumulating throughout the ages, from the earliest dawn of history, there was a body of doctrine, a reasoned insight into the relations of exact ideas, painfully won and often tested. This remained the main heritage of man; his little beacon of light amidst the solitudes and darkness of infinite space; or, like the shout of children at play together in the cultivated valleys, which continued from generation to generation. Yes, and continued for ever! A universe which had the potentiality of becoming thus conscious of itself was not without something of which memory was but an image. He must have studied nature in vain, who did not see that their spiritual activities were inherent in the mighty process of which they were part; who could doubt of their persistence. And on the intellectual side, of all that was best ascertained, and surest and most definite; of all that was oldest and most universal; of all that was most fundamental and far-reaching, of these activities pure mathematics was the symbol and the sum.

An Indian Alphabet.

At the British Association in Section L—Education—the Rev. J. Knowles (Travancore), in a paper on 'An Indian National Alphabet,' stated that the necessity for it arose from the fact that, though India had some 200 languages and dialects and, say, 50 different scripts there was no Indian alphabet properly so called (except for English).

The Indian scripts, were really syllabaries, each requiring from 500 to 1,000 complicated types to print. All the characters of a vernacular must be mastered before any reading was possible and learning to read was as difficult as mastering a system of shorthand. There were only 53 typical

elementary sounds in the whole of the Indian languages put together, but there were 20,000 elaborate symbols used to express them. Many of the characters were extremely trying to the eye-sight and difficult to read, to write, and to print. The complicated syllabaries were the chief cause of Indian illiteracy, which was so great that ninety per cent. of the males and 99 per cent. of the females were unable to read and write. The simple remedy suggested for this lamentable illiteracy was an Indian national alphabet based upon the Roman letters, supplemented by the phonotypes of Sir Isaac Pitman and Dr. A. J. Ellis, with some Romanic letters for special Indian sounds. Such an alphabet would provide for an accurate transliteration of all Indian languages or for a practical phonetic writing of the same. In all, 53 types were suggested, but on an average only 37 were required for a vernacular. The letters were easy to read and write and suitable for printing, and with them an illiterate might be thought to read his mother-tongue in ten simple lessons. It was suggested that the Government should appoint a linguistic Commission to go thoroughly into the whole question, and that the British Association should take the lead in promoting a memorial to the Secretary of State for India on the subject.

Education in India.

The Dean of Manchester (Bishop Welldon) said that no responsibility lying upon the British Empire was so great as the responsibility for India. It was necessary to educate the people of India, whether they wished it or not. Only they could not give the people education, and expect them to remain as before they gave them education. Sooner or later, they must give them office and responsibility, but for his own part he cherished his faith in the duty and blessing of giving the people of India education, whatever in the far, far future might be the result upon the Indian Empire itself. But education was worthless without religion. He hoped and prayed that the authorities in India would look facts in the face. There was a saying current in the East that it was right to leave the peoples of the East religiously alone. That was an absolutely mistaken idea. They could not leave the religions of India alone. If they wanted to have the religions of India alone then our whole Government must leave India. It was utterly impossible to plant down a great Western civilization in an Oriental people without vitally affecting the religions of the East, and if they upset an Oriental's religious faith without giving him anything in lieu of it, they were certain to produce a demoralization of character. That demoralization

would show itself in the disaffection and disloyalty, at present very limited, which would surely spread as the people became more educated, unless the education was based on religion. He realized that the Government of India could not be missionaries, but the Government must look, and he believed it was looking more and more with sympathetic favour upon the work done by the missionaries.

THE UNIVERSITIES.

CALCUTTA UNIVERSITY.

Rev. Dr. J. Watt has been appointed ordinary Fellow of the Calcutta University.

A contemporary learns that the Senate of the Calcutta University will avail themselves of the visit of His Excellency to Calcutta in December next to present him with an address of welcome in a special Convocation to be held for the purpose. It will no doubt be a worthy way of showing the loyalty and respect of the University to His Excellency.

Object of Simla Mission.

Sir Ashutosh Mukherjee, Vice-Chancellor, Calcutta University, who had been to Simla, recently to discuss educational matters affecting Bengal with the Government of India, has returned to Calcutta. One of the principal objects of the mission was to secure more money from the Government of India grant for education for the Calcutta University which will enable him to create new departments or extend existing ones. It is expected that, with the additional grant, the University will create new lectureships and appoint more University readers.

ALLAHABAD UNIVERSITY.

CONVOCATION.

A Convocation for conferring Degrees on graduates in Arts, Science and Law of 1913 will be held on the 15th November next. Only those graduates shall receive their Degrees at Convocation who have given prior notice, with particulars of college and roll number, to the Registrar, of their intention to be present. Such notice of intention to be present must reach the Registrar before the 8th November 1913.

Successful candidates for Degrees who are present at Convocation, and who have not their own gowns, can obtain gowns on hire at a charge of

Rs. 1-8 from the University tailors, Messrs. Parfitt and Co., who will be present at the Senate Hall. Candidates must be present at the Senate Hall, Allahabad, by 1 P. M. on the day of Convocation, to obtain their gowns and instructions for presentation to the Vice-Chancellor; otherwise they will not be admitted to Convocation. Candidates receiving their Degrees in absence shall be each charged Rs. 10.

Diplomas to *absentees* will be issued direct, on application by graduates, countersigned by Principals of colleges concerned, and on receipt of the fee of Rs. 10 in each case.

We are glad to learn that Pandit Manohar Lal Zutshi, M.A., Head-master, Government High School, Shahjahanpur, is a candidate for election as a Fellow of the Allahabad University. He has been nominated by Mahamahopadhyaya Dr. Ganganatha Jha. Pandit Manohar Lal as a brilliant alumnus of the Allahabad University. He is an educationist, a scholar, a public-spirited man. He richly deserves to be sent to the Senate. We have already announced the candidature of Pandit Gokaran Nath Misra of Lucknow and Munshi Narayan Prasad Asthana of Agra. Other candidates, we are told, are Mr. Abhaya Charan Mukerji of Muir Central College and Mehta Jagannath Prasad of the Police Department. There is a feeling that Pandit Ikbal Narain Gurtu should be a candidate too. There are four vacancies to be filled this year by election by registered graduates.—*Leader*.

TECHNICAL EDUCATION.

TYPEWRITER TOPICS.

NOTICEABLE IMPROVEMENT IN THE FOX.

The Fox typewriter has been very greatly improved during the year in several of its mechanical features, particularly the type-bars. After very exhaustive and extremely unpleasant experiences along new lines the Fox Type-writer Co. have established an entirely new method for making the type-bars, which up to the successful termination of these experiments it has always been claimed was an impossible process. This new method gives a type-bar which is extremely light, but has greater strength and stiffness than the heavier bar which we used before, and at the same time it has a perfect finish which was not possible with the bars which were made under the old process.

REMINGTON THE LEADER AMONG TYPEWRITERS.

In every exposition of the past third of a century, the Remington has received the highest honors wherever sought. Here are some of the landmarks of Remington history:

1876. First public appearance at the Centennial Exposition, Philadelphia.

1893. Official Typewriter of the World's Columbian Exposition at Chicago.

1900. Official Typewriter of the Universal Exposition at Paris.

1901. Official Typewriter of the Pan-American Exposition at Buffalo.

1912. Official Typewriter of the International Exposition at Turin.

As a fitting climax, then, to the Remington achievements of former years, came the announcement, made during the past year, that the Remington has been chosen as the official typewriter of the Panama-Pacific International Exposition at San Francisco, to be held in 1915.

It is difficult, within the confines of a single article, to tell even the main facts of the development of the Remington Typewriter during the year that has passed. The Remington Typewriter organization has expanded until, in the United States alone, there has been nearly a fifty per cent. increase in the number of direct branch offices of the Remington, with a like increase in the number of sub-offices, while in the other parts of the globe the expansion has been proportionate.

L. C. SMITH & BROS. TYPEWRITER.

One of the most important features of the L. C. Smith & Bros. Typewriter that appeals to the users is the system of ball-bearings. The importance of this is explained in some of the company's advertising matter as follows:

Here is the secret of the superior service the L. C. Smith & Bros. Typewriter renders:

The operator of every typewriter is doing three things 98 per cent. of her time—striking the keys, shifting to write capital letters and returning the carriage to start a new line.

Everyone of these operations is made easier and quicker by the use of ball-bearings—an exclusive L. C. Smith & Bros. feature.

The various Correspondents of Schools and Colleges interested in Typewriting will be benefited by the following article which appears in the Pitman's Journal (the organ of Shorthand and

Typewriting) published in London and dated the 27th September 1913:—

"Among the machines comparatively new to this market none has gained more friends than the L. C. Smith & Bros. Typewriter. Another proof of the popularity of this machine is seen in the fact that the Dupont Powder Co. who some little while ago gave the L. C. Smith Co. the sensational order for 521 machines, have renewed their contract and are now using more than 1,000 L. C. Smith & Bros. Typewriters."

We would just mention here that the machine has seen its way in several Schools and Colleges recently in connection with the Special Grants allowed by the Educational Department.

BOMBAY COLLEGE OF COMMERCE.

In a Press note of May 1913 the sanction of the Secretary of State was announced to the scheme for the establishment of a College of Commerce in Bombay and it was stated that the Secretary of State had been requested to select a suitable candidate for the post of Principal of the College. The Secretary of State had recently informed the Government that a suitable candidate has not yet been found. Although great difficulties have presented themselves in the way of an early opening of the College, partly owing to the above reason, partly in connection with the question of accommodation, and partly because of the recently introduced changes in the University calendar, the Governor-in-Council announces in a Press Note that it has been possible to concert provisional arrangements, which will admit of the original intention as to the opening of the institution being carried into effect.

The Government makes the following provisional arrangements in the College pending arrival of a permanent Principal from England or until further orders:—Mr. K. Subramania Iyer, B.A., L.T., F.S.A. A (London), to act as Principal (Honorary). Mr. Nilkanath Sadashiva Takakhav, M.A., L.L.B., to act as lecturer in English. Mr. Ramchandra Mahadev Joshi, M.A., LL.B., to act as lecturer in Political Economy. Mr. Bhashkar Rao Vitbaldas Mehta, M.A., L.L.B., to act as lecturer in Mercantile Law. Mr. Sorabji Shapurji, B.A., F.S.A. (London), Engineer, to act as lecturer in Accountancy.

The College has started work on the 22nd instant in the Elphinstone College Buildings, Esplanade Road, and the hours of attendance will

be from 8 to 10 a. m. and 5 to 7. p. m. Candidates that have passed the Intermediate examination of the Madras University are eligible for admission. The first University term will be from the 22nd instant to the 22nd December, the 2nd term from the 1st February to the 30th April and the third and the last from 15th June to the 15th August. Students must attend at least 3/4 of the lectures delivered during the term. This College will prepare candidates for the Bachelor of Commerce degree recently instituted by the University of Bombay at the instance of Mr. K. Subramani Iyer, Honorary Principal, 89, Appollo Street, Bombay, to whom applications for admissions are to be made.

Reviews and Notices.

POPE'S ESSAY ON MAN: EDITED BY A. HAMILTON THOMSON, M.A. (CAMBRIDGE UNIVERSITY PRESS.) 2s.

The annotated editions of the Pitt Press Series have very few rivals in point of excellence and comprehensiveness. The latest addition is Pope's *Essay on Man* by Mr. Thomson. In addition to the usual well-written introduction, it has got an elaborate analysis of the poem which will be found very useful to students. The edition might have been somewhat cheaper as it is intended to be used by students in educational institutions.

A PROGRAMME OF EDUCATION, BY MR. J. READY-MONEY. (THE TIMES PRESS, BOMBAY).

Mr. Readymoney has attempted to set forth an ideal of education, based on the free development of the child, unchecked by the shackles of scholastic routine and discipline. We do not know how far it will be possible to use the system advocated by the writer, for general education in a country, nor are we convinced of the possibility of good results from it. It is not probably not fair to judge an educational system by the study of a brief pamphlet. The author's *Science of Nature History* mentioned in the book may throw the needed light on the subject.

REPORT OF THE COMMITTEE ON HIGH SCHOOL TEACHING IN ENGLISH: ISSUED BY THE NATIONAL EDUCATION ASSOCIATION OF THE UNITED STATES.

Though an institution of very recent origin, the National Education Association has been

showing useful activity. The pamphlet under review contains an examination of the aims of Secondary education in English and has some suggestions for their effective execution.

STUDIES IN ENGLISH IDIOM, BY G. BRACKENBURY, M.A. (MACMILLAN & CO. LTD.) 1s. 6d.

This is a valuable exposition of the principles of English grammar in relation to the practical work of composition. There are chapters on the usual divisions of grammar, but attention is concentrated chiefly on the work of exhibiting models and affording useful exercises to the student. We wish the author had added some chapters on the usages of idiomatic English giving instruction in the correct idiom and drawing attention to some of the usual errors. An appendix of phrases should also have been useful.

INTRODUCTION TO THE STUDY OF ENGLISH LITERATURE, BY W. H. STEPHENS, B.A. (MACMILLAN & CO. LTD.) 1s. 6d.

Mr. Stephens' book is not only a short manual of the history of English literature, but also a treatise on the principles of style and Rhetoric. There is a survey of the development of English literature in the first half of the book. It is particularly adapted to the elementary student and special commendation is due to the simplicity and clearness with which the paragraphs are arranged. A very successful attempt is made to familiarise the student with the various branches of prose composition and their distinguishing characteristics of form and spirit. A beginning is also made in the study of the History of the English Language by a treatment of subjects like the Aryan family of languages and the borrowings of English from other languages. A chronological table of authors and their works and an explanation of some of the technical terms of literature enhance the value of the book.

THE TEMPEST, BY WEEKES AND ALLEN: JUNIOR SHAKESPEARE SERIES. (UNIVERSITY TUTORIAL PRESS.) 1s.

We have had occasion to draw attention from time to time to the excellent series of editions of Shakespeare's plays issued by the University Tutorial Press. The volume under review is intended for elementary students and the editorial matter is appropriately enough of a simpler kind than what is found in their usual editions. The book is prefaced

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with a necessary account of the life and work of Shakespeare. In these days of attractive books for children, the University Tutorial Press might have provided the book with some illustrations.

HIGHROADS OF LITERATURE: INTRODUCTORY AND FOURTH BOOKS (THOMAS NELSON AND SONS) 10d. & 1s. 6d.

Messrs. Thomas Nelson and Sons have been producing a remarkably beautiful and useful series of books in their *Highroads of Literature*. We have not seen the like of them in the elementary educational world, either in their capacity to kindle a love of literature, or in their appeal to the artistic sense of the young readers. The child is introduced to almost all the well-known personalities and works of literature and the coloured plates contain famous masterpieces of painting which illustrate them admirably. We have not been able to discern any lapses from the spirit of clearness and simplicity so necessary for books of this class. We confess the series has made us wish we were at school again!—to enjoy the privilege of reading such volumes instead of the dull and sombre manuals that were placed in our hands in the days of our childhood. One can only envy like Dr. Johnson, "the young dogs of this age."

We are sure the publishers could have found a more edifying illustration for the lesson on Tennyson, than that of the poet sweeping his garden at Farringdon. We have no doubt it will be replaced in the next edition.

SCHOOL ARITHMETIC, BY CLEMENT JONES AND P. H. WYKES. (EDWARD ARNOLD.) 4s. 6d.

This is a welcome addition to the copious number of books on 'arithmetic' which have recently appeared. The authors have tried to further break down the barriers which divide the several parts of Elementary Mathematics by devoting a chapter to generalised arithmetic and freely using algebraical methods in the solution of problems and also by introducing a good amount of the 'arithmetical' part of geometry and mensuration. Graphs are used *only* where they are found to be convenient or necessary. There are a good number of problems taken from practical life, i.e. from 'various trades and professions.' As regards the teaching methods indicated in the book, we are glad to remark that their introduction to generalised arithmetic and the illustration used in the solution of equations are excellent; but we are not able to say the same of their methods of

dealing with multiplication and division by fractions and decimals. Though the book is claimed to contain elementary notions of Algebra, we were not able to see anywhere a treatment of the multiplication or division by negative quantities.

The illustrations and the general 'get-up' are very attractive and there is a large collection of examination papers set by various examining bodies in England.

AIDS TO LAW SERIES: THE LAW OF OBLIGATIONS IN BRITISH INDIA. VOL. I.—STATUTE LAW. PART I. THE CONTRACT ACT, THE SPECIFIC RELIEF ACT, AND THE NEGOTIABLE INSTRUMENTS ACT: BY S. VENKATACHARIAR, B.A., M.L., ADVOCATE, HIGH COURT, MADRAS. PUBLISHERS: P. R. RAMA AIYER & CO., ESPLANADE, MADRAS. Price Rs. 3.

The book before us is evidently the first instalment of a series of notes to be published on the Law of Obligations in British India. From the division appearing on the title page of the book, one would take the author's plan to be to bring out some volumes on the Common Law of Obligations also in British India. But, in his preface, he tells us that he proposes to deal only with the chief enactments bearing on the Law of Obligations in British India, so that his object is to confine himself to the Statutory Law of Obligations in British India. When this is so, he would have done well if he had omitted the division, "Vol. I, Statute Law" from the title-page, as it is apt to mislead the reader.

Regarding the merits of the book, we are of opinion that it will be very useful to students of law, for whom it seems to have been primarily written. We see that the learned author has made several useful extracts from the suggestive notes contained in Dr. Stokes' Anglo-Indian Codes. He has also pointed out the differences between the English and the Indian law, wherever such differences require to be pointed out. The cases cited by him are very select and are of the latest decisions of the High Courts. The book would probably have been rendered more useful to the class of readers to be benefited by it, if the learned author had been less terse in his foot-notes. As it is, however, we are sure it will not fail to be an invaluable aid to all concerned in the study of our law. The get-up of the book is neat and attractive.

PUBLICATIONS RECEIVED.

- A School Arithmetic, by A. Clement Jones, M.A., and P. H. Wykes, M.A. London: Arnold. 4s. 6d.
- Dramatic Scenes in Easy French, by Mrs. A. G. Latham. London: Macmillan. 1s.
- Eckmann—Chatrian Le Blocus, by R. F. James, B.A. London: Clive. 1s. 6d.
- Shakespeare's *Tampest*, by A. R. Weekes, M.A., and F. Allap, B.A. London: Clive. 1s. 4d.
- A Social History of India, by George Gnest, B.A. London: Bell. 1s. 6d.
- Preliminary French Course, by H. F. Chaytor M.A., and H. E. Truelove, B.A. London: Clive. 2s. 6d.
- Problem Papers in Arithmetic for Preparatory Schools, by T. C. Smith, M.A. London: Bell. 1s. 6d.
- A First Course in Projective Geometry, by E. H. Smart, M.A. London: Macmillan. 7s. 6d.
- Deutsches Heft: A German Note Book, by W. E. Weber. Cambridge: University Press. 1s. 6d.
- Pitman's Commercial Series: Readings in Commercial French, 1s. net.; Readings in Commercial Spanish, 1s. net.; Readings in Commercial German, 1s. net.; Shorthand Instructor (Centenary Edition), 3s. 6d.; Book-keeping for Beginners, 1s.; How to write a Good Hand, 1s. London: Pitman.
- High Roads of Literature, Introductory, 10d. Fourth Book, 1s. 6d. London: Nelson.
- Pope's Essay on Man, edited by A. H. Thompson, M.A., F.S.A. Cambridge: University Press. 2s.
- The Children's Anthology of Verse, Part I, Junior, 4d. Intermediate Part II, 4d., Senior, Part III, 4d. London: Macmillan.
- Shakespeare's *Much Ado About Nothing*; edited by S. E. Goggin, M.A., and F. Allen, B.A. London: Clive. 1s. 4d.
- The Gospel of St. Luke, edited by J. F. Richards, M.A., and T. Walker, M.A. London: Clive. 1s.
- Exercises and Problems in English History, by W. J. R. Gibbs, B.A. Cambridge: University Press. 2s. 6d.
- Burke's Thoughts on the Cause of the Present Discontent, edited by W. Murison, M.A. London: Clive. 2s. 6d.
- Preliminary English Course, by A.M. Walmsley, M.A. London: Clive. 1s. 6d.

- Preliminary Geography, by E. G. Hodgkison, B.A., F.R.G.S. London: Clive. 1s. 6d.
- Victor et Victorine, by Madame J.G. Frazer. London: Macmillan. 1s.
- A First Book of Practical Mathematics, by T. S. Usher Wood, B.Sc., and C. J. A. Trimble, B.A. London: Macmillan. 1s. 6d.
- The School Algebra (Matriculation Edition), by A.G. Cracknell, M.A., BSc., F.C.P. London: Clive. 4s. 6d.
- British Administration in India, by C. Anderson, M. A. Bombay: Macmillan. Re. 1-12-0.
- The Continent of Europe, by Lionel W. Lyde, M.A., F.R.G.S. London: Macmillan. 7s. 6d. net.
- A Geography of the British Empire, by W. L. Bunting, M.A., and H. Collen, M.A. Cambridge: University Press. 3s. 6d.

Indian Educational Notes.

MADRAS.

The American College Malayala Samaj.—The 56th birthday of His Highness the Maharajah of Travancore and the first anniversary of the American College Malayala Samaj, Madras, were celebrated together on the 6th instant in the Assembly Hall of the College. Mr. K. P. Gopala Menon, Bar-at-Law, presided. Many respectable gentlemen were present on the occasion.

The proceedings of the evening commenced with a 'Social.' The Malayala students of the College entertained those present with humorous speeches, magic, farce and dumb-show. After the annual report of the working of the Samaj during the past year was read, Mr. K. Kumara Pillai, a member of the Samaj, read an essay on "Loyalty" giving therewith an account of the precious deeds and virtues of His Gracious Highness. Then another member Mr. K. R. Damodaran Pillai read an essay on the "Present State of Malayalam Literature."

Verses were composed for the occasion by the Malayalam Pandit of the College. The function was brought to a close with the singing of 'Vancheesa Mangalam,' the National Anthem of Travancore.

A telegram was sent to His Highness the Maharajah of Travancore. The message was:—"The student subjects of His Gracious Highness, reading in the American College, Madras, in meeting assembled, pray long-life and a happy reign. May God bless the Crown Prince."

The Sri Marthanda Exhibition of Pudukkottai has been in existence from the year 1911, and is an expansion of the Sri Saraswati Exhibition of

Pudukkottai which was held for several years before 1911 in this Native State. The present Exhibition has been organised for the encouragement of arts, industries, agriculture and education both within and outside the State. Exhibits have been invited from far and near, from private individuals and public bodies interested in the advancement of Indian Economic and Educational conditions. The scope of the Exhibition which is detailed in section 7 of the prospectus is various and full. New methods and processes are attempted to be propagated by the delivery of lectures by the holding of demonstrations, and by the distribution of pamphlets free of cost. For the encouragement of the exhibitors a decent provision amounting to over Rs. 1,400 has been made for medals and money prizes. The required funds for the management of the Exhibition are met from State grants and the Pudukkottai Durbar in organizing it as a State concern have evinced a desire to amply encourage arts, education, industries, and agriculture. It is hoped that the Exhibition would prove useful and successful. Intending exhibitors and such as are willing to take part in any other manner in the Exhibition may communicate with the Secretary of the Exhibition for further information.

Tanjore District Teachers' Association.—The following are the proceedings of the seventh meeting of the Tanjore District Secondary Teachers' Association held in the Town High School, Kumbakonam, at 5 P.M., on Saturday the 30th August 1913.

M. R. Ry. Rao Bahadur S. Appu Sastriar Avergal, B.A., presided. The meeting was well attended, nearly a hundred teachers from Shiyali, Mayavaram, Tirukattupalle, Papanasam, etc., being present.

Mr. V. Mahadeva Aiyar, B.A., L.T., read a paper on the S. S. L. C. Marking System, which was much discussed, criticised, and commented upon by Messrs. S. Srinivasa Aiyar and Rajam Aiyangar of Tanjore, Messrs. K. Seshu Aiyar, M. Venkatarama Aiyar, N. P. Krishnasami Aiyar of Mayavaram, and Mr. S. Narayanasami Aiyar of Kumbakonam. Discussion chiefly turned on (i) the marking of answers to oral questions, (ii) the apportionment of marks between the occasional examinations of the year on the one hand, and the annual examination on the other. In regard to oral questioning, there was common agreement respecting its great educational value. Though it was at the same time conceded that for marking purposes oral answers were far too elusive, and the marks awarded cannot be very reliable and accurate, and for that reason the percentage of marks allowed to oral questioning might be reduced so low as not to affect the total number of marks. In regard to (ii) it was maintained by some that the occasional examinations were of great value in so far as they engendered and fostered regular habits of study.

The Chairman closed the discussion of the meeting by an interesting speech setting forth the excellence of the present system, the influence of which is only being partially and is not wholly felt,

The school marks discover a far truer estimate of the boys than the public examination, as the examiners in the latter case are very apt to be indifferent. It was a matter for deep regret that the school marks should be ignored, if not disregarded, by the Principals of Colleges in determining the admission of boys, and it behoves an assembly of this size to record its regret and make a representation to the Government in this matter.

Mr. N. Venkatachariar, B.A., L.T., of the Tirukattupalle High School next read a paper on the "School Time-table." It was too late, and the discussion on it was consequently postponed to the next meeting which, it was announced, will be held at Tirukattupalle.

Besides the light refreshments served them before the meeting commenced, the teachers were provided with a sumptuous dinner that night in the native High School premises.

Sri Rajah's High School, Tuni.—The Sri Rajah's High School, Tuni, was inspected by C. Ranstord, Esq., M.A., Inspector of Schools, 1st Circle, in the last week of September. He expressed his satisfaction at the increase in the strength and the efficiency of the Institution. The members of the Debating Society attached to the school, celebrated the 2nd Anniversary of the Association on Friday, the 26th ultimo, with the Inspector of Schools in the chair. The meeting was well attended by all the elite of the town. The Secretary read the Annual report which showed that some useful work was done during the year. Some humorous recitations and dialogues having been gone through, Mr. M. Virabhadra Rau, B.A., an assistant teacher of the school, addressed the students on the advantages of the Debating Societies and gave them some valuable advice. Some scenes from Shakespeare's "Comedy of Errors" were then enacted. The President in his concluding remarks thanked the members for giving him the pleasure of presiding over the meeting and praised the Bani for her benevolent deeds, especially the maintenance of the High School, the Vedic School and the Choultry for the poor. The meeting terminated with the usual vote of thanks. As a part of the programme, the members of the Society put on boards the whole play of "Comedy of Errors" on the night of the 1st instant, before an enlightened audience, consisting, in particular, of some European ladies and gentlemen. The performance was thoroughly appreciated by all present and was pronounced to be a splendid success.

Government Grants.

The Government sanction the proposed expenditure of Rs. 1,500 for the purchase of the books required for the Presidency College from the special Imperial grant of 23 lakhs for education provided in the Civil Budget Estimate for 1913-14.

The Government approve the proposals of the Director of Public Instruction for the distribution of a subsidy of Rs. 11,96,500 to the various District Boards and Municipal Councils for the construction of elementary school buildings. They also sanction the payment of a sum of Rs. 3,500 to the Mayavaram Municipality for the formation of a common garden and museum for the elementary schools in the municipality.

The Accountant-General is requested to place the amounts specified at the disposal of the local bodies concerned. Eight lakhs out of the sum of 12 lakhs now sanctioned will be met from the Special Imperial Grant of 23 lakhs for education provided in the Civil Budget Estimate for 1913-14 and the balance of 4 lakhs from the provision of Rs. 4,16,567 made under 45-A. Civil Works—in charge of civil officers—Grants for educational buildings, in the same budget.

The attention of all local bodies concerned is drawn to paragraph 3 of G. O. No. 165, dated 20th February 1913, and G. O. No. 344, dated 21st April, 1913.

The Government sanction a grant not exceeding one-half of the actual expenditure nor Rs. 3,900 towards the cost of construction of laboratory and lecture rooms in connection with the London Mission High School, Salem.

The Government approve the proposal of the District Board of Tanjore to extend its High School buildings at Tiruvalur so as to provide for the increase in the number of pupils seeking admission thereto. The plan and estimate amounting to Rs. 16,500 submitted by the President with his letter No. 27-D.B., dated 7th April 1910, are, however, inadequate for the purpose. Three fresh plans have since been prepared by the Chief Engineer, C. A. Nos. 240/11, 241/11 and 242/11, and a building according to the design is estimated approximately to cost Rs. 31,000. This amount will be met from the non-recurring portion of the Imperial Grant of 23 lakhs provided in the Civil Budget Estimate for 1913-14.

On completion the building will remain the property of Government, but will be lent to the local Board for use in connection with the High School.

Orders regarding the preparation of detailed plans and estimates and the execution of the work will issue in the Public Works Department.

The Government approve the modifications proposed by the Executive Engineer, Tinnevely division, in the plans and estimates for the out-houses attached to the St John's Girls' High School, Nazareth.

The amount of the grant, sanctioned in G. O. No. 6, Educational, dated 6th January 1910, as modified by G. O. No. 835, Educational, dated 15th December 1911, will, as a special case, be raised from Rs. 4,483 to Rs. 7,073.

The Government are pleased to sanction a grant not exceeding one-half of the actual expenditure nor Rs. 5,920 towards the cost of construction of a hostel in connection with the Hindu High School, Masulipatam, subject to the following conditions:—

(1) that in carrying out the work the suggestions of the Chief Engineer are adopted; and

(2) that all the conditions prescribed in the Grant-in-Aid Code have been duly complied with.

On the above conditions being fulfilled the grant will be paid as funds become available.

The Government sanction an expenditure not exceeding Rs. 11,836 in the aggregate in the current year for subsidizing games in the Government Colleges and Secondary Schools and approve the Director's proposal to meet the expenditure from the special additional grant of Rs. 23,00,000 sanctioned by the Government of India.

Except the buildings at the Teachers' College, the works may be executed departmentally. The former will be undertaken by the Public Works Department, in which department orders will issue regarding the preparation of plans and estimates.

Orders regarding the provision of funds will issue in the Financial Department.

The expenditure referred to in paragraph 3 of the Director's letter will be met from the Public Works Department budget.

The Government have sanctioned a grant of Rs. 6,300 towards the construction of a dormitory and refectory rooms to be attached to the Roman Catholic Boarding and Training School, Trichinopoly.

The Government sanction the continuance of the fixed grant of Rs. 5,000 *per annum* to the Anjuman-i-Mufid-i-Abla-i-Islam for the current year on the same conditions as those approved in G.O. No. 77, Educational, dated 12th February 1903.

The Government approve the proposals of the Director of Public Instruction to institute additional scholarships for students in Secondary Schools and Colleges, general, and the proposed allotment in the current year of a sum of Rs. 3,564 for this purpose from the Imperial grant of 23 lakhs provided in the current year's budget.

A Prize-distribution in Tanjore.—The annual distribution of prizes to the girls of the Mahrattae Girls' School was held in the new hall of Koteesvaran Chatram, West Main Street, Tanjore. Mr. V. P. Madhava Row, C.I.E., presided on the occasion. The proceedings began with recital of prayers and religious songs in Mahrattae kings by the girls after which Mr. Sambamurti Row, the Secretary of the Institution, read the report of the year 1912. The President who distributed the prizes, gave the

girls some advice. It was a matter of pride that sometime ago one of the pupils, Miss Kamala Bai showed great skill in playing upon the vina before His Highness the Maharajah of Mysore who in appreciation of her performance, made her valuable presents. In conclusion, the President exhorted the pupils to keep themselves abreast the times and pursue a high ideal so that they may be an example for others to follow. Distribution of sweets, *pan supari* and flowers to the girls brought the proceedings to a close.

Coles' Memorial High School.—The American Baptist Mission High School named after Dr. Coles of America on account of his magnificent benefactions to the school, is doing good work.

The prize-distribution ceremony of the school took place in the presence of a distinguished audience. Many of the leading gentry of the town were present on the occasion. Before the prizes were distributed, certain recitations were gone through by some of the students, and they were excellent. Among the prize-winners, special mention may be made of V. A. Venkataraman, the talented son of Mr. V. K. Anantakrishna Aiyar, B.A., for some years the Huzur Sherishtadar of the local Collectorate, and now a Deputy Collector in the Northern Circars. The boy won the 1st prize for general proficiency and also the 1st prize in Bible among the students of the VI form of last year.

The Rev. W. L. Ferguson, M.A., D.D., who presided at the prize-distribution function, delivered an eloquent speech congratulating the prize-winners and giving some wholesome advice to them.

The Government have directed the vernacular translations of selections from speeches of Their Imperial Majesties to be printed and distributed among educational institutions and village officers in the Presidency.

The Victoria College Hostel.—This hostel has been opened. There are about 80 boarders at present. The hostel consists of two sections, Brahmin and non-Brahmin; but only Brahmin cooks are employed in both the sections. The students have great satisfaction at the arrangements in the hostel. Early in the morning before 7 o'clock a sumptuous meal is ready. About 2 o'clock is the time for lunch which is to consist of some nicely prepared solid tiffin and a cup of tea. Then again about 7 in the night comes the supper.

There are 50 rooms in all for the students. Only two students are allowed to occupy each room. Every student is furnished with a chair and a table with drawers.

The Hostel establishment consists of a warden, a deputy warden, a manager, cooks, etc. The Principal of the College is always to be the Warden. Mr. P. N. Unnikrishna Menon, the 1st Assistant and the History teacher of the High School Department is appointed as the Deputy Warden, who is given an allowance of Rs. 25 per mensem.

Two Prize-distributions.—The first Prize-distribution of the Kulitalai Board High School came off in the school premises and the Rev. A. F. Gardiner, M.A., Principal of the S. P. G. College, Trichinopoly, presided on the occasion.

The proceedings opened with the reading of the Annual Report read by the Headmaster which referred to the progress of the institution and the assistance rendered by Mr. R. Narayana Iyer, I.C.S., Sub-Collector of Trichinopoly who saved the school from an impending serious situation by collecting Rs. 15,000 for its building.

The President then distributed prizes to the successful students of the school and afterwards made a speech discussing some aspects of the educational problems and the Report presented by the Headmaster.

The ceremony of distributing prizes to the students of the Zamorin's College came off with Mr. S. G. Roberts, I.C.S., District and Sessions Judge, North Malabar, in the chair. The College building and its premises had been tastefully decorated for the occasion with flags, bunting, and evergreens, and there was a large and distinguished gathering, which included almost all the European ladies and gentlemen of the station. The proceedings commenced with the reading of the report by Mr. F. Norton Fagge, B.A., the Principal, who stated that the College was making rapid strides towards the path of progress in every respect and that the various activities of the authorities of the institution left nothing to be desired in the matter of providing boarding and other facilities to the students. A huge hostel at a cost of Rs. 16,000 was being constructed with all expeditiousness. He was taking a personal interest in the physical development of the students by stimulating them to take an active part in athletic sports, and had managed, through the co-operation of his students, to get down two silver cups to be presented to the winning teams in the Badminton and Football games of the various houses into which the whole institution had been divided for the purpose of competition. He had a desire to increase the number of cups, when funds permitted, so that each cup might be kept apart for each game. He also referred to the Meteorological Society formed by him very recently, in addition to the existing Scientific, Historical and Debating Societies. The strength of the institution continued to be on the increase, and the results obtained in the last public examinations were very satisfactory when compared with those of other institutions in the district.

CALCUTTA.

Calcutta Chemical Club.—The annual meeting of the Calcutta Chemical Club was held at the Chemical Lecture Theatre, Presidency College, Dr. Aghor Nath Chatterji presiding. Dr. P. C. Roy delivered an address on 'The Progress of Chemistry

in Bengal in 1912-13—the proposed University College of Science.' He said that the year under review had been an eventful one for more reasons than one. There had been a growing and steady increase in the number of advanced students who were anxious to take part in original investigations. Since last year, some 60 papers had been communicated to the Chemical Societies of London and New York, the Asiatic Society of Bengal, the *Zeitschrift für Anorganische Chemie*, *Zeitschrift für Electrochemie* and *Zeitschrift für Physikalische Chemie*. It was a matter for sincere congratulation that the contributions of several pupils in the Chemical Laboratory of the Presidency College were meeting with welcome and hospitable reception in the columns of the above journals. Those who, after taking the highest degree of the University in Science, had spent two or three years in original investigation at the Laboratory of the Presidency College, had never had any serious cause of complaint even from the wordly point of view. The Bengal Chemical and Pharmaceutical Works had already absorbed as many as five chemists—all of them graduates in science and alumni of the Presidency College. In due time many more chemical industries would spring up and find employment for scores of chemists. The speaker in conclusion referred to the researches carried out by students for the M. Sc. degree.

Koosteea High School.—The distribution of prizes of the Koosteea High School took place in the premises of the school. The popular District Magistrate S. C. Mukerjee, Esq., presided. After songs and recitations the annual report was read out and the prizes including some special prizes awarded by the Secretary and other local gentlemen, were given away by the President. The Additional Inspector of Schools, the Assistant Police Superintendent, almost all the local gentlemen and Rai Kunjalal Sanial Bahadur of Kumerkhali were present. The President in addressing the meeting noticed from the report that the school was gradually improving and the result of the last Matriculation examination was very good. The Mahomedan hostel building attached to the school and the new Hindu Hostel building for which the Government grant of Rs. 16,000 has been obtained and which is nearing its completion show how the Secretary, the President and the local public take interest for the school.

We are glad to learn that it is proposed to hold a Science Congress in the rooms of the Asiatic Society of Bengal during the week ending January 17th, 1914. The following draft rules have been suggested:—That the Congress should as far as possible be purely scientific. That if sufficient support be accorded, the Congress be divided into sections dealing with various branches of science. That there be a subscription of Rs. 5.

It is announced that Dr. J. G. Jennings, the Principal of the local Muir College, is to succeed Mr. Hallward as Director of Public Instruction in Behar and Orissa.

Post-graduate teaching.—The elaborate and exhaustive statement on Post-graduate teaching, with which the Vice-Chancellor prefaced the proceedings of the recent Senate meeting has been very opportune no doubt in view of the strenuous times the Calcutta University is just now passing through. Not only have thunderbolts after thunderbolts been forged and hurled on its devoted head by the superior gods from their Olympic heights, but the smaller fry also have chosen this exact moment for throwing mud at it,—beautifully illustrating the Bengalee adage that while the elephant is stuck in a quagmire, even the bats kick at him. The statement by Sir Ashutosh discloses that the Calcutta University is carrying out its Statute-imposed duty of expanding itself from a merely examining into a teaching body in no niggardly or recalcitrant spirit. This ought to satisfy all reasonable men interested in its welfare. But as to whether it will satisfy the bats referred to above, that is quite another thing. After all, the Vice-Chancellor's statement, in spite of all that can be said in its favour, labours under one supreme disqualification. For, does it not show that the various Professorships, Assistant Professorships, Readerships and Lectureships are bestowed on the consideration of merit alone, regardless of caste, creed or colour? Does it not also show that there is a preponderance of the Indian element in the list catalogued by the Vice-Chancellor,—than which nothing more impertinent can be conceived on the part of an Indian University?—*Amrita Bazar Patrika*.

BOMBAY.

New Architectural Scholarships.—The Government of India have had under their consideration the recommendation of the Conference of Orientalists held at Simla in July, 1911, that opportunity should be afforded to Indian students to accompany Conservators in order to learn the principles and practice of architecture. They have decided, in communication with those Local Governments who have Consulting Architects, to award three scholarships of the value of Rs. 100 a month to Indians, in order to facilitate this training. As there are greater facilities for architectural education and for a combination of a thorough course of theoretical instruction with practical training in Bombay than elsewhere in India, they have decided that these scholars should be trained in the Office of the Consulting Architect to the Government of Bombay.

Dr. D. D. Gune, Ph. D., a former student of the Poona Fergusson College, who has, after three years' stay at Leipzig, just come back, says in the Fergusson College Magazine that Germany affords

exceptional facilities to Indian students. Dr. Gune briefly sums up the advantages thus:—

(1) You get as good a scientific education here as—if not better than—in any other advanced European country. (2) Education is comparatively cheaper here than in other countries. (3) You have better chances of acquiring practical knowledge in Germany, than in any other country. There are at least no prejudices and misunderstandings: because there have been very few Indian students here, and those few have, in my opinion, created a good impression on German educationists and scientists. (4) There are not racial or any other reasons that would prevent Indians being employed for practice in factories. (5) Living is cheaper here than in England and also, I believe, France.

ALLAHABAD.

Primary Education Committee.—The report of the Primary Education Committee has been published together with the reports of the Female Education Sub-Committee and the Committee on Educational Hygiene and a number of other papers, all of which cover 137 pages of the last number of the Government Gazette. The report of Mr. Piggott's Committee covers 35 pages, and to it are attached a 'historical note' by the Hon. Dr. Sundar Lal, a note by Mr. Streatfeild on the organization of primary schools, one by Mr. Fremantle on rural education, a note by the Hon. Babu Ganga Prasad Varma on the language question and a minute of dissent by the Hon. Manshi Asghar Ali Khan and the Raja of Purnour. The report of the Female Education Sub-Committee covers nine pages and is signed Mr. Piggott, Miss Stuart, Mr. S. P. Sanyal and Miss V. Yadav. Separate notes are appended by Mr. Piggott, Mr. Motilal Nehru and Babu Jyoti Swarup. Four pages are covered by the report of the Sub-Committee for School-Buildings of which Mr. Fremantle was the Chairman. The Committee on Educational Hygiene was composed of Lieut.-Col. Young, I. M. S., Major Graham, Captain Dunn, Mr. H. Banister, and Rai Gokul Prasad. They make a large number of recommendations, the most important being the periodical inspection of the sanitary condition of all schools and the periodical medical inspection of scholars by qualified doctors.

MYSORE.

Scholarships.—The Government of Mysore have decided to offer a scholarship for training a graduate in actuarial and allied work. The selected candidate will be required to pass the examinations prescribed by the Institute of Actuaries, London, for enrolment as a "Fellow" of the Institute and also to undergo, if required, a course of practical

training in actuarial and allied work. The total period of study and training will be about 4 years and a part of this period will have to be spent in England. For the period of training in India the scholarship will be Rs. 100 per mensem, and for the period in England £200 per annum, and second class Railway fares and ocean passage will be given. If the scholar acquits himself creditably, he will be taken into the service of the Mysore Government.

Maharani Girls' School.—The Improvement Trust Board has granted a good site free of cost for the building of the Maharani Girls' School. This augurs well for the future and should encourage the active Secretary Mrs. Rangamma while it should, at the same time, make her fully realise her great responsibilities in the matter. I hope other members of the Mission will rise equal to the occasion in making this a success.

Marimallappa's High School.—The Marimallappa's High School is one of the largest schools in the Province. The strength of the school comes to over 600. The establishment charges including contingencies, etc., amounted last year to Rs. 13,172. There are 60 Lingayat students in the school. The Lingayat students studying in different colleges and schools in and outside the Province are given scholarships. The accommodation of the school having been insufficient, a second and a third storey were erected at a cost of over Rs. 10,000. The building is considered to be one of the best buildings in the city. The veteran Headmaster Mr. Venkatakrishnayya is taking a very great interest in promoting the cause of education in the school.

COCHIN.

A Prize-distribution.—The silver jubilee of the Santa Cruz High School, an institution started in 1888 by the Padroado Mission in Cochin, was celebrated recently in a manner befitting the occasion. The first item of the celebration was the distribution of prizes to the pupils under the distinguished presidency of His Lordship the Right Rev. the Bishop of Cochin. The school building and the premises were profusely decorated, some 400 invitations were issued and before the appointed hour the Hall was packed with people. The Bishop accompanied by the Rev. Father Vincent Mendez De Souza, his Secretary, arrived punctually at 8 and he was received by the Manager, Very Rev. Father P. Antunes, S. J., and the Headmaster, Rev. Father William Arkwright, S. J., and conducted to a special seat in the Hall. The proceedings of the evening began with a song "What I live for" by the choir of St. Cecilia which was rendered in excellent style and was much appreciated. Rev. Father Arkwright, the Headmaster, read the report of the Manager.

The Report gave a short history of the school, referred to the three past Managers and six Head-

masters in appreciative terms and said that from 200 pupils in the first year the number had risen to 700 in the present year. After dwelling on the progress achieved in the various subjects taught in the school, the report that it was proposed not to neglect the teaching of Malayalam and to drop the teaching of Latin. The school was not a European School and Malayalam would be made an obligatory study. A good account of the school cadets was given and thanks were expressed for Government grants.

After the reading of the report and another song, the Bishop gave away the prizes to the winners whose names were announced by the Headmaster. Mr. Glyn Barlow, M.A., Principal of the Ernakulam College, who presided at the Prize-distribution in 1912, delivered an extempore speech in which he complimented the school authorities on the success of the institution and the nights' entertainment and the successful jubilee celebration.

TRAVANCORE.

The College Day.—The past and present students of H. H. The Maharaja's College celebrated their College Day on the 7th instant, at the public meeting held under the presidency of Mr. A. R. Raja Raja Varma, M.A., Professor of Sanskrit and Superintendent of Dravidian languages. Among others present were the Dewan and the Chief Justice. Several speeches were made. The following extract is made from the speech of:—Mr. M. Raja Raja Varma, M.A., Under Secretary to Government—

I highly appreciate the honour which the College Day Committee has conferred on me to day and thank them sincerely for the same. I was present at the first preliminary meeting which Dr. Mitchell called together to consider the question of instituting this annual function with the express object of affording an opportunity to the past and present students to know each other.

When I stand in this time-honoured hall, my memory runs back for over quarter of a century, when the late Reverend Dr. Harvey controlled not only this College and the High School attached thereto, but all the English Schools in the State, with that strict discipline and paternal affection which were all his own. Older boys than myself would also remember that tall, gigantic Scotchman, Mr. John Ross, whom, as a boy, in the Special School at Mavellkara, I had learned to look upon with a feeling of terror. A shake of their flowing beard had more significance to us than a hundred Codes and a thousand Standing Orders. Though in body, these veterans have left us, their spirit yet lives in us and guides us each in our walk of life. It is indeed a consolation to think that some at least of our old preceptors are living, each of whom, in spite of the change of times and environments, had laboured hard for our dear College. With his ever-smiling face and pleasant conversations, Mr. H. N. Read, unconsciously took us out from the groove

Literary Notes.

Forthcoming Books of the University Tutorial Press:—

A new and enlarged edition of the *Anthology of English Verse* will be published during the autumn. This book was originally issued with a view to meeting the requirements of the Board of Education's Examinations for the Teachers' Certificate and of Training Colleges. It was found, however, to serve as an admirable supplement to text-books in literature and has, as a result, been very widely adopted. In the new edition the size of the book will be increased by over 100 pages, and the Glossary will be extended to cover the new matter. The price of the new edition will be 2s. 6d.

The University Tutorial Press hopes to begin a series of new and modern works on Economics and kindred subjects by the publication in the spring of next year of an *Economic History of Great Britain*. This book will be a full and concise treatment of the whole subject, and will lay special stress on the developments of the nineteenth century. An addition to the educational text-books published by the Press will be *A History of Elementary Education in England and Wales*.

A book on *Chemical Calculations* is now in preparation. The object of this volume is to give a simple account of the typical calculations required in inorganic chemistry up to the standard of intermediate and final degree examinations, with numerous exercises for practice. The course includes the atomic theory, chemical equivalents, molecular and atomic weights, quantitative analysis, and the elements of physical chemistry.

Messrs. Macmillan & Co. announce the following forthcoming books:—

The Works of Tennyson. Author's annotated Edition. Edited with Memoir by Hallam, Lord Tennyson. With Portrait Extra crown 8vo. 10s. 6d. net; The History of England from the Accession of James the Second, by Lord Macaulay. Edited by Prof. Charles Harding Firth, M.A. With 900 Illustrations, including 44 in colour, and Photogravure Portrait. Uniform with the Illustrated Edition of Green's "Short History of the English People." In 6 vols. Super royal 8vo. 10s. 6d. net each. A Dictionary of Classical Names for English Readers, by W. T. Jeffcott, B.A. Crown 8vo. 1s. 6d. A Treatise on Chemistry, by the Right Hon. Sir H. E. Roscoe, F.R.S., and C. Schorlemmer, F.R.S. Vol. II. The Metals. New edition completely revised by the Right Hon. Sir H. E. Roscoe, F.R.S., and others. 8vo. 30s. net.

Messrs. Longmans, Green & Co.'s announcement: The Making of the Australian Commonwealth (1889-1900). A Stage in the Growth of the Empire, by B. R. Wise; Problems of Empire. Papers and Addresses, by Viscount Hythe, D.C.L. Hon. Fellow of Balliol. New Edition. The Rise of South Africa: A History of the Origin of South African Colonisation and of its Development towards the East from the Earliest Times to 1857, by G. E. Cory, M.A.,

of the old method of teaching and led the way for the introduction of the modern practical system. His advent really marks the commencement of the modernisation of our College. To him we owe the development of our out-door games. He talked and played with his students, cracked jokes with them, was ever a happy companion to them. He taught not by formal lectures delivered the hour nor by the dictation of elaborate notes, but by pleasant talks in and out of the class. In a period when the mania for cram and written examinations was running high, Mr. Read boldly, with that liberal spirit characteristic of an English University man, introduced a change of method quite against the taste of the then educationists, but which it is the endeavour of every one now to follow. Another Scotchman Dr. A. C. Mitchell, worked up a complete revolution in our educational system. His influence was not confined to this College or this State. It was felt all over the Presidency. His clear intellect, thorough mastery of details and prodigious energy, made him one of the greatest of educationists.

INDIA (GENERAL).

Indian students proceeding to Europe.—It has come to the notice of the Government of India that some misapprehension exists with regard to the intention of the orders governing the grant of certificates of identity to Indian students and others, contained in the resolutions of the Home Department No. 2831-2842, dated the 8th December 1899, Nos. 481-492, dated the 15th November 1901, and Nos. 609-620, dated the 8th June 1910.

2. The orders contained in those resolutions were intended to apply only to Indians of some status proceeding to Europe, the United States of America, or Japan for the purposes of study, for pleasure or on business, and not to persons desirous of emigrating to those or other countries in search of manual employment even though sufficiently well to do to be able to pay their own fares. The latter class of persons, instead of receiving the encouragement or assistance which may be implied by the issue to them of certificates of identity, should be warned of the attendant risks and strongly advised not to emigrate unless they have received definite and reliable information that remunerative work will be found for them in the country to which they are destined.

3. Local Governments and Administrations are requested to give wide publicity to the tenor of these orders.

King's College, Cambridge; Professor in Rhodes University College, Grahamstown, South Africa. In Four Volumes. Vol. II. With 38 Illustrations; The Life of William Pitt, Earl of Chatham, by Basil Williams. With Portraits and Maps. 2 Vols.; Essays on Men and Matters, by Wilfrid Ward.

Amongst Messrs Macmillan's List of New Books to be published in October 1913 are:—

The Life of Edward Bulwer. First Lord Lytton, by his Grandson; The Life of Florence Nightingale, by Sir Edward Cook; Songs from Books, by Rudyard Kipling; Just So Stories, by Rudyard Kipling; The Fairy Book. The best popular Fairy Stories, by Warwick Goble; Essays Political and Literary, by the Earl of Cromer, O.M., G.C.B.; The Works of Tennyson. Author's annotated Edition. Edited with Memoir by Hallam, Lord Tennyson; The Crescent Moon. Child Poems, by Rabindranath Tagore. Translated by the Author from the Original Bengali; The Gardener. Poems by Rabindranath Tagore. Translated by the Author from the Original Bengali; Sadhana: The Realisation of Life. A Series of Lectures by Rabindranath Tagore; Jane Austen, by F. W. Cornish, Vice-Provost of Eton College; A Changed Man, The Waiting Supper, and other Tales, concluding with the Romantic Adventures of a Milkmaid, by Thomas Hardy; Statistics, by the late Sir Robert Giffen, K.C.B., F.R.S. Edited, with an Introduction, by Henry Higgs, C.B. with the assistance of George Udny Yule, M.A.; British Budgets 1887-8 to 1912-13, by Bernard Mallet, C.B.; A Treatise on Chemistry, by the Right Hon. Sir H. E. Roscoe, F.R.S., and O. Schorlemmer, F.R.S. Vol. II. The Metals. New edition completely revised by the Right Hon. Sir H. E. Roscoe, F.R.S., and others; A Dictionary of Classical Names for English Readers, by W. T. Jeffcott, B.A.

Important new books of Messrs. Longmans, Green & Co:—

Intermediate Physics, by W. Watson, F.R.S., A.R.C.S., D.Sc., Assistant Professor of Physics at the Royal College of Science, London, 6s. net; Electricity and Magnetism, by Sydney G. Starling, B.Sc., A.R.C.S., Head of the Physical Department in the West Ham Municipal Technical Institute, 7s. 6d. net; Modern Inorganic Chemistry, by J. W. Mellor, D.Sc., Author of "Higher Mathematics for Students of Chemistry and Physics" and "Chemical Statics and Dynamics," 7s. 6d.; A History of Europe, by Arthur J. Grant, M.A., King's College, Cambridge, Professor of History at the University of Leeds; Author of "Outlines of European History." With Maps, Plans and Illustrations. Large crown 8vo. 7s. 6d. net; Practical Geometry and Graphics by David Allan Low, Professor of Engineering, East London Technical College 7s. 6d. net.

"Government of India."—Sir Courtenay Ilbert, K.C.S.I., has issued a second supplementary chapter to his well-known volume, "Government of India," under the name of "The Coronation Durbar and its Consequences." (Clarendon Press, Oxford, 2s. 6d. net). The chapter contains a succinct account of

the territorial and other changes introduced soon after the Durbar, and those who know Sir Courtenay's style of writing hardly require to be told that the account is thoroughly up-to-date and written in the crisp and pointed manner so characteristic of him. The booklet contains several useful appendices, and among them the correspondence preceding the Durbar, the announcements made at the Durbar, the Government of India Act, 1912, and the revised Regulations for the constitution of Legislative Councils. Those who have already on their shelves "The Government of India" will find this publication both necessary and useful.

Bohn's Popular Library is net G. Bell & Sons.

The first list of the new reissue is in itself a testimony to the wide range covered by the famous Libraries, comprising as it does some of the finest examples of our own classic literature—novels, belles-letters, satire, philosophy—masterpieces of the literature of history and travel, and translations from the great classics of Greece, Rome, Germany, France, and Spain—surely a fine nucleus for a discriminating reader's library, as low in price as it is excellent in form.

Messrs. Jack announce The New Encyclopædia. The work will be entirely original throughout, and owing to the way in which the matter is condensed and the illustrations treated the 1,600 pages will contain as much information as is usually got into six large volumes. All the entries are thoroughly up to the latest date, and science is a strong feature of the work. Struck by the inconvenience to the reader of having a dozen to twenty volumes to choose from, and the consequent confusion and irritation, the publishers have put the whole into one good-sized volume. This new departure in a full-sized Encyclopædia will be welcomed by many a worried reader. A large edition has been printed and the work will be issued at a popular price.

A work of great interest to sportsmen is announced by Messrs. Methuen. It is "The Book of the Ball" by Mr. A. E. Crawley, giving an account of what the ball does, and why, in connection with cricket, football, golf, baseball, tennis, etc.

A collection of reflective and comforting verses by L. E. Smith entitled "Odes and other Poems" will shortly be published by Messrs Methuen.

Messrs. John Long, Ltd., will shortly publish a volume of Verse entitled "Queen Elizabeth: an Epic Drama," by the Rev. William H. Winter, M.A., B.D., etc., Rector of St. Saviour's, Glen Osmond, South Australia. The work has already been dramatised and staged with success in Australia, where the authorities have signified their appreciation of it.

Messrs. Kegan Paul, Trench, Trübner and Co., Ltd., have in preparation a new edition of "Tod's Annals of Rajasthan." This famous Indian classic has been long out of print, and is dedicated by permission to His Highness Maharajah Rana of Jhalawar.

SCHOOL AND COLLEGE SPORTING NEWS.

Annual Sports in Kumbakonam.

The Inter-Collegiate Athletic Sports for this year came off at the spacious playground in the Government College premises here and all the various educational institutions in this district including the colleges of Kumbakonam and Mannargudy competed. Mr. J. A. Yates, Principal of the College was the President of the Executive Committee while a good number of the Professors and teachers of the competing schools helped him in the get-up of the sports. The programme was varied and interesting enough to keep up the high enthusiasm of the players and the spectators. The games over, Mr. R. B. Wood, I. C. S., our Collector, distributed the prizes to the winners amidst great cheering. The Wesleyan Mission College at Mannargudy and the St. Peter's High School at Tanjore practically obtained most of the prizes. Mr. Yates thanked Mr. Wood for presiding over the meeting and the others for helping him during the two days of the competition.

Ernakulam Inter-School Sports.

As the appended lists will show, the Sports were as keen as ever, for the D. M. S. Trichur, wanted some of the trophies permanently, and the College boys were "not having any." The *Rajah's Shield* was won and will find a local habitation and an honoured name in Trichur, but the *Pathappan Shield* went to the College after a battle royal which will be long remembered. The Chittur Junior walked off with the *Davies Tug-of-War Cup*.

Mr. Davies took the place of Mr. Barlow for the afternoon as Mr. Barlow was unavoidably absent. It fell to him to thank H. H. the Raja for graciously presiding and Mr. Davies took the opportunity of thanking Mr. Banerji, the Dewan, for the encouragement, he had given to physical education by the institution of these games. Six meetings had been held, each one from a sporting standpoint, better than its predecessor. The only note of sadness was when Mr. Davies spoke of the sports as Mr. Banerji's last, but he assured Mr. Banerji that, if for no other thing, for this at least he would always be remembered in Cochin State with reverence and gratitude.

Mr. Davey of Alleppy took command of the army of judges and made progress rapid. Mr. S. K.

Subramania Iyer of the College was again, as in previous years, a most efficient and successful Secretary of the Inter-School Sports Committee.

West Coast Badminton Tournament.

This Tournament open to all the teams of the Colleges, Schools and recognised private clubs of the West Coast (South Canara, Malabar, Cochin, Travancore and Coimbatore inclusive), will commence on the 15th December 1913. The entrance fee is Rs. 2 per team. All applications with entrance fees must be sent to E. N. Natesan, Secretary, West Coast Badminton Tournament, Government School of Commerce, Calicut, on or before the 15th November, 1913. The winning teams will be presented with Silver Medals awarded by the Hon'ble Rao Bahadur P. Somasundram Chettiar of Calicut.

West Coast Foot-Ball Tournament.

The Tournament for the "Rao Sahib S. Vaidyanatha Aiyar Cup" will commence on 15th December, 1913. This is open to all teams of the recognised Schools and Colleges on the West Coast (South Canara, Malabar, Cochin, Travancore and Coimbatore inclusive). The entrance fee is Rs. 4 per team. All applications together with the entrance fees must be sent to E. N. Natesan, Secretary, West Coast Foot-Ball Tournament, Government School of Commerce, Calicut, on or before the 15th November, 1913. The winning team will be presented with the Cup which will be a rotating one, and the players of that team each with a silver medal.

Mysore Interested Sports.

The following are some of the results of games played in connection with the Dasara Tournaments:—On the 10th morning the Maharaja's College, (B team) met Marimallappas' High School (A team), the game resulting in success for the former by 6 goals to nil. In the evening, the Crescent team played the Y. M. E. Union, the game resulting in a draw neither side having scored. On the 11th morning, the play was between the Maharaja's College and R. B. A. N. M's School, the game being drawn with 1 goal a side. On the same evening the drawn match between the Crescent's and the Y. M. E. Union was resumed, the former scoring by 2 goals to nil. The game on the 12th morning was between teams representing the Maharaja's College (A team) and the R. B. A. N. M's School, the latter winning the match by 2 goals to nil.

The Bangalore Inter-School Tournament.

It was believed that the Cottonian team had a really fair chance of beating St. Joseph's College in the Inter-School Tournament for the Cricket Trophy.

It was a particularly hot day as play opened on the Central College ground and the College went in to bat first. When their third wicket fell the prospects of the side were not bright, for Sexton,

Simon and Rule succumbed quite early and Simon was felt to be a distinct loss. Maybury, however, stayed in from third wicket to walk out with his bat for a finely compiled total of 78 and Watts who went in eighth man stayed with him till Ferdinands found his wicket for a substantial 50. He was then joined by McCosh who began to hit about quite merrily and with Maybury generally punished the bowling. The College knocked up the splendid score of 219, before lunch.

On resuming play at 2 p.m., the Cottonians began badly, only Ferdinands (16) and Johnson 12, making anything of a stand. In the result they could only make 73 runs and were put in again by their opponents and this time did much better by making 116 runs. Johnson (24) and Danhill (22) being the principal scores. The College thus won by an innings and 30 runs and have now to play the Baldwin High School. The Cottonian School had rather bad luck owing to Reuben being excluded from the team just overnight, owing to the age clause of the rules, and Dr. Doherty was far from well.

St. Joseph's College Sports.

Perfect weather favoured the annual sports of St. Joseph's College held on the College grounds in the presence of large crowds of spectators, both the College Square and the balconies of the buildings being filled with friends. Mr. A. R. Cox, I.C.S., Mr. R. A. Gray and Mr. W. H. Murphy, were among the judges and Mrs. Cox gave away the prizes. The champion of the day was found in M. da Silva, who was run pretty close by H. Tremehere. J. Sexton annexed the similar honor as among the Junior Competitors. The events

which were most loudly applauded during the afternoon were the figure-running, ring drill and the tug-of-war—and the prize-giving, of course. The Rev. Fr. St. Germain is to be heartily complimented on a most successful programme and upon its very enthusiastic reception.

Inter-School Sports at Salem.

The Salem Field Games Association at its meeting held in August last under the presidency Mr. J. T. Gillespie, I.C.S., resolved to run the Annual Sports on the 26th and 27th ultimo and on following days, the large compound of the London Mission High School presented scenes of the greatest enthusiasm. In response to invitations sent round by Messrs. W. H. H. Chatterton and Rao Sahib K. D. Subramania Iyer there was a distinguished gathering of ladies and gentlemen to witness the various events. There were in all 47 items and the organisers very wisely ruled that there be four classes of competitors as follows:—Class I open to all; Class II open to all under 17 years; Class III children under 13 years; and Class IV open to all under 10 years. No boy was permitted to take more than two prizes. In the unavoidable absence of Mr. J. T. Gillespie, I.C.S., Mr. E. Pakenham Walsh, I.C.S., his successor did duty as host. The invited guests were treated to tea and light refreshments, and the arrangements, made on the two days reflected credit on Rao Sahib K. D. Subramania Iyer who was mainly responsible for the same. The leading citizens from the town and the mofussil made a ready response and presented the Committee with gold medals and silver cups, and the Committee's thanks are in a large measure due to the various donors for such encouragement and help.

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The Educational Review.

Principal E. H. Griffiths presided over this section and his address deserves to be read carefully by all people who are interested in influencing the shaping of educational policy. Especially those that clamour for the introduction of compulsory Primary education in India will do well to read Principal Griffiths' report of his carefully made enquiries of the results of compulsory Primary education in England for the past forty years. He finds that a large majority of manual labourers are not rendered any more efficient in the discharge of their tasks by further instruction of an academic character [than the acquisition of the three R's]. He points out that "the assumption that all children are fitted to profit by more than the rudiments of academic education" is the cause of much mischief. "Democracy in its control of education counts noses rather than brains." Among others, Principal Griffiths gathered the views of teachers, who also admit that Primary education has been a failure, though they attribute it to other causes. "They plead in extenuation that the large size of the classes is in itself a barrier to real efficiency, and that the teacher is so fettered by regulations, so bothered by the fads of individual Inspectors."

Principal Griffiths then propounded his own method for the remedy of the defects of Primary education. "I consider that we are proceeding in the wrong order, in that we give greater prominence to the acquisition of knowledge than to the development of character. There is truth in Emerson's dictum that 'the best education is that which remains when everything learnt at school is forgotten.' We appeal to think that the learning of the

three R's is education. We must remember that in imparting these we are only supplying the child with the *means* of education, and that even when he has acquired them the mere addition of further knowledge is again not education. If we impart the desire for knowledge and train the necessary mental appetite, the knowledge which will come by the bucketful in after-life will be absorbed and utilized." Recently in India we have had also much talk of placing moral education in the forefront of school work, but the means proposed for attaining this was ridiculously inept. Teach one more book—a text-book of morality. It is a ridiculously childish belief that morality can be taught like the multiplication-table. Real moral education—at least that part of it that can be aimed at in schools, as Principal Griffiths has pointed out is the introduction into all schools "the spirit of our much-abused public schools," *i.e.*, "a sense of responsibility—and, as a necessary sequence, a sense of discipline—a standard of truthfulness and consideration." The Warwickshire County Council has introduced the prefect system into its Elementary Schools with admirable results. Sir Robert Baden-Powell's Boy Scout movement is at the root of this reform that places the training in right conduct over and above the imparting of right knowledge. But "so long as we attach greater importance to the results of examination than to the judgment of the teacher our system stands self-condemned, for it places knowledge above character."

Principal Griffiths then dealt with the important question of the freedom from official control of the greater educational institutions. "Evolutionary progress is only possible where variety exists,

The freedom of
the Schools and
the Universities.

and variety is necessarily abhorrent to the official mind. Freedom from local authorities to adopt their own methods, to experiment—often to fail—is the system, if system it might be called, by which alone advance is possible. The curse of uniformity, perhaps the greatest curse of all, is a necessary consequence of over-centralized control." Further on he said, "the freedom of the Universities is one of the highest assets of this country, and it is to the advantage of the community as a whole that each University should be left unfettered to develop its energies, promote research, and advance learning in the manner best suited to its environment." How different it is in India. This "highest asset" of English University, freedom to devise courses of studies and follow them is denied to the Indian Universities. An Under-Secretary in the Government Secretariat can by a stroke of his divinely-inspired pen upset the resolutions of a body of educational experts who have given the best portion of their lives to educational work; for no resolution of the Senate is worth the paper on which it is written, unless the Government sanctions it. And what is worse, any Fellow, even one who has never been inside a college since he took his degree and who knows absolutely nothing about the educational activities of civilized world, has merely to start a fad; and, even though but a handful of Fellows follow his lead, and the bulk of the Senate is against him, he straightway rushes to Government, and invokes the strong arm of Government to brush aside the result of the accumulated experience of all the eminent educationists of the land. He has only to make sufficient noise and some eminent Government official begins telling people, "It would be *politic* to meet this agitator half-way." Higher education

should be saved from the blighting influence of platform politics and the power the Government has over the University forcibly drives University affairs into the arms of the demagogue and the stump orator and the party politician.

After the presidential speech, numerous urgent educational questions were debated on. We have barely space for more than enumerating them.

Other questions considered at the British Association. The educational value of museums was discussed in conjunction with the Anthropological Section. The next question was the function of the Modern University. A committee report on the influence of school-books was next considered. This was followed by a paper by the ever-active Rev. J. Knowles in which he pointed that "in the various Indian scripts there are at least 20,000 symbols to represent 53 elementary sounds" and this monstrosity is kept up by Indian sentiment, which very often is destructive of sound common sense. The address of Dr. Kimmins on "a plea for research in education" deplored the utter lack of professional knowledge among most teachers, such as is possessed by the lawyer or the doctor. The next paper was on the teaching of spelling; with this we have no sympathy, for we hold that the absurd English spelling has best be given a decent burial as soon as possible; it is a wonder that England is the only European country that sticks to a ridiculous spelling. The other papers dealt with the use of suggestion in education, registration of schools and the value of handwork.

The independence of the University from the State and outside control, even though the authority that attempts to control it be the State that contributes to

the funds of the University was passionately pleaded for by Principal Griffiths; and the recent debate and resolution anent the same subject in the Madras Senate at its last meeting is eloquent testimony that out here in Madras, we want another Principal Griffiths to teach us our duty. This is not a case of the right of the man who pays the piper to order the tune, for the Government is as a Government eminently unfit to interfere in any University matter, for the reason we have already put forward. The Senate is a body of men who have to concern themselves with science, with learning, with the advancement of knowledge, but the prime function of Government is to balance the demands of various parties and to do what is expedient, what is politic. We do not want policy in the temple of learning. We do not want the University to be swayed by party considerations, by the clamant cries of sections of people. The Government cannot help being the target of passionate denunciation and equally passionate defence; its proper function is to work on the plane of emotion; but the University ought to be kept out of the sphere of passion and prejudice. We, therefore, protest, quite as passionately as Principal Griffiths at the British Association, against the State attempting to keep the University in leading strings, simply because it contributes recurring or non-recurring grants to University funds.

Rumour has it that the number of Inspectors of Schools will be increased by twelve. There are some amateur critics of educational policy that oppose any increase in the number of Inspectors. They say, "there are more Inspectors than schools." This we consider a

prejudiced criticism. In old times, attempts were constantly made to improve teaching by changing the style of examination. It was an article of belief with most educational reformers that a new style of examination will help to bring about a new style of teaching. This hope has been discovered to be ill-founded; a new style of examination means a new style of cram and not an intelligent reform of methods of teaching. The external examiner can never help to improve methods of teaching; nor can the average teacher be expected to move in the matter, for he is so ill-paid and so much sat upon that he has neither money nor initiative. The only person that can reform methods of teaching in schools is the Inspector; and this he can do only if he is informed and enthusiastic. While we welcome therefore the increase in the number of Inspectors, we hope that the right men will be chosen and the new Inspectors will prove a help and not a hindrance to the improvement of teaching methods. In the case of Indian Inspectors, in most cases in the past, either they have risen by stress of long-service from the Sub-Assistant Inspector's grade, when the grind of office-work, of manufacturing returns and reports, has killed out what little soul they had or from the professorial staff of colleges, when years of lecturing on mathematics or metaphysics had snuffed out all remembrance of school life and school subjects. A much better method of choice of Inspectors (and we hope half of the new Inspectors will be Indians) would be to select men who have taken a good degree, appoint them probationary Inspectors, send them to Europe to study methods of school education for a year or two and then make them pukka Inspectors. As regards England-appointed Inspectors, we do not know how the

Secretary of State selects them, but we know that some of them are very good and others not quite up to the mark. Some are fresh from the Colleges without any experience of Indian or other schools. They should serve as probationary Inspectors at least for a year in India to enable them to learn the conditions of Indian schools and vernaculars. It will not be too much to institute an examination for them in the vernaculars as it is in the case of Civilians and others. It would be seen that here, too, there was great need for reform of the methods of recruitment.

To some people Sir Oliver Lodge's presidential address has proved disappointing. They expected, from his eminence as a physicist, to hear him discourse on the recent discoveries in Physics which now-a-days chase each other so rapidly that even earnest students can scarcely keep pace with them, or from his dallying with psychical research, to hear blood-curdling tales of spooks from the land beyond the grave and what enlightening information he might have derived from such weird sources. He avoided both these and went, as it were, on a side-track. Pointing out that discontinuity is the mark of the things we have to deal with in Mathematics, Physics and Chemistry, he averred his faith in ultimate continuity. The problem of continuity necessarily involves the question of the properties of ether, the hypothetical *malaprakriti* of modern science and Sir Oliver Lodge gave a lucid exposition of the characteristics which we have to endow ether with, so that it may prove a useful concept in Physics. In this connection he attacked the principle of Relativity in the extreme form held by Prof.

Einstein. The principle of relativity says that "no effect of any order of magnitude can be observed without the relative motion of matter," in other words, that we can never ascertain motion with reference to ether. To oppose this view, Sir Oliver Lodge suggests that we can do so by comparing the speed with which we move through ether with the speed of light. Into the details of his suggestions we need not here enter. From a vigorous defence of the real, objective existence of ether, Sir Oliver Lodge passed on to a defence of vitalism. "The ether makes no appeal to sense, and therefore some are beginning to say that it does not exist. Mind is occasionally put into the same predicament. Life is not detected in the laboratory, save in its physical and chemical manifestations; but we may have to admit that it guides processes nevertheless." From vitalism, Sir Oliver Lodge slipped on to a defence of the immortality of the soul and deprecated the pugnacity of mood which still clings to some scientific men with regard to theology, and wound up by drawing attention to the "Immanent grandeur," which we will be deaf and blind to, "unless we have insight enough to recognize in the woven fabric of existence, flowing steadily from the loom in an infinite progress towards perfection, the ever-growing garment of a transcendent god."

Far and away, the most important paper read at the British Association, from the standpoint of the extension of scientific knowledge, was the one read by Mr. Frederick Soddy to Section B. It announced the great discovery of the year 1913, that of the general law governing the passage through the periodic table of the

The Radio-active Elements and the Periodic Law.

elements in process of radio-active change. "As the result it is possible to write the three disintegration series of uranium, thorium and actinium across the periodic table, so that each member falls into its proper place in the case of the twenty-seven members the chemistry of which is known. The general law is that in an α -ray change, when a helium atom carrying two atomic charges of positive electricity is expelled, the element changes its place in the periodic table in the direction of diminishing mass and diminishing group number by two places. In a β -ray change, when a single atomic charge of negative electricity is expelled from the atom as a β -particle, and also in the two changes for which the expulsion of rays has not yet been detected, the element changes its position in the table in the opposite direction by one place." We cannot go into further details nor reprint the table which illustrates the discovery, for that will interest only the specialist. But we quote the final paragraph of Mr. Soddy's paper which indicates the general lines of the work. "The chemical analysis of matter is thus not an ultimate one. It has appeared ultimate hitherto, on account of the impossibility of distinguishing between elements which are chemically identical and non-separable unless these are in the process of change the one into the other. But in that part of the periodic table in which the evolution of the elements is still proceeding, each place is seen to be occupied not by one element, but on the average, for the places occupied at all, by no less than four, the atomic weights of which vary over as much as eight units. It is impossible to believe that the same may not be true for the rest of the table, and that each known element may be a

XIX

group of non-separable elements occupying the same place, the atomic weight not being a real constant, but a mean value of much less fundamental interest than has been hitherto supposed. Although these advances show that matter is even more complex than chemical analysis alone has been able to reveal, they indicate at the same time that the problem of atomic constitution may be more simple than has been supposed from the lack of simple numerical relations between the atomic weights."

This question is beginning to attract the attention of several educationists in England and America. They are beginning to realize that there must be something rotten in an educational organization that permits of but two periods of 45 minutes each in a week to be devoted to subjects like History, Geography, Algebra, &c. The overcrowding of our curricula is due to the false theory that the object of school-work is to pour as much knowledge of as many subjects as possible into the minds of pupils. Says a writer in *School Science and Mathematics* in an article of "Academic inefficiency":—"The curricula of our schools, from the Kindergarten to and including the University, are crowded beyond all reason and all hope of producing the best results. To be able parrot-like to recite rules and formula is not education, walking through a botanical garden does not make a botanist; it is that which the student masters that makes him a student; going through books does not educate one. There is a great difference between one's going through a book and having the book going through him. Too many studies in a given time cut off the time necessary for reflection

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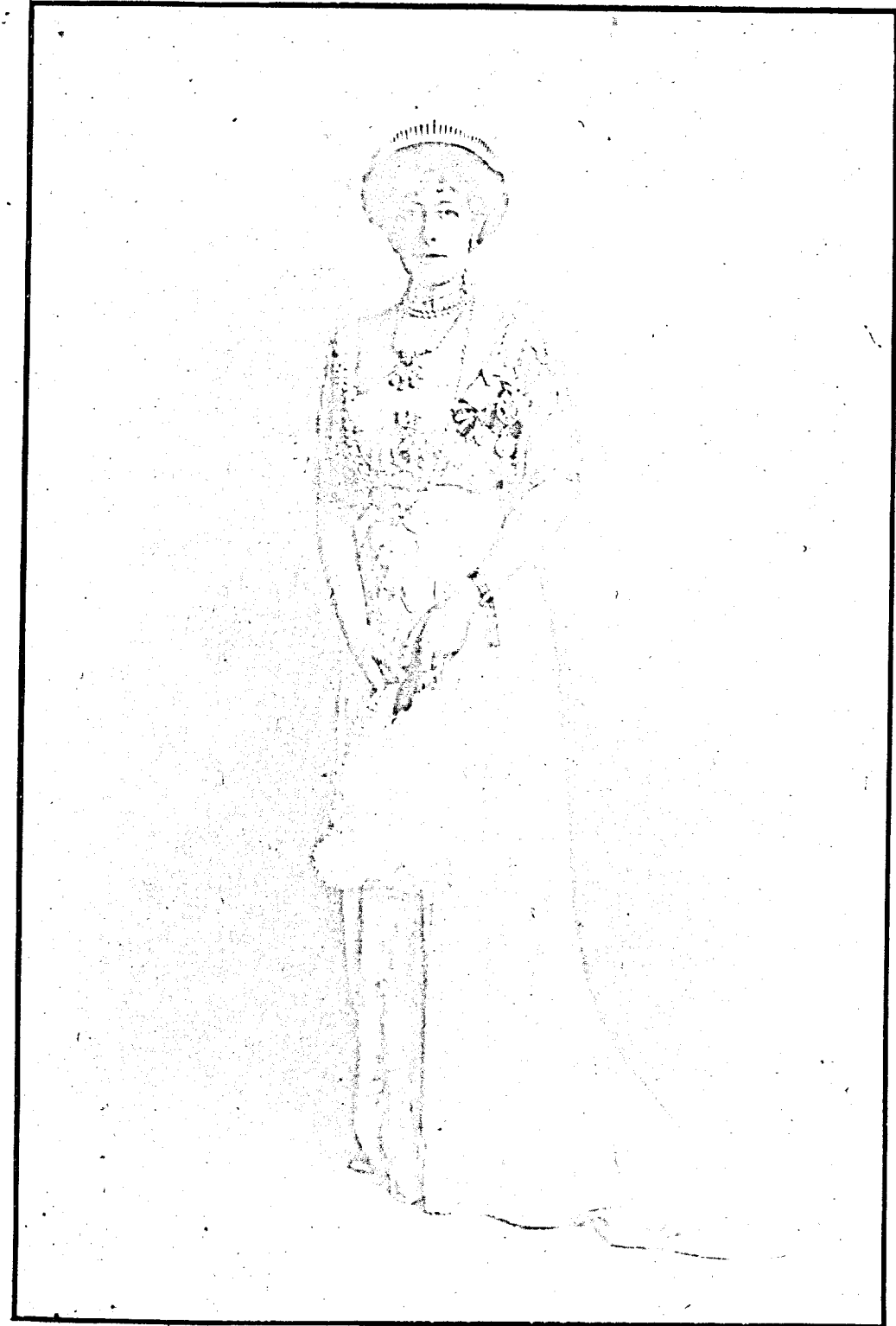
—a prime essential to thoroughness. *Intensiveness* is not the child of *extensiveness*. One's scholarship is not measured so much by its *breadth* but by its depth. The disciplinary and cultural value of a course does not depend so much upon the number and kind of subjects in the course as upon the way in which it is taught and studied." We wish the people who clamour so persistently for what they very inaccurately phrase as "the reintroduction of the vernaculars," will read and understand the sound educational doctrine contained in the above extract—*what the student cannot master is not worth making him study*. The history of the study of vernacular poetry—that is what "the reintroduction of the vernaculars" really means—for the past fifty years has proved to the hilt that not one in a hundred can master it; why, then, should the other ninety-nine go through the treadmill, be stuffed with pabulum which they get rid of at the earliest available opportunity? The slightest acquaintance with modern educational principles will enable these agitators to realize how frightfully out-of-date they are in their demands, how they take much trouble to pull back the progress of real education in our midst!

Most school boys know that the current of warm water that leaves the Gulf of Mexico under the name of the Gulf Stream affects the climate of the west coast of

Europe. But other far-reaching consequences of the daily transportation of 40 millions of milliards of calories by the gulf stream have now been discovered. Water retains heat easily; so that when the waters of the Gulf Stream reach high latitudes, they preserve enough heat to raise the temperature of the air that rests on them higher than the surrounding temperature. Thus an ærial gulf stream superposed on the watery gulf stream is produced. This ærial current flows over Europe, precipitating as rain the enormous masses of water-vapour it carries; it is this plentiful rainfall that feeds the numerous lakes of Sweden, Finland and Northern Russia. But on account of the rotation of the earth, the ærial current turns to the east. Having dropped its heavy burden of aqueous vapour, it is now a current of dry cold air and as such it flows over the plains of Russia. The current then turns south and nearing the Equator, it is again warmed, but as it now flows not over the sea but over a land mass, it cannot gather any water vapour, and becomes a current of hot, dry air. Its direction is now north-east and blows its devastating breath over Turkestan, Arabia, and Sahara, which are on its return route. "After having left the Continent, the ærial current, thanks to the trade-winds, links itself on again to its starting point, the Gulf Stream, thus looping its circuit after its having, like everything else, done much good and much evil."



HIS EXCELLENCY THE RIGHT HON'BLE LORD HARDINGE.



HER EXCELLENCY LADY HARDINGE.

616-B

616-C

To
H. E. LORD HARDINGE.

The teeming millions of the South, we hail
Thee august lord that bears on India's soil,
Britain's thrice sacred trust and sovran toil;
Thou noble statesman piloting her sail
In storm and stress with wise and loving care,
Thou hast our deep-felt homage, true and free;
Through all this land of palm and shrine, from sea
To sea, the grateful welcome rends the air.

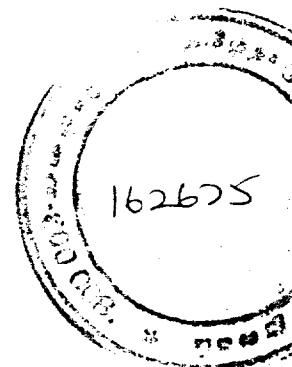
Benignance crowns thy brow with glorious might,
With even-tempered power, worshipped more
And held in greater love, than all the roar
Of heartless sternness. Mercy throned with Right
Befriends thy labour for the highest weal
Of India's sons, to bring them ampler life
And growth, and soften all their longing strife
To sweet content with Bounty's calming seal.

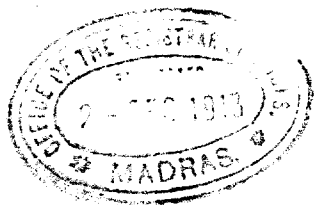
Dowered with spirits unfaltering and brave,
No dastard villainy could dim thy love
For India's millions—it made thee vow
Thy faith in them with renewed strength, and save
The loyal children from the loathsome breath
Of lurid suspicion. The wicked hand
Ignobly raised in hatred, smote the land
With sorrow keener than the pain of Death.

Thy hands have helped to flash the sacred light
Of knowledge, through this spacious realm; the walls
Upreamed in Learning's cause, the storied halls
Whence India's myriad, flowering youth will sight
Truth's gleaming tops shall blazon forth thy fame
To distant time; and on the hallowed soil
Of ancient Delhi will be shrined thy toil
In spire and dome, to speak thy mighty name.

The roll of India's rulers holds thee dear,
The son that came to link in closer love
The land his fathers won. Thy zealous vow
For India's happiness and good, shall cheer
All future statesmen and thy memory
Of fruitful endeavour and golden peace
Shall ever ring in Orient lands and seas,
With echoes heard along eternity.

P. SESHADRI.





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TO BE A CHEMIST.

CONSCIOUS as I am of my inability to suggest instructions to teach and study chemistry, my interest in students would, I think, be a sufficient excuse if I attempt to do so. The science of chemistry has, of recent years, taken an important place in the Secondary and Collegiate course. Many teachers are in a puzzle to find out what their aim must be in imparting instructions in the science and even if they are told the true aim of teaching, they do not know how to fulfil it. With such teachers who are unequal to the task imposed on them, it is but natural that students are unable to grasp the subject properly. With such students as our future citizens, India must suffer a consider-

able loss economically through neglect of science.

It must be admitted on all hands that it is a sheer waste of time to teach abstract ideas such as the kinetic hypothesis, atomic theory and ionic theory in the elementary course without familiarising the students with the common facts from which the generalisations have been developed. While teaching the facts, the teacher in the course of his lessons and experiments will try his best to insist on the students to pay more attention to scientific method than to facts. So much so, the students may afford to forget the facts as they derive more lasting benefit from the general method.

The great importance to the students of himself performing experiments relating to the facts cannot well be over-rated. Very frequently, practical work is taught and practised in such a manner as to degrade it to the level of a purely mechanical and often unintelligible series of rule of thumb operations. Such a student who has not nobler aspirations and who, therefore, does work in this fashion is sure to meet with failure in his goal of life.

How then should a student work? What may he expect from a general laboratory course? First he develops a skill in observation and general manipulation. The importance to the student of making careful notes

of his work, *while in progress*, cannot be over-estimated, as perhaps, more than anything else, this is calculated to develop in him those habits of exact observation, self-reliance and resource which are essential qualities in a scientific man.

Secondly, he cultivates his imaginative faculty and creates in him a reflective turn of mind. It must be granted that facts alone will not make a scientific man. It is the sole duty of the teacher to indicate to the student the more relevant and significant facts to be committed to memory and used as material for the exercise of his intellect. Now it falls to the student to reflect logically and systematically on the observed data and draw legitimate inferences from approved evidence.

To ensure success as a chemist, it is absolutely necessary that the student shall cultivate the imaginative faculty and develop a critical and impartial judgment. More than anything else, rigorous honesty in recording what is observed and absolute impartiality in inferring from the available data are indispensable factors of success.

P. A. NARAYANA AIYAR.

FORMATION OF CHARACTER.

1. **THE OBJECT OF EDUCATION:**—The wisest of mankind, at the present day, want more tangible books than running brooks, and more audible sermons than stones can furnish. The civilized man differs from the savage, from brute creation, even in this—that he has capacities latent in him which, when properly developed, enable him not merely to exist somehow, but to live an intelligent, useful, and good life. The potentialities in him have to be drawn out, developed, and perfected

with a view to qualify him to face the battle of life manfully and hopefully. Physically, mentally and morally the child grows up, and has to be helped to grow. The object of education is to help this natural growth, to furnish facilities for the child's full and harmonious development. Though in studying the child's complex nature, we may concentrate attention upon the physical or mental or moral aspect, yet we should never forget that the child's growth is that of an organic though complex whole. No system of education can, therefore, be said to be complete which does not consciously and intelligently accelerate the concentric growth of the child—which does not make out of him a strong, intelligent, upright and useful young man. The system obtaining at present in this country, because it attaches undue importance to the training of the intellect—and even of that only in certain directions, because it makes not sufficient provision for physical culture, and almost none for developing the active virtues of life, therefore is it faulty. The problem of devising a fairly efficient and complete system—not to say perfect—is by no means easy; but cannot and should not on that score be resigned as hopeless.

2. **THE SCOPE OF OUR ENQUIRY:**—And in the first place we have clearly to define the scope of our attempt. It is not a philosophical inquiry in which we are at present engaged. We do not want to formulate the conditions under which character is formed. We are trying to solve a very difficult, but a very practical, educational problem—to ascertain what should and could be done in schools and colleges to help the boys to grow into vigorous manhood. And we deliberately confine our attention to what should be done

in places where "public instruction" is imparted. Not a little confusion in thought underlies the glib attempts made frequently to shelve aside the question by saying that moral education is primarily a matter for "home" agency to shape out—as well or as ill as it may.

3. **EDUCATIONAL AGENCIES:**—I am not by any means denying or even under-rating home influence. A great many factors certainly enter into the child's growth. For, as already pointed out, *by education is meant the conscious and intelligent bringing of the pupil into such healthy contact with his environment as will accelerate the natural and concurrent growth of his physical, mental and moral nature*; and the environment consists of at least four factors—the pupils' community, home, playmates and teachers. These factors are by no means of equal importance, nor does any continue to exert the same influence upon him all through life. It is a most shallow view which urges that with respect to moral education a pupil should be left entirely or even mainly to the influence of the home and the community. At first, of course, and till a boy goes to school, the "teacher" does not exist for him; and it is at a far later age even that he has any sense of that undefinable factor of the community and tries to conform to its demands. Whatever influence again a little boy's playmates exert upon him, such influence can hardly be said to be conscious, and will always depend upon the company he is allowed to keep. Lastly, until a boy goes to school, and during the first few years of his school-life—which we may roughly put down as from six to eighteen years of age, leaving aside the college course—during the early years of this period the home has still the greater influence upon him.

But after a boy has been at school for two or three years, his playmates and teachers begin to have an importance for him which grows with the growing years. In fact in the case of an average boy, say of the Form classes, I would represent the respective influence upon him of the community, home, playmates and teachers by the arithmetical proportion 5, 20, 25 and 50. The entire problem, then, of the Formation of Character—as an educational problem—resolves itself into this: *What should be the nature of the overwhelming influence exerted upon a boy by his teachers and school-fellows—of the 75 per cent. of the forces at work upon his mind in shaping his personality during the most impressionable period of his life?*

4. **THE WORK OF THE TEACHER:**—And it cannot be denied that the ten to fifteen years that a boy spends at school and college is the most impressionable period of his life. Modern psychology has no doubt disproved the "eighteenth century view" of mind as a *tabula rasa* on which any impression whatsoever can be made, of the pupil being mere clay in the hand of the instructor; but does it not open our eyes to the *true function of the teacher as the most conscious and responsible agent in trying to establish the healthiest possible relation between the growing personality of the pupil and his complex environment?* The school-life of the boy is certainly more engrossing than his home life. This is generally admitted with regard to what is often specifically and erroneously called—for no such "compartment of the mind" exists—intellectual growth. A boy confined to the dull monotony of his home, it is granted, does not "learn his lessons" half so well as he does through the bracing emulation at school. But his "morals," it is opined, he

can "pick up" more easily at home! It cannot be done at schools, this "training of the emotions," is the learned explanation, and must be left into the hands of the parents! A mother can almost instinctively draw forth the child's love, and she ought to direct his emotional impulses into healthy channels in the early years of her boy. What precious psychology all this is! as if indeed there are such distinct periods of life, and separate agencies of education—for inculcating "the feelings," for training "the intelligence" and for strengthening "the will"! It is time that teachers at any rate give up such false notions. I do not deprecate the value of a good home, the benign power for good that a capable mother can exert all through life, or the strength of the fairy ideals that she builds up for the boy in his earliest years. But I emphatically maintain that it is in his school that a boy's personality is developed; it is developed in the course of the *corporate life* he leads along with others, in his desire to love and be loved by his peers, in his desire to maintain his self-respect before them, in his curiosity to know what others know, in his desire for fair-play and justice. And who but the teacher can shape this *corporate life* of the boys? Very real and very responsible is his work. He has to devise intelligent methods for the boys to grow together, and develop their best traits. He has to study the idiosyncracies of his pupils, note their good and bad traits, rouse their higher and nobler feelings, and so curb their lower and baser impulses. He has to study the special aptitudes of his boys, to study their physical capacities, to correlate manual work with intellectual and moral instruction; he has to take an interest in drill and gymnastics, in games and sports—in everything that affects

the well-being of the boys. By precept and by example he has to present to them in the most life-like colours high ideals which they would for ever cherish and aspire to. Such a teacher loves best and longest in the pupil's mind.

5. **PRESENT CONDITIONS:**—But, is not all this being done at present? Some people answer in the affirmative, but with a qualification—"as far as possible;" that is with a qualification which but paints the glow of youth on faded cheeks. But why should not all this be done at present? In answer to this question I shall very briefly enumerate the unfavourable conditions under which we now have to work:—(i) *Inadequate perception of the ideal to be aimed at:* Education at present is what it was certainly twenty years ago, and probably forty or even sixty years ago when the Universities were first founded. It is primarily a means for securing appointments by passing examinations in various subjects. The ideal of a complete education, of the endeavour to give as much prominence to physical and moral as to intellectual training is discreetly reserved for departmental reports and anniversary speeches! (ii) *The Domination of Examinations:*—Public examinations and college regulations still govern the results of work aimed at in High Schools. The S. S. L. C. scheme has made only a slight move towards a goal which as yet is hardly within sight. The new S. S. L. C. Public Examination has taken the place of the old Matriculation; by the number of boys securing sufficient percentage of marks therein, by the number of those who secure admission into colleges, is the work of the school still gauged; the 180 working days we try to make up in a year, and the 5 working hours we have each day, are hardly enough to drill

the boys up in the A and C groups of the S. S. L. C. syllabus. Many a Headmaster has pathetically exclaimed to me "Where is the time, Sir, for moral instruction? From what subject on the time-table can we possibly cut off even a period or two a week? As for games and sports you see our accommodation is limited; we certainly do the best we can!" Indeed the only matter in which one school tries to compete, or is compared, with another is in that of examination results. (iii) *Insufficiency of accommodation, funds, etc.* How many institutions in the Presidency have sufficient play-grounds for even 10 per cent. of their pupils? (iv) *Lack of public spirit and initiative;* (v) *Inadequate appreciation of the teacher's work:*—(I deal with this point at length further on). (vi) *Inadequate knowledge on the part of teachers themselves as to methods of moral education:*—Thus one very old teacher at a recent conference asked me: "What is it, Sir, you want me to do which I am not doing now? I do my duty as conscientiously as possible, and ask my boys to do their duty as well as they can. I tell them whenever necessary what is right and what is wrong: What more need be done?" Aye—what more need be done? He is by no means the only one whose conception of moral education is limited, who has no idea of what is meant by *creating an atmosphere* of active love in which the boys will imbibe pure and lofty ideals of conduct and character and strive to emulate one another by keen yet healthy endeavour. Indeed, exceptions apart, the majority of Indian teachers fall into one or other of three classes:—(a) a few who rely too far upon direct moral and religious instruction, (b) a good many who deprecate unduly the value of such instruction, utter the sapient warning that example is

better than precept, and cynically smile upon all enthusiasts; and (c) those, by far the largest number, who do not consider it discreet to express any opinion definitely, apply the world-old solution of the rod to all delinquencies, and would, when pressed, ask us to wait and see what the Government is going to resolve and recommend upon the matter!

6. **THE POLICY OF THE GOVERNMENT:**—We cannot therefore be too thankful for the emphatic declaration that "in the forefront of their educational policy the Government of India desire to place the Formation of Character of the scholars and under-graduates under tuition." In Bombay, we are told that the question of moral and religious instruction is being tackled practically, and that in other provinces committees were appointed almost two years ago to report on the question. We are assured that though "for the present the Government of India must be content to watch the experiment" yet they "keep the matter prominently in view." Naturally the machinery of Government moves very slow: yet, by this time, surely, the various Provincial Committees must have submitted their reports. But whatever the upshot of their recommendations is going to be, whatever *special* methods will be devised in future for the formation of character, yet, even as the matter now stands, consistent with the declaration already made by Government, two *general* measures the Government will surely have to adopt. (i) In the first place, steps will have to be taken for impressing upon all the teachers of the land the ideal set up by Government, and the practical bearings of that ideal upon methods and organisation of school-work. For *it is the teachers that have to be taught in the first*

instance. It is not enough for the Government of India to notify the ideal; it is not enough to point out that "in the formation of character the influence of home and the personality of the teacher play the larger part." The "home" is naturally a factor which must be left to improve itself; but it certainly behoves Government to do all it can to improve "the personality of the teacher." It is curious to read that "the Bombay Government are engaged upon the preparation of a book containing moral instructions" for the benefit of teachers. For text-books by themselves can never solve the problem; and I emphatically declare this, although I am myself the author of 'A Handbook of Morals.' We want pre-eminently not codes of instructions, not moral charts, but living teachers possessing enthusiasm, knowledge, hopefulness and strength, who will be most inspiring books in themselves. *The knowledge that most teachers want more than they possess at present is not, solely or even mainly, of duties and virtues, of moral anecdotes and religious biography—but of practical psychology, of the laws of mental action and reaction, of moral organisation, of methods of persuasion, of the manner in which to present ideals and make them live in the hearts of pupils.* Even if we have only a teacher or two in each school possessing such knowledge, the problem will be satisfactorily solved. Therefore the first step that Government should take is (a) *to provide for such instruction in training schools and colleges as will qualify the future generation of teachers to be moral educators as well; and (b) to institute courses of lectures to be delivered upon "methods of moral education" by competent persons to existing teachers.* (ii) A second practical step that, to give effect to their

declared policy, the Government should take, will obviously be to direct inspecting officers of the Department to review in far greater detail than they at present are called upon to do, the facilities (and they are not at all confined to imparting direct moral and religious instruction) afforded in each school for the formation of character, and to give constructive criticism and advice regarding this very important branch of education. This of course means that the inspecting officers should themselves possess the requisite knowledge to give such advice.

7. PAY AND PROSPECTS OF TEACHERS:—But even "training" and advice can have value only where the teachers are placed above ordinary wants. This is a matter, however, on which I need not expatiate. It is enough to note its bearing upon the subject on hand, to point out how preposterous it is to expect that a race of ill-paid—and in many cases half-starved—workmen, struggling hard to keep themselves and their families above the wants of civilised social life, would give that whole-timed and that whole-hearted attention to their work which in the interests of true education they ought to give. The wonder is that they should do their work even as well as at present they do.

8. CONCLUSION:—Thus we see that our schools and colleges, though they have done, and are doing, very good work, are yet deficient in many respects and in none so greatly as in affording ample facilities for the building of strong, vigorous, and well-balanced types of character. But character, as an educational problem, has come up for discussion only in recent years, and has not, in this land at least, yet received that attention that it so pre-eminently deserves. It is not a problem that can be left entirely to home influence.

TRAINING OF TEACHERS.

The teacher has the largest share in *educating* the character of the rising generation. His task is very arduous and requires a thorough knowledge of the development of the pupil's mind as a *living and growing organism*. It requires tact and enthusiasm, patience and sympathy—in other words great "personality." Text-books, syllabuses, and departmental instructions—excellent as these may be—are destined to prove futile unless the character is improved of the agency employed. Upon such character primarily depends the success of every branch of education. It is no doubt necessary to increase school accommodation where it is found wanting; it is very necessary to have sufficient furniture and appliances, necessary to have larger and better play-grounds, to have many, many more hostels than we now have. But the most necessary factor of all is the teacher's personality. His claims for better treatment are receiving some little attention; and *side by side* with improving his status, it behoves Government to take immediate steps to improve his "personality," to give him better training, to place before him higher ideals and help him to organise better methods of work. And the Government can do and need do nothing more, at least directly; neither does the education of the country need anything more so urgently.

M. KRISHNAMACHARYA.

NOW that education is making marked progress in every civilized country, and that thoughtful people have begun to realise that education should be controlled by the State, because the proper development of young brains is an indispensable factor in the growth of a nation, the 'equipment of teachers' should necessarily form an important topic for consideration, and should now engage more serious attention than in the past. To impart sound instruction in all branches of knowledge which would help the rising generation to be useful citizens of the land, and to build their character without which the society would lose its charming influence are functions, the difficult nature of which the man in the street may not quite grasp. The responsibilities of a teacher are far more difficult and arduous than generally imagined to be, and it should be realised that the difficult nature and the sacredness of his work make his profession really ennobling. That he requires as much training and instruction in his art as the members of the other professions should have, is seldom understood; and people argue that the teaching profession does not offer sufficient worldly reward to justify any considerable extension either of time or of expense on the part of those who are to prepare themselves for it. This is surely a silly argument, but those interested in education should aim at improving the prospects and emoluments of the profession thus attracting capable and intelligent men to its fold.

Discussions are going on in public platforms and in press of England, whether after all training of teachers is indispensable and whether a teacher can discharge his duties better, after a course of training. A

cursory glance of the proceedings of the conferences of headmasters and headmistresses of England, held occasionally, would explain the contrary opinions held. There are those who deeply consider that training is somewhat questionable *parergon* and that the teacher can pick up his work by his own experience without any training whatever. They further hold that no one type or method of training is suitable for all teachers alike, and that instead of giving out psychological theory that faculties are inter-related, we must discover by personal investigation what kinds of ability are inter-related. According to them experience is the best teacher and training is a mere waste of time. Those who hold the other opinion think that there should be thought behind practice, and that after observing expert teachers handling classes and learning from them their own experiences and methods of teaching one is expected to teach better. America and Germany, the pioneers of education in the civilized world, have by result of experiment once for all decided that formal training is quite necessary. Germany has extended the period of training to five years, and it is producing excellent teachers every year who are discovering new theories in Psychology. We can safely rely on their experience and can come to the conclusion that training is imperative for teachers.

This leads us to the question whether the training should be theoretical, practical or both. Professor Adams, one of the greatest educational authorities of the modern times, observes in one of his presidential addresses: "Educational theory is so far consolidated that the whole time of Training College students might be profitably occupied on non-controversial matters." I should consider that theory of education is as important as

practice of education for both are interdependent. Teachers generally do not attach much importance to theory and as a matter of fact they forget all about it after the training course is over. During their actual experience they do not care to convert theory into practice. Further, teachers of secondary schools who learn much of Psychology during their training course are not given opportunities to teach the lower classes, and the mental state and the development of the brains of the pupils coming from the lower forms are not generally understood by the secondary school teacher. But if, as is done in some of the schools of Germany and America, the same teacher is asked to teach one and the same batch of students throughout their course he would then realise the importance of theory and would, in course of time, prove a successful teacher.

Would theory alone do without practice? One of the experts recently held 'the performance of masters as teachers is in inverse ratio to their proficiency in training.' That is because the practical side of training is often neglected. The student in training must be in touch with the University training on the subject. He should observe the teaching of experts in various subjects and note down the important points in their lessons. Discipline for example, is an essential thing for a teacher and it should be learnt practically. Further the student under training should be asked to handle classes occasionally under the supervision of model teachers; and his lessons should be thoroughly discussed and criticised. Training should mean something more than probation. Practical training should take place in specially selected schools and be conducted by the best experts. I would suggest that the teacher in training

should be required to write a thesis on a subject approved of by the University. It must give proof of personal observation of the candidate's pupils, which alone would strengthen his knowledge of the theory.

Various schemes have been put forward for the improvement of the training colleges. In England a student is allowed to undergo both the training course and the University course simultaneously. That would mean that the educational authorities in England consider that even the under-graduates are competent to teach the secondary school classes. I strongly think, from my own experience, that unless one has undergone the University course he cannot do full justice to his work in the secondary school. While in India even graduates sometimes fail as teachers, I wonder how one who has no University training can infuse into the minds of his pupils the real spirit of learning; and it should be remembered that learning by rote some extracts from text-books is not the be-all and end-all of education. The building of character of pupils is perhaps more important than imparting any knowledge, and it can be done successfully only by mature minds. The personality and the moral influence of the teacher count much in strengthening the pupils' morality and character. The German Universities have realised to the utmost the truth of this, and in the syllabus of work in the training colleges the Board of Education have included subjects of general nature. Passing the general test is made preliminary to the training course. In our own Universities it is gratifying to note that only persons of general qualifications are allowed to enter training schools and colleges. But then one suggestion, I wish to make, that is, courses of general education and training should both be

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done by the training colleges, as done by the German Universities. It is the training colleges alone that should decide who are competent to take to teaching profession. Passing some preliminary general test should be the qualification for admission into the training school or college. In the University of Manchester, 150 bursaries of free tuition and scholarship are awarded to the pupils of the secondary schools who intend to become teachers. These student-teachers attend for three days a week in public elementary schools, and two days a week at the secondary schools; and after their school course is over, they enter training colleges. Here in India, people take to teaching as a stepping-stone to other professions, and the stability of the profession suffers. Therefore it is imperative that stringent regulations should be introduced to obviate this evil. Competent persons who can enter the teaching profession should be decided beforehand, and mediocre men should be thoroughly expelled from our schools and colleges.

As I said before, the training colleges should be manned by experts whose chief qualification should be that they should visit all the important schools and colleges of the civilized world. The colleges should be made as up-to-date as possible, and all the practical reforms should be introduced. Even the students under training should be taken, at least once during their training course, to some of the model schools and they should be required to take down notes and suggest improvements in the methods they had learnt.

Again, the libraries and laboratories of the training colleges should be made as rich as possible, where the devoted student should have ample opportunities to improve his general knowledge and culture. All the edu-

educational reviews should be subscribed for, and students under training should be expected to study them and take down notes. The experts should supervise their work occasionally and criticise it. This reform should be immediately introduced in the training colleges of India, for I know, many of the teachers coming from the training schools and colleges have their minds blank, and are ignorant of the state of education in other countries.

In conclusion, if the youth of the land is to be properly educated remembering that the child of to-day is the citizen of to-morrow, we want first-rate teachers, and for first-rate teachers we want first-rate training schools and colleges. Therefore it is these training institutions that should engage the immediate attention of the authorities and they should be endowed as largely as possible. The Madras Government, of course, have done much to improve the training schools of this Presidency, but still much more is to be done. Time alone will cure the existing evils and we shall wait.

M. VAIDYANATHAN.

THE PRESENT S. S. L. C. MARKING SYSTEM.

It will be well to trace the present marking system from the state of the Secondary Education before the advent of the School Final Examination.

It was during the Viceroyalty of Lord Ripon in 1882, the Education Commission sat under its formidable President, Sir William Hunter; as a result, so far as Secondary education was concerned, the High Schools were handed

over to Local bodies for management, they are to supply the sinews of war, the examinations were conducted by the University, the Government control being confined to the occasional visits of the Inspectorate. Thus the Matriculation Examination continued to hold its head from its inception till a few years ago.

There have been terrible complaints both from the press and the parents about the "slaughter of the innocents" as they called it; there was unrest in the land caused, as they said, by the result of the Japanese war, by the doings—rather the overdoings of Lord Curzon.

The Government mind was much agitated. They saw or believed, they saw how the Secondary education was gradually drifting beyond its mooring, saw how far they have become responsible for young India getting beyond State-control.

With a view to remedy these defects, the Government indirectly did away with the Matriculation Examination, virtually took it off the hands of the University, appointed S. S. L. C. Board: They shaped the Curricula of Studies and brought with them this incubus of the Marking system.

Let us examine how far the Government succeeded in their attempt—though three years is too short a period to give it a fair trial.

We shall touch upon only one feature of this School Final System before coming to the present subject.

During the days of the Matriculation Examination, the Never-do-wells, were forcibly withheld from the portals of the University till they got the required minima of marks for success. What do we find now? As there is neither pass nor failure in the School Final

Examination, these flocked to colleges and are there detained by the sieve of the Intermediate Examination of the University; thus the situation is this—they were once enriching High Schools—now they enrich the Second-grade Colleges; the disease has not been rooted out, it has been shifted from one locality to another with greater loss to parents—whose eyes were opened sooner than than now after they have been impoverished to a greater extent.

So the New Scheme, which was hailed as the panacea of all educational ills remains inoperative as a cure. There were plucked Matriculates then; (Mr. Editor, allow us the use of the expression though a contradiction in terms, it is so very significant); there are plucked Intermediate men now.

The other feature is the present marking system; how did it originate? What is it intended to serve, how does the system work at present? What are the points good and bad in it?

Bear with us a while, till we pass under-review the different stages through which it should have been distilled out to us in its present shape.

There was till lately a mania for Public Examinations for the selection of suitable candidates for State-service. In some quarters, where people worship the Fetish of Prestige and Efficiency, an interested cry was raised that the Brahmin mendicants—the acknowledged intellectual Aristocracy of the land—carried away the plums and everything before them by passing the examinations, that they successfully split the tenth part of a hair with surpassing dexterity, that these examinations exercised their intellectual fitness, did not call forth their moral worth and

touched not even the fringe of what they call character and all things that come under that denomination—that the backward classes and the minority were left unrepresented, the landed and the moneyed Aristocracy were woefully in the lurch—therefore down with the paper-examination!

Then a new principle was set up, called Selection and Nomination principle. The candidates were chosen by the presiding deity of each department, such as have been gold-spoon fed, born of loins enthroned.

Nature is ever impartial—where she gives the length of the purse, to such, she refuses the wealth of brain. The result was all the satellites of the god of wealth were chased out, forcibly brought together and pressed into service, but unfortunately they clogged the wheels of the machinery of the Government.

The change from examination to selection and nomination improved not the situation a whit. Now an awkward combination of the two incompatible elements—examination and selection—is now in its trial and experimental stage.

In this imperfect world, no man-made system can be perfect. Man strives after an ideal, can press closer and closer to it, but the ideal cannot be realised and must for ever continue to be unrealizable.

Come we now from the larger world to the small world of the school; the authorities have decided that the yearly paper tests by themselves were useless, that that test ignored the personality of the teacher who is where he is, not for the purpose of training the young men in intellectual gymnastics, but for building them up into perfect organisms physically, intellectually and above all morally;

therefore make the teachers loom large in the eyes of the pupils, give them a freer hand in controlling their destiny and shaping their character, let the boy population be brought more systematically under the teachers' control and discipline.

Hence this new scheme of the marking system was ushered in to the utter dismay of the teachers and the taught. This, as we understand, is the etiology of the marking system.

The old cry was that there were too many examinations, yearly, half-yearly, &c., the strain of which broke down young India. What do we find now? The disease has appeared in a more virulent form. There are now hourly examinations by individual teachers all the year round.

We all well knew that in the High School classes, there is, not as of old, as single teacher for all subjects, but a specialist for each subject; and if there be 6 or 7 periods in a school day, the boys must pass under the view and scrutiny of each of the specialists—and these ever demand their pound of flesh—nothing less will satisfy them; the pupils thus have a number of these gods to propitiate; their energy and labour is stretched to the breaking point. These teachers are frail human beings and as such have their likes and dislikes; the boys irrespective of their individual merit and mettle must bend their knees to their idiosyncrasy—lest their marks are gone. Mr. Editor, I ask you in all seriousness, whether such a kind of double life in our students would not dwarf their moral growth, would not give them a schooling in hypocrisy. To think of the impartiality and the justice-loving nature of these people who are passing rich with 40 to 100 Rs. a month is make human nature immaculate.

Thus the one sad feature noticeable now in our boys is their utter loss of self-assertion and boyish pranks. We find that, instead of sprightly beaming faces, a pack of boys with slavish looks, whenever the teachers flourish their formidable weapon, the Mark Register, they carry in their arm's pit as the baton and symbol of their office in their hourly march from one class to another.

Now come to the teachers; they are an honest, hard-working people; their teaching work in all conscience is enough to break their back; add to this, their submission by the end of every month to the Headmaster the percentage average marks of the boys in each subject they teach; on an average allow hundred boys to each teacher; can human flesh stand the strain of the weighing of the pupils' merit by scruples and drams? No, the result, at best, must be haphazard guess. Grant that the mark system is more or less perfect in its operation in compelling obedience to the constituted authority, and that thousand good results follow. Have we as yet seen one S. S. L. certificate where a real black sheep is propped forth in all earnest. Under the head of "general character" you find all grades of "poor, tolerable" to "good and excellent." Nobody dare put down in down-right honest English "Here is an veritable devil, hang him." If you find one, we will make hold to call the Headmaster who issued the certificate as a remarkably stupid gentleman. The certificates do not reveal the real situation; for which human flesh can stand the moaning of the branded ones and the woe begone faces of their parents.

In fine, our fear rather hope is that the old order, though changed for the present, must reappear in its periodicity sooner or later, the old Matriculation, with modification under a

new denomination would raise up its head thus illustrating the oft-forgotten truth that we are not a whit better than those who have gone before us.

A TEACHER.

ENGLISH SPELLING.

AN APPEAL TO BACON, SHAKESPEARE, AND
H. G. WELLS.

(By a Special Correspondent)

THE spelling reform movement derives its main support from eminent philological scholars, more particularly from those who have given special attention to the Tenthonic elements in the English language, and from the ranks of the teachers in our elementary schools, who know from painful experience how much of their time and energy is wasted in hopeless attempts to teach their pupils the wonderful vagaries of our conventional spelling for which it is impossible to give rhyme or reason. The main opposition to spelling reform comes from those who are conventionally called the educated classes. They have been taught on the old lines at our Public Schools and Universities, but they have not specialised in philology, and they are old-fashioned enough to believe that the views expressed by Archbishop Trench represent the highest level of modern scholarship in this particular department. Some of them are men and women, whose opinion deservedly carries great weight on purely literary matters, and their statements that the zeal of the spelling reformers is menacing the vigour and purity of the English language are naturally accepted at their face value by those who are already under the sway of the wide-accepted superstition that

those who spell in the conventional manner are "literate" and those who spell as they please, as is recommended by Principal Sir James Donaldson of St. Andrew's University, are "illiterate."

One eminent opponent of spelling reform recently declared that the spelling that was good enough for Shakespeare and Bacon was good enough for him. No one can reasonably deny that the spelling that was good enough for Shakespeare and Bacon proved itself an adequate vehicle for a great literature. How Shakespeare himself spelt we have little means of knowing, the specimens of his caligraphy extant leave us in doubt as to the correct spelling of his name, but the spelling of his printers diverges almost as much as the "Nyu Speling" of the Simplified Spelling Society from the conventional orthography of to-day. In illustration of this permit me to quote the opening speech of *Orlando* in "As You Like It," as printed in the First Folio Edition of Shakespeare's works published in 1623:

As I remember Adam, it was vpon this fashion bequeathed me by Will, but poore a thousand Crownes, and as thou saist charged my brother on his blessing to breed mee well: and there begins my sadnesse; My brother Iaques he keepes at schoole, and report speakes goldenly of his profit: for my part, he keepes me rustically at home, or (to speak more properly) staies me heere at home vnkept: for call you that keeping for a gentleman of my birth, that differs not from the stabling of an Oxe? His horses are bred better, for besides that they are faire with their feeding, they are taught their mannage, and to that end Riders deerely hir'd but I (his brother) gaine nothing under him

but growth, for the which his Animals or his dunghills are as much bound to him as I: besides this nothing that he so plentifully gives me, the something that nature gave mee, his countenance seemes to take from me: hee lets mee feede with his Hindes, barres me the place of a brother, and as much as in him lies, mines my gentility with my education. This it is Adam that grieves me, and the spirit of my Father, which I thinke is within mee, begins to mutinie against this servitude. I will no longer endure it, though yet I know no wise remedy how to aniod it.

The spelling would look even more quaint to the modern eye, if the old-fashioned long s closely resembling an f were used as it is in the First Folio. This however is a question of typography not one of spelling.

Shakespeare knew little Latin and less Greek, and, in the technical medieval sense, he might be described as "illiterate," but Lord Bacon was the most erudite man of his age, and it is surely not unreasonable to assume that he would pay some attention to the literary form of the first and other editions of his "Essays" that were published in his life-time. As a specimen of the spelling of his printers the following quotation from his essay on "Studies" may be given:—

Studies serue for pastimes, for ornaments and for abilities. Their chief vse for pastime is in privatenes and retiring, for ornamente is in discourse, and for abilitie is in iudgement. For expert men can execute, but learned men are fullest to iudge a censure.

To spend to much time in them is slouth, to vse them too much for ornament is affectation: to make iudgement wholly by their rules is the humour of a Scholler.....

Some bookes are to bee tasted, others to

bee swallowed, and some few to bee chewed and digested. That is some bookes are to be read only in partes; others to be read, but cursorily, and some few to be read wholly and with diligence and attention.

In contrast to the quotations from Shakespeare and Bacon take the following passages in the "Nyu Speling" of the Simplified Spelling Society from "The Star" by H. G. Wells:—

Brieter it woz than eni star in our sciez; brieter than the eevening star at its brietest. It stil gloed out whiet and larj, no meer twinkling spot ov liet, but a smaui, round cleer, shiening disc, an our aafter the dai had cum. And whair siens haz not reecht, men staird and feerd, teling wun anuther ov the worz and pestilensez that ar forshadoed bi theez fieri sienz in the hevenz. Sturdi Boerz, dusci Hottentots, Gold Coast neegroez, Frenchmen, Spaniardz, Portuguese, stood in the wormth ov the sunriez woching the seting ov this strainj nyu star.

I submit that the old spelling of Shakespeare and Bacon is nearly as much removed from the modern conventional spelling as the "Nyu Speling." If the last mentioned is ugly so are the other two. If the diction of Mr. Wells suffers from the "Nyu Speling," Shakespeare and Bacon in like manner suffered from the manner in which their thought was mangled by their printers.

There are scholars who prefer to read Shakespeare's plays in the First Folio, and it might plausibly be urged that the works of Mr. Wells, a man of the new age, are most appropriately set forth in the "Nyu Speling." Be this as it may, it is generally recognized that Mr. Wells has a consummate sense for style. He would therefore be the

last man to allow his works to be printed in the "Nyu Speling" if he thought this medium dimmed in the slightest degree the delicacy and piquancy of his thought. In language and also in literature it is the spoken sound that really matters, as the late Professor Skeat constantly maintained, and to this our present absurd method of spelling English gives no clue.

The main impression that I have sought to convey is that we can have great English literature in diverse forms of spelling. When this view, which is the only possible one, when the facts are fairly considered, permeates the educated classes in England, the "Nyu Speling" will have a fair chance of being considered on its merits, and this is all that its advocates ask you.

Mr. Sydney Walton, M.A., B.Litt., Secretary, Simplified Spelling Sositet, writes to us:—

44, Great Russell Street,
London, W. C.,
Oct. 29th, 1913.

THE EDITOR,
"EDUCATIONAL REVIEW."

DEAR SIR,

I was very much interested in reading in your pages for September, the excellent paper read by Vice-Principal Ross before the South Indian Branch of the English Association in Madras.

I should like to add to the list of books he gives, the name of the "Pioneer," a monthly journal which is published by this Society. Its pages are of absorbing interest to all students and teachers of phonetics.

The spelling in which it is printed faithfully represents the best southern English speech and the reading of it is therefore of very great value to lovers of English beyond the borders of this country. I shall be happy indeed to have the privilege of sending a free copy to any of your readers who will apply to me.

A DOUBT.

"All that is fair must fade
The fairest still the soonest."

Why is it ever born—
The little child
That comes but to be gone
Our 'dearest' styled?

Why does it cross our way—
A passing star
Now here, now far away,
And next nowhere?

In snatching it away
Thus suddenly,
What revelation may
He cause to be?

The infant knew not aught
Of any sin—
For what could it have wrought
Bare summers seven?

Ah! Not for us are they
Whom we may love,
But soon one borne away
To spheres above.

They loved each other well
And love has knit
Them: First his grand fell
Now he would flit.

'Dear girl,' her father says
 'A precious gift
 Is your boy; watch his ways
 That he doesn't drift.'

One after one they drop
 Before my eyes
 First falls the family prop
 The best of ties.

The latest is this child
 Our darling dear
 That dies a death so wild
 But bare seven years!

Why is it ever born
 The little child
 That comes but to be gone
 Our 'dearest' styled?

S. SRINIVASAN.

Regulation No. V of 1913.

THE ELEMENTARY EDUCATION REGULATION, MYSORE.

(Received the assent of His Highness the Maharaja
 on the 11th day of October 1913.)

Whereas it is expedient to make better provision for the extension of elementary education; His Highness the Maharaja is pleased to enact as follows:—

1. (1) This Regulation may be called the
 Short title, com- 'Elementary Education Re-
 mencement and ex- gulation, 1913;' and shall
 tent, come into operation in such
 areas and from such dates as may be notified by
 Government.

(2) It extends to the whole of Mysore.

2. In this Regulation, unless there is anything
 Definition, repugnant in the subject or
 context,—

"Parent" includes the guardian and every person who is liable to maintain any child.

"Education Department" means the Government of Mysore in the Education Department or the Inspector-General of Education in Mysore acting under the Government of Mysore in matters connected with public instruction in Mysore.

"Recognised School" means a school recognised by the Education Department for the purposes of this Regulation.

"Elementary Education" means the courses in reading, writing and arithmetic and other subjects, if any, prescribed from time to time by the Education Department for elementary schools for the purposes of this Regulation.

3. In every area to which this Regulation applies, it shall be the duty of the parent of every boy, not under 7 and not over 11

Duty of parent to send boy to school, of the parent of every boy, not under 7 and not over 11 years of age, residing within such area, to cause such boy to attend a recognised school for elementary education for so many days in the year and for such time on each day of attendance as may be prescribed by the Education Department, unless there is a reasonable excuse for the non-attendance of the boy.

4. (1) Any of the following circumstances is a reasonable excuse for non-attendance when excusable. non-attendance:—

(a) that there is no recognised school within a distance of one mile measured along the nearest road from the residence of the boy which the boy can attend;

(b) that the boy is prevented from attending school by reason of sickness, infirmity, domestic necessity, the seasonal needs of agriculture, or other sufficient cause;

(c) that the boy is receiving instruction in some other satisfactory manner; and

(d) that the boy has been exempted from such attendance by proper authority.

Thomson said at Winnipeg: 'The æther is not a fantastic creation of the speculative philosopher, it is as essential to us as the air we breathe..... The study of this all pervading substance is perhaps the most fascinating and important duty of the physicist.' Matter it is not, but material it is as it belongs to the material universe and is to be investigated by ordinary methods. But to say this is by no means to deny that it may have mental and spiritual functions to subserve in some other order of existence as has in this.

The æther of space is at least the great engine of continuity. It may be much more, for without it there could hardly be a material universe at all. Certainly, however, it is essential to continuity; it is the one all-permeating substance that binds the whole of the particles of matter together. It is the uniting and binding medium without which, if matter could exist at all, it could exist only as chaotic and isolated fragments; and it is the universal medium of communication between world and particles. And yet it is possible for people to deny its existence, because it is unrelated to any of our senses, except sight—and to that only in an indirect and not easily recognized fashion.

LIMITATION OF PHYSICAL SCIENCE.

I hold that science is incompetent to make comprehensive denials, even about the æther, and that it goes wrong when it makes the attempt. Science should not deal in negations; it is strong in affirmations, but nothing based on abstraction ought to presume to deny outside its own region. It often happens that things abstracted from and ignored by one branch of science may be taken into consideration by another.

I observe that by some critics I have been called a vitalist, and in a sense I am; but I am not a vitalist if vitalism means an appeal to an undefined "vital force" (an objectionable term I have never thought of using) as against the laws of chemistry and physics. Those laws must be supplemented, but need by no means be superseded. The business of science is to trace out their mode of action everywhere, as far and as fully as possible; and it is a true instinct which resents the mediæval practice of freely introducing spiritual and unknown causes into working science. In science an appeal to occult qualities must be illegitimate, and be a barrier to experiment and research generally; as, when anything is called an act of God—and when no more is said. The occurrence is left unexplained. As an ultimate statement such a phrase may be not only true but universal in its application. But

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there are always proximate explanations which may be looked for and discovered with patience. So, lightning, earthquakes, and other portents are reduced to natural causes. No ultimate explanation is ever attained by science; proximate explanations only. They are what it exists for; and it is the business of scientific men to seek them. To attribute the rise of sap to vital force would be absurd, it would be giving up the problem and stating nothing at all. The way in which osmosis acts to produce the remarkable and surprising effect is discoverable and has been discovered.

THE SUPERPHYSICAL ELEMENT IN LIFE.

As is well known, there are more than a few biologists who, when taking a broad survey of their subject, clearly perceive and teach that, before all the actions of live things are fully explained, some hitherto excluded causes must be postulated. Ever since the time of J. R. Mayer it has been becoming more and more certain that, as regards performance of work, a living thing obeys the laws of physics, like everything else; but undoubtedly it initiates processes and produces results that without it could not have occurred—from a bird's nest to a honeycomb, from a deal-box to a warship. The behaviour of a ship firing shot and shell is explicable in terms of energy, but the discrimination which it exercises between friend and foe is not so explicable. There is plenty of physics and chemistry and mechanics about every vital action, but for a complete understanding of it something beyond physics and chemistry is needed. And life introduces an incalculable element. The vagaries of a fire or a cyclone could all be predicted by Laplace's calculator, given the initial positions, velocities, and the law of acceleration of the molecules; but no mathematician could calculate the orbit of a common house-fly. A physicist into whose galvanometer a spider had crept would be liable to get phenomena of a kind quite inexplicable, until he discovered the supernatural, i. e., literally superphysical cause. I will risk the assertion that life introduces something incalculable and purposeful amid the laws of physics; it thus distinctly supplements those laws, though it leaves them otherwise precisely as they were and obeys them all.

We see only its effect, we do not see life, itself. Conversion of inorganic into organic is effected always by living organisms. The conversion under those conditions certainly occurs, and the process may be studied. Life appears necessary

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to the conversion, which clearly takes place under the guidance of life, though in itself it is a physical and chemical process. Many laboratory conversions take place under the guidance of life, and, but for the experimenter, would not have occurred.

Again, putrefaction, and fermentation, and purification of rivers, and disease, are not purely and solely chemical processes. Chemical processes they are, but they are initiated and conducted by living organisms. Just when medicine is becoming biological, and when the hope of making the tropical belt of the earth healthily habitable by energetic races is attracting the attention of people of power, philosophizing biologists should not attempt to give their science away to chemistry and physics. Sections D and H and I and K are not really subservient to A and B. Biology is an independent science, and it is served, not dominated, by chemistry and physics.

SCIENCE AND SUPERSTITION.

Scientific men are hostile to superstition, and rightly so, for a great many popular superstitions are both annoying and contemptible; yet occasionally the term may be wrongly applied to practices of which the theory is unknown. To a superficial observer some of the practices of biologists themselves must appear grossly superstitious. To combat malaria Sir Ronald Ross does not indeed erect an altar; no, he oils a pond—making libation to its presiding genii. What can be more ludicrous than the curious and evidently savage ritual, insisted on by United States officers at that hygienically splendid achievement, the Panama Canal—the ritual of punching a hole in every discarded tin, with the object of keeping off disease! What more absurd, again—in superficial appearance—than the practice of burning or poisoning a soil to make it extra fertile? What appears to be quite certain is that there can be no terrestrial manifestation of life without matter. Hence naturally they say, or they approve such sayings as, “I discern in matter the promise and potency of all forms of life.” Of all terrestrial manifestations of life, certainly. How else could it manifest itself save through matter? “I detect nothing in the organism but the laws of chemistry and physics,” it is said. Very well: naturally enough. That is what they are after; they are studying the physical and chemical aspects or manifestations of life. But life itself—life and mind and consciousness—they are not studying, and they exclude them from their purview. Matter is what appeals to our senses here and now; materialism

is appropriate to the material world; not as a philosophy, but as a working creed, as a proximate, an immediate form for guiding research. Everything beyond that belongs to another region, and must be reached by other methods. To explain the psychical in terms of physics and chemistry is simply impossible; hence there is a tendency to deny its existence, save as an epiphenomenon. But all such philosophizing is unjustified, and is really bad metaphysics.

LIFE AND MIND.

But although life and mind may be excluded from physiology, they are not excluded from science. Of course not. It is not reasonable to say that things necessarily elude investigation merely because we do not knock against them. Yet the mistake is sometimes made. The ether makes no appeal to sense, therefore some are beginning to say that it does not exist. Mind is occasionally put into the same predicament. Life is not detected in the laboratory, save in its physical and chemical manifestations; but we may have to admit that it guides processes nevertheless. It may be called a catalytic agent. To understand the action of life itself, the simplest plan is not to think of a microscopic organism, or any unfamiliar animal, but to make use of our own experience as living beings. Any positive instance serves to stem a comprehensive denial; and if the reality of mind and guidance and plan is denied because they make no appeal to sense, then think how the world would appear to an observer to whom existence of men was unknown and undiscoverable, while yet all the laws and activities of nature went on as they do now. Suppose, then, that man made no appeal to the senses of an observer of this planet. Suppose an outside observer could see all the events occurring in the world, save only that he could not see animals or men. He would describe what he saw much as we have to describe the activities initiated by one.

If he looked at the Firth of Forth, for instance, he would see piers arising in the water, beginning to sprout, reaching across in strange manner till they actually join or are joined by pieces attracted up from below to complete the circuit (a solid circuit round the current). He would see a sort of bridge or filament thus constructed, from one shore to the other, and across this bridge insect-like things crawling and returning for no very obvious reason.

Or let him look at the Nile, and recognize the meritorious character of that river in promoting the growth of vegetation in the desert. Then let

him see a kind of untoward crystallization growing across and beginning to dam the beneficent stream. Blocks fly to their places by some kind of polar forces; “we cannot doubt” that it is by helio or other tropism. There is no need to go outside the laws of mechanics and physics, there is no difficulty about supply of energy—none whatever—materials in tin cans are consumed which amply account for all the energy; and all the laws of physics are obeyed. The absence of any design, too, is manifest; for the effect of the structure is to flood an area up-stream which might have been useful, and to submerge a structure of some beauty: while down stream its effect is likely to be worse, for it would block the course of the river and waste it on the desert, were it not that fortunately some leaks develop and a sufficient supply still goes down—goes down in fact more equably than before; so that the ultimate result is beneficial to vegetation, and simulates intention.

THE EVIDENCE OF DESIGN.

If told concerning either of these structures that an engineer, a designer in London, called Benjamin Baker, had anything to do with it, the idea would be preposterous. One conclusive argument is final against such a superstitious hypothesis—he is not there, and a thing plainly cannot act where it is not. But although we, with our greater advantages, perceive that the right solution for such an observer would be the recognition of some unknown agency or agent, it must be admitted that an explanation in terms of a vague entity called vital force would be useless, and might be so worded as to be misleading; whereas a statement in terms of mechanics and physics could be clear and definite and true as far as it went, though it must necessarily be incomplete. And note that what we observe, in such understood cases, is an interaction of mind and matter; not parallelism nor epiphenomenalism nor anything strained or difficult, but a straightforward utilization of the properties of matter and energy for purposes conceived in the mind, and executed by muscles guided by acts of will. But, it will be said, this is unfair, for we know that there is design in the Forth Bridge or the Nile Dam; we have seen the plans and understand the agencies at work; we know that it was conceived and guided by life and mind; it is unfair to quote this as though it could simulate an automatic.

Not at all, say the extreme school of biologists whom I am criticizing, or ought to say if they were consistent, there is nothing but chemistry and physics at work anywhere; and the mental activity apparently demonstrated by those struc-

tures is only an illusion, an epiphenomenon; the laws of chemistry and physics are supreme, and they are sufficient to account for everything! Well, they account for things up to a point; they account in part for the colour of a sunset, for the majesty of a mountain peak, for the glory of animate existence. But do they account for everything completely? Do they account for our own feeling of joy and exaltation, for our sense of beauty, for the manifest beauty existing throughout nature? Do not these things suggest something higher and nobler and more joyous, something for the sake of which all the struggle for existence goes on?

DEEPER MEANINGS IN NATURAL OBJECTS.

Surely there must be a deeper meaning involved in natural objects. Orthodox explanations are only partial, though true as far as they go. When we examine each particoloured pinnule in a peacock's tail, or hair in a zebra's hide, and realize that the varying shades on each are so placed as to contribute to the general design and pattern, it becomes exceedingly difficult to explain how this organized co-operation of parts, this harmonious distribution of pigment cells has come about on merely mechanical principles. It would be as easy to explain the sprouting of the cantilevers of the Forth Bridge from its piers, or the flocking of the stones of the Nile Dam by chemiotaxis. Flowers attract insects for fertilization; and fruits tempt animals to eat them in order to carry seeds. But these explanations cannot be final. We have still to explain the insects. So much beauty cannot be necessary merely to attract their attention. We have further to explain this competitive striving towards life. Why do things struggle to exist? Surely the effort must have some significance, the development some aim. We thus reach the problem of existence itself, and the meaning of evolution.

The mechanism whereby existence entrenches itself is manifest, or at least has been to a large extent discovered. Natural selection is a *vera causa*, so far as it goes; but if so much beauty is necessary for insects, what about the beauty of a landscape or of clouds? What utilitarian object do those subserve? Beauty in general is not taken into account by science. Very well that may be all right, but it exists nevertheless. It is not my function to discuss it. No; but it is my function to remind you and myself that our studies do not exhaust the universe, and that if we dogmatize in a negative direction, and say that we can reduce everything to physics and chemistry

we gibbet ourselves as ludicrously narrow pedants, and are falling far short of the richness and fulness of our human birthright. How far preferable is the reverent attitude of the Eastern poet:—

"The world with eyes bent upon thy feet stands in awe with all its silent stars."

Superficially and physically we are very limited. Our sense organs are adapted to the observation of matter; and nothing else directly appeals to us. Our nerve-muscle-system is adapted to the production of motion in matter, in desired ways; and nothing else in the material world can we accomplish. Our brain and nerve systems connect us with the rest of the physical world. Our senses give us information about the movements and arrangements of matter. Our muscles enable us to produce changes in those distributions. That is our equipment for human life; and human history is a record of what we have done with these parsimonious privileges.

TEMPORAL CONTINUITY IN EVOLUTION.

But if we have learnt from science that evolution is real, we have learnt a great deal. I must not venture to philosophize, but certainly from the point of view of science evolution is a great reality. Surely evolution is not an illusion; surely the universe progresses in time. Time and space and matter are abstractions, but are none the less real; they are data given by experience and time is the keystone of evolution. "The centuries follow each other, perfecting a small wild flower." We abstract from living, moving reality a certain static aspect, and we call it matter; we abstract the element of progressiveness, and we call it time. When these two abstractions combine, co-operate, interact, we get reality again. It is like Poynting's theorem. The only way to refute or confute the theory of evolution is to introduce the subjectivity of time. That theory involves the reality of time, and it is in this sense that Professor Bergson uses the great phrase "Creative evolution."

I see the whole of material existence as a steady passage from past to future, only the single instant which we call the present being actual. The past is not non-existent, however, it is stored in our memories, there is a record of it in matter, and the present, is based upon; the future is the outcome of the present, and is the product of evolution.

Existence is like the output from a loom. The pattern, the design for the weaving, is in some sort "there" already; but whereas our looms are mere machines, once the guiding cards have been fed into them, the Loom of Time is compli-

cated by a multitude of free agents who can modify the web, making the product more beautiful or more ugly according as they are in harmony or disharmony with the general scheme. I venture to maintain that manifest imperfections are thus accounted for, and that freedom could be given on no other terms, nor at any less cost. The ability thus to work for weal or woe is no illusion; it is a reality, a responsible power which conscious agents possess; wherefore the resulting fabric is not something pre-ordained and inexorable, though by wide knowledge of character it may be inferred. Nothing is inexorable except the uniform progress of time; the cloth must be woven, but the pattern is not wholly fixed and mechanically calculable.

Where inorganic matter alone is concerned, there everything is determined. Wherever full consciousness has entered new powers arise, and the faculties and desires of the conscious parts of the scheme have an effect upon the whole. It is not guided from outside but from within, and the guiding power is immanent at every instant. Of this guiding power we are a small, but not wholly insignificant, portion.

That evolutionary progress is real is a doctrine of profound significance, and our efforts at social betterment are justified because we are a part of the scheme, a part, that has become conscious, a part that realizes dimly at any rate, what it is doing and what it is aiming at planning and aiming are therefore not absent from the whole, for we are a part of the whole, and are conscious of them in ourselves.

SCIENCE AND PSYCHICAL RESEARCH.

Either we are immortal beings or we are not. We may not know our destiny, but we must have a destiny of some sort. Those who make denials are just as likely to be wrong as those who make assertions; in fact, denials are assertions, thrown into negative form. Scientific men are looked up to as authorities, and should be careful not to mislead. Science may not be able to reveal human destiny, but it certainly should not obscure it. Things are as they are, whether we find them out or not, and if we make rash and false statements, posterity will detect us—if posterity ever troubles its head about us. I am one of those who think that the methods of science are not so limited in their scope as has been thought; that they can be applied much more widely, and that the psychic region can be studied and brought under law too. Allow us anyhow to make the attempt. Give us a fair field. Let those who prefer the materialistic hypothesis

by all means develop their thesis as far as they can; but let us try what we can do in the psychical region and see which wins. Our methods are really the same as theirs—the subject-matter differs. Neither should abuse the other for making the attempt.

Although I am speaking *ex cathedra*, as one of the representatives of orthodox science, I will not shrink from a personal note summarizing the result on my own mind of 30 years' experience of psychical research, begun without predilection—indeed, with the usual hostile prejudice. This is not the place to enter into details or to discuss facts scorned by orthodox science, but I cannot help remembering that an utterance from this chair is no ephemeral production, for it remains to be criticized by generations yet unborn, whose knowledge must inevitably be fuller and wider than our own. Your President, therefore, should not be completely bound by the shackles of present-day orthodoxy, nor limited to beliefs fashionable at the time.

"PERSONALITY PERSISTS BEYOND BODILY DEATH."

In justice to myself and my co-workers I must risk annoying my present hearers, not only by leaving on record our conviction that occurrences now regarded as occult can be examined and reduced to order by the methods of science carefully and persistently applied, but by going further and saying, with the utmost brevity, that already the facts so examined have convinced me that memory and affection are not limited to that association with matter by which alone they can manifest themselves here and now, and that personality persists beyond bodily death. The evidence to my mind goes to prove that discarnate intelligence, under certain conditions, may interact with us on the material side, thus indirectly coming within our scientific ken; and that gradually we may hope to attain some understanding of the nature of a larger, perhaps ætherial, existence and of the conditions regulating intercourse across the chasm. A body of responsible investigators has even now landed on the treacherous but promising shores of a new continent. Yes, and there is more to say than that. The methods of science are not the only way, though they are our way, of being piloted to truth. "*Uno itinere non potest perveniri at tam grande secretum.*"

PROPHETS OF A NEW ERA.

Many scientific men still feel in pugnacious mood towards theology, because of the exaggerated dogmatism which our predecessors encounter-

ed and overcame in the past. They had to struggle for freedom to find truth in their own way; but the struggle was a miserable necessity and has left some evil effects. And one of them is this lack of sympathy, this occasional hostility, to other more spiritual forms of truth. We cannot really and seriously suppose that truth began to arrive on this planet a few centuries ago. The pre-scientific insight of genius—of poets and prophets and saints—was of supreme value, and the access of those inspired seers to the heart of the universe was profound. But the camp followers, the Scribes and Pharisees, by whatever name they may be called, had no such insight, only a vicious or a foolish obstinacy; and the prophets of a new era were stoned.

Now at last we of the new era have been victorious, and the stones are in our hands; but for us to imitate the old ecclesiastical attitude would be folly. Let us not fall into the old mistake of thinking that ours is the only way of exploring the multifarious depths of the universe and that all others are worthless and mistaken. The universe is a larger thing than we have any conception of, and no one method of search will exhaust its treasures. Men and brethren, we are trustees of the truth of the physical universe as scientifically explored: let us be faithful to our trust.

Genuine religion has its roots deep down in the heart of humanity and in the reality of things. It is not surprising that by our methods we fail to grasp it; the actions of the Deity make no appeal to any special sense, only a universal appeal, and our methods are, as we know, incompetent to detect complete uniformity. There is a principle of relativity here, and unless we encounter flaw or jar or change, nothing in us responds; we are deaf and blind, therefore, to the immanent grandeur around us, unless we have insight enough to scrutinize in the woven fabric of existence, flowing continually from the loom in an infinite progress towards perfection, the ever-growing garment of a transcendent God.

EDUCATION IN THE MAGAZINES.

(INDIAN)

Enlightened Educational Policy.

His Excellency the Viceroy spoke as follows in reply to the speech of His Highness the Maharajah of Mysore during His Excellency's stay at Mysore:—

I must congratulate Your Highness upon your enlightened educational policy. Under your fostering care education is making rapid progress and springing from the Annual Conference of 1911. Your Government have recently sanctioned a generous programme which includes provision for a large extension of primary education, measures to supply teachers possessed of higher qualifications, increased grants for female education and an experimental boarding house for Panchamas at Mysore. At the same time a special committee assembled in 1910 to consider the improvement of industrial education is bearing fruit in schemes for a Technical Institute at Mysore, and a Mechanical Engineering School and a Commercial School at Bangalore where progress will be made on tentative lines. I am glad that the vexed question of the revenues of the assigned tracts was last year decided and I am sure that it must be a source of satisfaction to Your Highness to have arrived at a settlement. The more so as an examination of the then accounts show, I understand, a balance due to the Durbar of nearly 40 lakhs of Rupees. It is hardly necessary for me to speak of the relations between the Government of India and the Mysore Durbar. They have always been intimate and friendly and their harmony will, I am confident, never be disturbed, certainly so long as Your Highness is on the *Gadi* and has, as Resident, an officer of Sir Hugh Daly's wisdom and sympathy.

Education in Mysore.

At the Mysore Dasara Representative Assembly the Dewan delivered an address in the course of which he said:—

The year was one of more than usual activity in educational matters. Dealing first with the ordinary progress of education, the number of public and private institutions increased by 90 and the attendance by 7,226. The percentage of boys at school to the male population of school-age rose from 30.1 to 31.3 and that of girls at school to the female population of school-age from 6.2 to 6.8. The number of pupils under instruction in comparison with the population of the

State gives a percentage of 2.9. A great deal more remains to be done to spread primary education in the State. A special grant of two lakhs and a half—one lakh for opening new Primary Schools and improving the existing ones, and a lakh and a half for the construction of Village School buildings—was sanctioned during the year, and a similar special grant of 2½ lakhs has been sanctioned in connection with the current year's budget. The Government have no doubt that the Department of Education is fully alive to the responsibility resting upon it for giving practical effect to the various important schemes that are being sanctioned from time to time.

With regard to higher education, further arrangements were in progress to complete the equipment and the staff required for the two First-grade Colleges to adapt them to the new University Regulations. The Central College was affiliated in Branch II (B) Chemistry, of the B. A. Pass Course. The Chemical Laboratory building is now very nearly complete and provides ample accommodation for the classes concerned.

Government have under consideration the question of opening Honours Courses for both the First-grade Colleges in certain branches in the near future.

A comprehensive scheme of elementary and advanced Technical and Commercial education has been approved by Government and it consists in the main of the establishment of the Chamarajendra Technical Institute at Mysore, and a Commercial and a Mechanical Engineering School at Bangalore. The present Engineering School and the Industrial School at Mysore will be combined to form the nucleus of the new Chamarajendra Technical Institute, which will be located in the spacious building specially constructed for it. The institute will consist of five sections, viz., the Engineering Section, the Industries and Crafts Section, the Fine Arts Section, the Commercial School Section and the Workshop. . . .

Lessons according to the prescribed curriculum are being regularly given under the scheme of religious and moral instruction introduced in November 1908. After nearly five years' experience it is still difficult to say what real advancement has been made and whether any of the desired results have been achieved. In Colleges and High Schools where the teaching of the subject is in the hands of capable teachers the lessons are instructive, but in other schools, want of trained teachers to handle the subjects and the paucity of suitable text-books have made the teaching to lack in interest and to become more or

less stereotyped. The question has to be further discussed as to whether in the long run it is not wiser to leave this branch of education to the parents and communities concerned.

In view of the growing educational activities of the State and the need that is felt to ensure that the increased grants given are utilized to the best advantage the appointment of a Deputy Inspector-General of Education has been sanctioned. This officer will be entrusted with the direct charge of Vernacular education, both Elementary and Secondary, in the State.

The University and the State.

There was a very large attendance at the meeting of the Education Section of the British Association on September 12th, when the general subject under consideration was "The Function of the Modern University in the State." Principal Griffiths presided.

Sir Alfred Hopkinson, who opened the discussion, referred to the great change in the relationship of the Universities to the State during the last 40 years. Oxford and Cambridge were practically the only Universities of the country 40 years ago, and it was striking to see the enormous growth which had taken place since then. There was an idea that the Universities then were not in close relationship to the State. It was perfectly true that the State made no grants for their support and in no way interfered with the management, except by occasionally appointing Commissions, but there was really the very closest relationship. Those who were responsible for the government of the country were practically drawn from the two Universities, as were the permanent officials. When an important post in the Colonies was to be filled, it was as likely as not that the Minister of State sent to the Master of Balliol and said, "Send me a good man." A man who was forming his Cabinet knew what stuff the man he was inviting was made of, and he did not want to see the old system entirely done away with in a hurry. In the same way the Clergy, the Judges, and the Press were then very largely supplied from the old Universities. That state of things had altered, but he doubted whether it would ever entirely disappear, and he did not think it would be an advantage if it did. Two great new factors had appeared in the last 40 years, the fastness of the growth of Universities in the big centres of population and the advancement of the democratic movement. At the present moment, though it was not so originally, the main differentiation

between the newer and the older Universities was not that they studied different subjects or that one was of a higher or a lower type, but that the modern ones were in receipt of State aid at the present time. The position of receiving large State aid introduced an entirely new element.

He took it that the function of the University was threefold. Forty years ago the object put before the tutors of the colleges was to raise up a due supply of persons fitted to serve in Church and State. That was the first and foremost function. The second object—and that was especially the work of the Universities in great centres of population—was not to shut up their influence simply to those who were their students, but as far as possible to be centres from which certain ideals would be put forward and certain interests stimulated in the whole of the community in which they were placed. He was not one who despised popular lectures, and he hoped that their influence would extend. He hoped that the Universities in fixing their course of studies—and he spoke with greater freedom than he would have ventured to do a few months ago—would remember that their object was not so much the training of specialists as of the cultivated merchant or manufacturer who would have a knowledge of the subject and would also have some interest in the life which was quite remote from his ordinary business. The third function was the actual adding to knowledge, and he believed that nothing was more fruitful than that the experienced mind should be brought into contact with the young active mind. They must get rid of that most pestilential heresy of all that existed, that the University was a thing founded to give degrees. He recognized that they were a necessity, but he believed that they were originally invented to stimulate people to work at a time of life when corporal punishment was no longer possible. Let them get rid of the idea that the University professor ought to spend half his time and all his temper on discussing what the degree regulations should be and in altering them from time to time. He hoped that they would always see some representatives of State Departments on the boards of the modern University, for that was all to the good. As regards the relations of the Universities to Parliament, nobody who had anything to do with public life could help recognizing the enormous advantage of University representation in Parliament. There might be reasons for altering it, but they appealed to a different type of mind from his. The State now recognized the need for financial assistance, and successive Chancellors

of the Exchequer had acted wisely and liberally in the policy they had adopted. They had not made big grants at first. Such grants would have been wasted, and a system of progressive increase was the right one. If the modern Universities rose to the full understanding of their functions not only in relation to the State Departments but to the public among whom they were placed, he believed that then and then only would they have really understood their functions and be ready to accomplish their mission. He believed that the present position with regard to the State was more satisfactory and more hopeful than at any time in the past.

Education of Women.

The anniversary and prize distribution of the Government Girls' School, Guntur, was held in the College Hall, on the 3rd instant under the presidency of Mrs. Roy. Mrs. Rhenius, Inspectress of Schools, Northern Circle, delivered an interesting address on the "Education of Women," in the course of which she said:—

The duty of emancipation of women lies at your very door; it is your first duty, an imperative call, that takes no denial. It is the key to national development. Development cannot be one-sided, confined to one sex alone. A nation that has produced a Pegond has also given birth to a Madame Carie. Two famous novelists, one English, the other American, have written novels, having for motive the principle that a system founded on the subjection of women is doomed to perish. Every impulse of manhood in you must respond to the appeal to give your women the best possible. There is a fund of poetical feeling in your people; it finds expression here and there in the poems of a Toru Dutt, a Sarojini Naidu, a Rabindranath Tagore. Does it not help you to picture married life, raised above the plane of expediency and custom to a height where the cultured woman of trained intelligence shares her husband's life in every phase? Such a companionship sanctifies the marriage tie. Again the character of a woman is a valuable asset in the training of her children, and character is the product of education and experience. I have a strong belief in personal application for driving home a truth, and in illustration of my meaning, I will tell you an incident that made a strong impression upon me. Some years ago I was staying with a lady who had a small son of about 3. On one occasion the child was playing on the verandah at midday thoroughly engrossed in his game when the

whistle of an approaching train sounded and almost immediately the child burst into tears and rushed to his mother. A soothing word or two effectually consoled him, and he was carried off by the servant to his mid-day rest. The lady explained afterwards that the whistle of the train was the signal agreed upon for the cessation of play and the mid-day sleep. The training the child was thereby receiving was invaluable. To say nothing of regularity of habit, there was the acceptance without demur after the first involuntary outburst of his mother's wish and the lesson to place inclination second to duty. The fundamental bases of character being the same irrespective of caste, creed, colour, may this task of moulding a child's character be entrusted to a child-mother? I have touched on the attitude of the husband and the peril of the child, the life of the wife and the mother with its meagre outlook, its limited scope, the negation of the development of the natural powers may best be described in the sweet language of your own poetess, she lives "with all her blossoming hopes unharvested, her joys ungarnered, and her songs unsung." I remember years ago reading an extract from a French book in which the writer anticipating Herbert Spencer's idea of a punishment to suit the offence drew on these lines a picture of the torments that awaited the unregenerate. To take one case, Nero, whom History has accredited with the heartlessness of fiddling when Rome was burning has to expiate his sins in the next world as a blind fiddler begging from door to door. Given the powers of Plato, what punishment to suit the offence would one be tempted to mete out to the intellectual Indian of the day? Why! he should be placed behind a purdah. No, he should be bolted and barred within with the pots and pans and be given for mental sustenance, Marsden's Fourth Reader! while his women-folk should be lifted to the Seventh Heaven of the realisation of the joys denied them on earth. But I will not leave you with this gloomy outlook for yourselves. You shall believe with me in a new India where the social fabric will be reconstructed on the loom of a common humanity, the warp and woof shall be equal opportunities, equal rights, equal privileges for man and woman alike. Give the woman the opportunities for intellectual attainment equal in degree if not in quality to that of man; let her emerge from her position of social insignificance; enlarge the range of her activities, and the gift reacting upon the giver will result in a fullness of life for him hitherto undreamt of.

"Yet in the long years closer must they grow;
The man be more of woman, she of man;

(2) Where there is a reasonable excuse for non-attendance, a certificate of exemption may be granted by such authority and in such manner as may be prescribed by Government.

5. If in a recognised school in any area to which this Regulation applies religious classes are held, no boy shall be compelled to attend such classes against the wishes of his parent.

6. In any place to which a notification under Section 1 applies, no person shall employ any boy between the ages of 7 and 11 who is not receiving elementary education in a recognised school or has not obtained a certificate of exemption under Section 4.

7. For the purpose of enforcing the provisions of this Regulation and rules framed thereunder, one or more School Committees may be appointed for each specified area with such powers and in such manner as may be prescribed.

8. (a) A parent who, without lawful excuse fails to send to a recognised school a boy, to whom Section 3 of this Regulation applies, shall be liable on conviction before a Magistrate to a fine not exceeding Rs. 2 provided that a warning in writing shall have been served on the parent by a School Committee or by an Inspecting Officer of the Education Department not lower in rank than an Assistant Deputy Inspector of Schools.

(b) In cases of repeated non-compliance, the parent shall, on conviction, before a Magistrate be liable to a fine not exceeding Rs. 10.

9. Any person who knowingly employs any boy in contravention of the provisions of Section 6 shall, on conviction before a Magistrate, be liable to a fine not exceeding Rs. 20.

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10. The Government may exempt particular classes or communities from the operation of this Regulation.

11. The Government may, by notification in the Gazette, extend the provisions of this Regulation and the rules prescribed thereunder relating to boys within any area to the case of girls also residing in the said area.

12. The Government may, by notification in the Gazette, make rules to provide—

(1) for the exercise of the powers of recognising schools and courses of instruction for the purposes of this Regulation,

(2) by whom and in what manner and to what extent exemption certificates may be granted under Section 4, Sub-Section (2),

(3) for the appointment of School Committees and to define their powers and duties and to regulate in what manner they shall be exercised,

(4) by what authorities and in what manner warning shall be given to parents before the launching of a prosecution before a Magistrate, and

(5) generally for more efficiently carrying out the provisions of this Regulation.

M. VISVESVARAYA,
Deewan.

EDUCATIONAL DEPARTMENT.

Bombay Castle, 13th October 1913.

No. 2945—The following Press Note, No. 2912, dated the 10th October 1913, is published for general information:—

Press Note.

In Press Note No. 1393, dated the 12th May 1913, the sanction of the Secretary of State was announced to the scheme for the establishment of a College of Commerce in Bombay, and it was stated that the

Secretary of State had been requested to select a suitable candidate for the post of Principal of the College. The Secretary of State has recently informed Government that a suitable candidate has not yet been found. Although great difficulties have presented themselves in the way of the early opening of the College, partly owing to the above reason, partly in connection with the question of accommodation, and partly because of the recently introduced changes in the University calendar, the Governor in Council is glad to be able to announce that it has been possible to concert the following provisional arrangements which will admit of the original intention as to the opening of the institution being carried into effect.

2. The College will for the present be accommodated in the Elphinstone College building and instruction will be given between the hours of 8 and 10 in the morning and 5 and 7 in the evening. It will prepare candidates for the Bachelor of Commerce degree of the Bombay University, to which it will be affiliated. A fee of Rs. 40 per term, or Rs. 120 for the academic year, will be charged to the students and will be payable in advance at the commencement of each term. The College will commence work on the 22nd instant.

3. His Excellency the Governor in Council is pleased to make the following provisional appointments in the College pending the arrival of the permanent Principal from England or until further orders:—

(1) Mr. K. Subramani Aiyar, B.A., L.T., F.S.A.A. (London), to act as Principal (honorary).

(2) Mr. Nilkanth Sadashiv Takikhar, M.A., to act as Lecturer in English on Rs. 300 per mensem.

(3) Mr. Ramchandra Mahadev Joshi, M.A., LL.B., to act as Lecturer in Political Economy on Rs. 300 per mensem.

(4) Mr. Bhaskarrao Vithaldas Mehta, M.A., LL.B., to act as Lecturer in Mercantile Law on Rs. 300 per mensem.

(5) Mr. Sorabji Shapurji Engineer, B.A., F.S.A.A. (London), to act as Lecturer in Accountancy on Rs. 300 per mensem.

4. Candidates for admission to the College must have passed the Previous Examination of the Uni-

versity of Bombay or the Intermediate Examination in Arts of any other Indian University, or else must produce a certificate from the Principal of an Arts College affiliated to the University of Bombay showing that they have satisfactorily carried out the work appointed for the first two terms in Arts.

The first term of the College will be from October 22nd to December 22nd, 1913, the second from February 1st to April 30th, 1914, and the third from June 15th to August 15th, 1914. Students belonging to the first batch will be sent up for the Intermediate Examination in Commerce to be held by the University of Bombay in the first week of September 1914.

Applications for admission should be addressed to the Officiating Honorary Principal of the College, Mr. Aiyar, at 89, Apollo Street, Fort, Bombay. Mr. Aiyar will be at the Elphinstone College between the hours of 8 and 10 A.M. on the 20th, 21st and 22nd October 1913 for the purpose of interviewing candidates for admission.

5. His Excellency in Council in announcing these temporary arrangements desires to acknowledge that their early introduction has been rendered possible only through the energy, zeal, and resourcefulness of Mr. K. S. Aiyar, who has consented, pending the arrival in India of the permanent Principal of the College, to give his services in an honorary capacity to the College. The Bombay Government are glad that this institution, which so largely owes its inception to Mr. Aiyar's labours in the cause of commercial education, should first commence operations under his Principalship.

*By order of His Excellency the Right Honourable
the Governor in Council,*

J. L. RIEU,
Secretary to Government.

BRITISH ASSOCIATION.

THE PRESIDENTIAL ADDRESS.

SIR O. LODGE ON SCIENTIFIC DOGMATISM.

The meeting of the British Association opened on September 10th in the Central Hall, Birmingham, where Sir Oliver Lodge, the President, delivered his address before a large audience, including distinguished representatives of every branch of science.

Lord Rayleigh presided at the outset, and among others present were:—

The Lord Mayor, Sir J. J. Thomson, Lord Plymouth, Dr. Bonney, Sir W. Ramsay, Lord Craven, Sir D. Gill, Sir F. Waller, Sir J. Larmor, Professor Perry, Sir G. H. Kenrick, the Bishop of Worcester, Alderman Bowater, Sir E. Brabrook, Dr. G. Barling, Professor Herdman, Alderman Denrick, Dr. Carey Foster, the Archbishop of Birmingham, Professor Lapworth, Dr. D. H. Scott, Alderman Clayton, Major MacMahon, Mr. Willis Bund, and the Town Clerk.

Lord Rayleigh explained that he occupied the chair for a few minutes as the senior ex-President of the Association. It was 30 years since at the Montreal meeting he was known for a week as "the boss scientist." In the normal state of things it would have been the duty of the President of the year to have opened the proceedings, but unfortunately Sir Edward Schafar had written to express regret that, owing to the fact that long since he had undertaken to deliver the Lane lectures in San Francisco in the first week of September, he could not be present. He had added:—"It would have been a real pleasure to induce my friend and colleague into the presidential chair, and to listen to his address. The loss is mine, but I have at any rate the satisfaction of knowing that the mantle has fallen upon Elisha, and that the success of the meeting is ensured beyond the possibility of doubt." It was supposed to be the duty of the Chairman to introduce the new President, but it was an absurdity to introduce Sir Oliver Lodge in Birmingham. His work was known, but all might not remember that he was a pioneer in wireless telegraphy, and was in the field even before Hertz and had done much to prepare the way for the great practical success which had been reached.

THE ADDRESS.

The President then delivered his address, which had as its title "Continuity," followed by the motto, "Natura non vincitur nisi parendo." In the course of the address he said:—

First let me lament the catastrophe which has led to my occupying the chair here in this city. Sir William White was a personal friend of many here present, and I would that the citizens of Birmingham could have become acquainted with his attractive personality and heard at first-hand of the strenuous work which he accomplished in carrying out the behests of the Empire in the construction of its first line of defence. Although a British Association address is hardly an annual stock-taking, it would be improper to begin this year of office without referring to three more of our losses:—One that cultured gentleman, amateur in the best sense, who has chosen to preside over our jubilee meeting at York 32 years ago. Sir John Lubbock, first Baron Avebury, cultivated science in a spirit of pure enjoyment treating it almost as one of the arts; and devoted social and political energy to the welfare of the multitude of his fellows less fortunately situated than himself.

Through the untimely death of Sir George Darwin the world has lost a mathematical astronomer whose work on the tides and allied phenomena is a monument of power and achievement. So recently as our visit to South Africa he occupied the presidential chair.

Within the last month I have heard of the premature death of John Milne, who was apparently at the height of his energy and usefulness. His enthusiasm and persevering work for seismology, conducted throughout with a committee of the British Association, has resulted in an international organization centring round his personality. He has, I am told, left £1,000 to help to continue the work, and it behoves us to see that no sinews of war shall be lacking to assist in organizing and continuing the attack in this immensely important field of combined and co-operative research.

By the third of our major losses, I mean the death of that brilliant mathematician of a neighbouring nation who took so comprehensive and philosophic a grasp of the intricacies of physics, and whose eloquent though sceptical expositions of our laws and processes, and of the modifications entailed in them by recent advances, will be sure to attract still more widespread attention among all to whom the rather abstruse subject-matter is sufficiently familiar. I cannot say that I find

myself in agreement with all that Henri Poincaré wrote or spoke in the domain of physics, but no physicist can help being interested in his mode of presentation, and I may have occasion to refer, in passing, to some of the topics with which he dealt.

SCIENTIFIC PROGRESS AND FUNDAMENTAL SCEPTICISM.

And now, eliminating from our purview, as is always necessary, a great mass of human activity, and limiting ourselves to a scrutiny on the side of pure science alone let us ask what, in the main, is the characteristic of the promising though perturbing period in which we live. Different persons would give different answers, but the answer I venture to give is—rapid progress combined with fundamental scepticism. Rapid progress was not characteristic of the latter half of the 19th century—at least not in physics. Fine solid dynamical foundations were laid, and the edifice of knowledge was consolidated; but wholly fresh ground was not being opened up, and totally new buildings were not expected. With the realization of predicted ether waves in 1888, the discovery of X-rays in 1895, spontaneous radio-activity in 1899, and the isolation of the electron in 1898, expectation of further achievement became vivid; and novelties, experimental, theoretical, and speculative, have been showered upon us ever since this century began. That is why I speak of rapid progress. Of the progress I shall say little—there must always be some uncertainty as to which particular achievement permanently contributes to it; but I will speak about the fundamental scepticism.

Let me hasten to explain that I do not mean the well-worn and almost antique theme of theological scepticism—that controversy is practically in abeyance just now. At any rate, the major conflict is suspended; the forts behind which the enemy has retreated do not invite attack; the territory now occupied by him is little more than his legitimate province. It is the scientific allies, now who are waging a more or less invigorating conflict among themselves, with philosophers joining in. Meanwhile the ancient foe is bidding his time and hoping that from the struggle something will emerge of benefit to himself. Some positions, he feels, were too hastily abandoned and may, perhaps, be retrieved; or, to put it without metaphor, it seems possible that a few of the things prematurely denied, because asserted on inconclusive evidence, may, after all in some form or other, have really happened. Thus, the old theological bitterness is mitigated, and a tem-

porizing policy is either advocated or instinctively adopted.

SOME DOMINATING CONTROVERSIES.

To illustrate the nature of the fundamental scientific or philosophic controversies to which I do refer would require almost as many addresses as there are sections of the British Association, or, at any rate as many as there are chief cities in Australia; and perhaps my successor in the chair will continue the theme but, to exhibit my meaning very briefly, I may cite the kind of dominating controversies now extant, employing as far as possible only a single word in each case so as to emphasize the necessary brevity and insufficiency of the reference. In physiology the conflict ranges round vitalism. (My immediate predecessor dealt with the subject at Dundee.) In chemistry the debate concerns atomic structure. (My penultimate predecessor is well aware of pugnacity in that region). In biology the dispute is on the laws of inheritance. (My successor is likely to deal with this subject probably in a way not deficient in liveliness.) And besides these major controversies debate is active in other sections. In education curricula generally are being overhauled or fundamentally criticized, and revolutionary ideas are promulgated concerning the advantages of freedom for infants. In economic and political science, or sociology, what is there that is not under discussion? Not property alone, nor land alone, but everything—back, to the Garden of Eden and the inter relations of men and women. Lastly in the vast group of mathematical and physical sciences, "slurred over rather than summed up as Section A," present-day scepticism concerns what, if I had to express it in one word, I should call continuity. The full meaning of this term will hardly be intelligible without explanation, and I shall discuss it presently.

Still more fundamental and deep-rooted than any of these sectional debates, however, a critical examination of scientific foundations generally is going on; and a kind of philosophic scepticism is in the ascendant, resulting in a mistrust of purely intellectual processes and in a recognition of the limited scope of science.

DEFENCE OF NEWTONIAN MECHANICS.

Not by philosophers only, but by scientific men also, ancient postulates are being pulled up by the roots. Physicists and mathematicians are beginning to consider whether the long-known and well-established law of mechanics hold true everywhere and always, or whether the Newtonian scheme must be replaced by something more modern,

something to which Newton's laws of motion are but an approximation. Indeed, a whole system of non-Newtonian mechanics has been devised, having as its foundation the recently-discovered changes which must occur in bodies moving at speeds nearly comparable with that of light. It turns out, in fact, that both shape and mass are functions of velocity. As the speed increases the mass increases and the shape is distorted, though under ordinary conditions only to an infinitesimal extent. So far I agree; I agree with the statement of fact; but I do not consider it so revolutionary as to overturn Newtonian mechanics. After all, a variation of mass is familiar enough, and it would be a great mistake to say that Newton's second law breaks down merely because mass is not constant. A raindrop is an example of variable mass; or the earth may be, by reason of meteoric dust; or the sun, by reason of radio activity; or a locomotive, by reason of the omission of steam. In fact variable masses are the commonest, for friction may abrade any moving body to a microscopic extent.

That mass is constant is only an approximation. That mass is equal to ratio of force and acceleration is a definition, and can be absolutely accurate. It holds perfectly even for an electron with a speed near that of light; and it is by means of Newton's second law that the variation of mass with velocity has been experimentally observed and compared with theory. I urge that we remain with, or go back to, Newton. I see no reason against retaining all Newton's laws, discarding nothing, but supplementing them in the light of further knowledge.

MORE DISCOVERY, MORE COMPLEXITY.

One thing is very notable, that it is closer and more exact knowledge that has led to the kind of scientific scepticism now referred to; and that the simple laws on which we used to be working were thus simple and discoverable because the full complexity of existence was tempered to our ken by the roughness of our means of observation. Kepler's laws are not accurately true, and if he had had before him all the data now available he could hardly have discovered them. A planet does not really move in an ellipse, but in a kind of hypocycloid and not accurately in that either. So it is also with Boyle's law and the other simple laws in physical chemistry. Even Van der Waals's generalization of Boyle's law is only a further approximation.

In most parts of physics simplicity has sooner or later to give place to complexity; though certainly I urge that the simple laws were true, and are

still true, as far as they go, their inaccuracy being only detected by further real discovery. The reason they are departed from becomes known to us; the law is not really disobeyed, but is modified through the action of a known additional cause. Hence it is all in the direction of progress.

THE FIGHT BETWEEN CONTINUITY AND DISCONTINUITY.

If we had to summarize the main trend of physical controversy at present, I feel inclined to urge that it largely turns on the question as to which way ultimate victory lies in the fight between continuity and discontinuity. On the surface of nature at first we see discontinuity; objects detached and countable. Then we realize the air and other media, and so emphasize continuity and flowing quantities. Then we detect atoms and numerical properties, and discontinuity once more makes its appearance. Then we invent the ether and are impressed with continuity again. But this is not likely to be the end; and what the ultimate end will be, or whether there is an ultimate end, is a question difficult to answer.

The modern tendency is to emphasize the discontinuous or atomic character of everything. Matter has long been atomic, in the same sense as anthropology is atomic; the unit of matter is the atom, as the unit of humanity is the individual. Whether men or women or children—they can be counted as so many "souls." And atoms of matter can be counted too.

Certainly, however, there is an illusion of continuity. We recognize it in the case of water. It appears to be a continuous medium, and yet it is certainly molecular. It is made continuous again, in a sense, by the ether postulated in its pores; for the ether is essentially continuous, though Osborne Reynolds, it is true, invented a discontinuous or granular ether, on the analogy of the seashore. The sands of the sea, the hairs of the head, the descendants of a patriarch, are typical instances of numerable, or rather of innumerable, things. The difficulty of enumerating them is not that there is nothing to count but merely that the things to be counted are very numerous. So are the atoms in a drop of water—they outnumber the drops in an Atlantic Ocean—and, during the briefest time of stating their number, 50 millions or so may have evaporated; but they are as easy to count as the grains of sand on a shore.

THE INVASION OF NUMBER INTO UNSUSPECTED REGIONS.

Electricity itself—i.e., electric charge—strangely enough has proved itself to be atomic. There is a

natural unit of electric charge, as suspected by Faraday and Maxwell and named by Johnstone Stoney. Some of the electron's visible effects were studied by Crookes in a vacuum, and its weighing and measuring by J. J. Thomson were announced to the British Association meeting at Dover in 1899—a fitting prelude to the 20th Century.

Even magnetism has been suspected of being atomic and its hypothetical unit has been named in advance the magneton; but I confess that here I have not been shaken out of the conservative view. We may express all this as an invasion of number into unsuspected regions. Biology may be said to be becoming atomic. It has long had natural units in the shape of cells and nuclei, and some discontinuity represented by body-boundaries and cell-walls; but now, in its laws of heredity as studied by Mendel, number and discontinuity are strikingly apparent among the reproductive cells, and the varieties of offspring admit of numerical specification and prediction to a surprising extent; while modification by continuous variation, which seemed to be of the essence of Darwinism, gives place to, or at least is accompanied by mutation, with finite and considerable and in appearance discontinuous change. So far from Nature not making jumps, it becomes doubtful if she does anything else. Her hitherto placid course, more closely examined, seems to look like a kind of steeplechase.

Yet undoubtedly continuity is the backbone of evolution, as taught by all biologists—no artificial boundaries or demarcation between species—a continuous chain of heredity from far below the amoeba up to man. Actual continuity of undying germ-plasm, running through all generations, is taught likewise; though a strange discontinuity between this persistent element and its successive accessory body-plasms—a discontinuity which would convert individual organism into mere accretions or excretions, with no power of influencing or conveying experience to their generating cells—is advocated by one school.

DISCONTINUITY AND PURE MATHEMATICS.

Discontinuity does not fail to exercise fascination even in pure mathematics. Curves are invented which have no tangent or differential coefficient, curves which consist of a succession of dots or of twists; and the theory of commensurable numbers seems to be exerting a dominance over philosophic mathematical thought as well as over physical problems. And not only these fairly accepted results are prominent, but some more difficult and unexpected theses in the same direction are being propounded, and the atomic charac-

ter of energy is advocated. We had hoped to be honoured by the presence of Professor Planck, whose theory of the quantum, or indivisible unit or atom of energy, excites the greatest interest, and by some is thought to hold the field.

Then again radiation is showing signs of becoming atomic or discontinuous. The corpuscular theory of radiation is by no means so dead as in my youth we thought it was. Some radiation is certainly corpuscular, and even the ætherial kind shows indications which may be misleading, that it is as otty or locally concentrated into points as if the wave front consisted of detached specks or patches; or, as J. J. Thomson says, "the wave-front must be more analogous to bright specks on a dark ground than to a uniformly illuminated surface, thus suggesting that the æther may be fibrous in structure, and that a wave runs along lines of electric force, as the genius of Faraday surmised might be possible, in his "Thoughts on Ray Vibration." Indeed, Newton guessed something of the same kind, I fancy, when he superposed æther-pulses on his corpuscles.

IMPORTANCE OF RADIATION.

Whatever be the truth in this matter, a discussion on radiation, of extreme weight and interest, though likewise of great profundity and technicality, is excepted in Section A. We welcome Professor Lorentz, Dr. Arrhenius, Professor Langevin, Professor Pringsheim, and others, some of whom have been specially invited to England because of the important contributions which they have made to the subject-matter of this discussion.

Why is so much importance attached to radiation? Because it is the best-known and longest-studied link between matter and æther, and the only property we are acquainted with that affects the unmodified great mass of æther alone. Electricity and magnetism are associated with the modifications or singularities called electrons; most phenomena are connected still more directly with matter. Radiation however, though excited by an accelerated electron, is subsequently let loose in the æther of space, and travels as a definite thing at a measurable and constant pace—a pace independent of everything so long as the æther is free, unmodified and unloaded by matter. Hence radiation has much to teach us and we have much to learn concerning its nature. How far can the analogy of granular, corpuscular, countable, atomic, or discontinuous things be pressed? There are those who think it can be pressed very far. But to avoid misunderstanding let me state, for what it may be worth, that I

myself am an upholder of *ultimate* continuity and fervent believer in the æther of space.

PROGRESS IN THE STUDY OF MOLECULES.

One very valid excuse for the prevalent attitude towards discontinuity is the astonishing progress that has been made in actually seeing or almost seeing the molecules, and studying their arrangement and distribution.

The laws of gases have been found to apply to emulsions and to fine powders in suspension, of which the Brownian movement has long been known. This movement is caused by the orthodox molecular bombardment, and its average amplitude exactly represents the theoretical mean free path calculated from the "molecular weight" of the relatively gigantic particles. The behaviour of these microscopically visible masses corresponds closely and quantitatively with what could be predicted for them as fearfully heavy atoms, on the kinetic theory of gases; they may, indeed, be said to constitute a gas with a grammolecule as high as 200,000 tons; and, what is rather important as well as interesting, they tend visibly to verify the law of equipartition of energy even in so extreme a case, when that law is properly stated and applied.

Still more remarkable—the application of X-rays to display the arrangement of molecules in crystals, and ultimately the arrangement of atoms in molecules, as initiated by Professor Lane with Drs. Friedrich and Knipping, and continued by Professor Bragg and his son and by Dr. Tutton, constitute a series of researches of high interest and promise. By this means many of the theoretical anticipations of our countryman Mr. William Barlow and—working with him—Professor Pope, as well as of those distinguished crystallographers von Groth and von Fedorow, have been confirmed in a striking way. These brilliant researches, which seem likely to constitute a branch of physics in themselves, and which are being continued by Messrs. Mosely and C. G. Darwin, and by Mr. Keene and others, may be called an apotheosis of the atomic theory of matter.

ADVOCACY OF A CONSERVATIVE ATTITUDE.

Now in all the debatable matters of which I have indicated possibilities I want to urge a conservative attitude. I accept the new experimental results on which some of these theories—such as the principle of relativity—are based, and am profoundly interested in them; but I do not feel that they are so revolutionary as their propounders think. I see a way to retain the old and yet

embrace the new, and I urge moderation in the uprooting and removal of land-marks. And of these the chief is continuity. I cannot imagine the exertion of mechanical force across empty space, no matter how minute; a continuous medium seems to me essential. I cannot admit discontinuity in either space or time, nor can I imagine any sort of experiment which would justify such a hypothesis. For surely we must realize that we know nothing experimental of either space or time; we cannot modify them in any way. We make experiments on bodies, and only on bodies, using "body" as an exceedingly general term.

THE REALITY OF THE ÆTHER.

Very well then, what about the æther—is that in the same predicament? Is that an abstraction or a mere convention, or is it a concrete physical entity or which we can experiment? Now it has to be freely admitted that it is exceedingly difficult to make experiments on the æther. It does not appeal to sense, and we know no means of getting hold of it. The one thing we know metrical about it is the velocity with which it can transmit transverse waves. That is clear and definite, and thereby to my judgment it proves itself a physical agent, not indeed tangible or sensible, but yet concretely real. But it does elude our laboratory grasp. If we rapidly move matter through it, hoping to grip it and move it too, we fail; there is no mechanical connexion. And even if we experiment on light we fail too. So long as transparent matter is moving relatively to us, light can be affected inside that matter; but when matter is relatively stationary to matter nothing observable takes place, however fast things may be moving, so long as they move together.

Hence arises the idea that motion with respect to æther is meaningless; and the fact that only relative motion of pieces of matter with respect to each other has so far been observed is the foundation of the principle of relativity. It sounds simple enough as thus stated, but in its developments it is an ingenious and complicated doctrine embodying surprising consequences which have been worked out by Professor Einstein and his disciples with consummate ingenuity.

Now the facts are that no motion with reference to the æther alone has ever yet been observed; there are always curious compensating effects which just cancel out the movement-terms and destroy or effectively mask any phenomenon that might otherwise be expected. When matter moves past matter observation

can be made; but, even so, no consequent locomotion of æther, outside the actually moving particles, can be detected.

MEASUREMENT OF ÆTHERIAL MOTION.

To detect motion through æther we must use an ætherial process. We may use radiation and try to compare the speeds of light along or across the motion; or we might try to measure the speed, first with the motion and then against it. But how are we to make the comparison? If the time of omission from a distant source is given by a distant clock, that clock must be observed through a telescope—that is, by a beam of light, which is plainly a compensating process. Or the light from a neighbouring source can be sent back to us by a distant mirror, when again there will be compensation. Or the starting of light from a distant terrestrial source may be telegraphed to us, either with a wire or without; but it is the æther that convey the message in either case, so again there will be compensation. Electricity, magnetism, and light are all effects of the æther. Use cohesion then; have a rod stretching from one place to another, and measure that. But cohesion is transmitted by the æther too, if, as believed, it is the universal binding medium. Compensation is likely; compensation can, on the electrical theory of matter, be predicted. Use some action not dependent on æther, then. Very well, where shall we find it?

The fact is we are living in an epoch of some very comprehensive generalizations. The physical discovery of the 20th century, so far, is the electrical theory of matter. This is the great new theory of our times; it was referred to, in its philosophical aspect, by Mr. Balfour in his presidential address at Cambridge in 1904. We are too near it to be able to contemplate it properly; it has still to establish itself and to develop in detail, but I anticipate that in some form or other it will prove true.

The theory is bound to have curious consequences, and already it has contributed to some of the up-rooting and uncertainty that I speak of. For if it be true every material interaction will be electrical—i. e., ætherial; and hence arises our difficulty. Every kind of force is transmitted by the æther, and hence, so long as all our apparatus is travelling together at one and the same pace, we have no chance of detecting the motion. That is the strength of the principle of relativity. The changes are not zero, but they cancel each other out of observation.

DIFFICULTY OF OBSERVING THE ÆTHER OF SPACE.

It is the extreme omnipresence and uniformity and universal agency of the æther of space that makes it so difficult to observe. To observe anything you must have differences. If all actions at a distance are conducted at the same rate through the æther, the travel of none of them can be observed. Find something not conveyed by the æther and there is a chance. But then every physical action is transmitted by the æther, and in every case by means of its transverse or radiation like activity. Except perhaps gravitation. That may give us a clue some day, but at present we have not been able to detect its speed of transmission at all. No plan has been devised for measuring it. Nothing short of the creation or destruction of matter seems likely to serve; creation or destruction of the gravitational unit, whether it be an atom or an electron or whatever it is. Most likely the unit of weight is an electron, just as the unit of mass is. The so-called non-Newtonian mechanics, with mass and shape a function of velocity, is an immediate consequence of the electrical theory of matter. The electrical theory of matter is a positive achievement, and has positive results. By its aid we make experiments which throw light upon the relation between matter and the æther of space. The principle of relativity, which seeks to replace it, is a principle of negation, a negative proposition, a statement that observation of certain facts can never be made, a denial of any relation between matter and æther, a virtual denial that the æther exists. Whereas if we admit the real changes that go on by reason of rapid motion, a whole field is open for discovery; it is even possible to investigate the changes in shape of an electron—appallingly minute though it is—as it approaches the speed of light; and properties belonging to the æther of space, evasive though it be, cannot lag far behind.

THE FOUNDATION OF MATERIAL CONTINUITY.

Speaking as physicist I must claim the æther as peculiarly our own domain. The study of molecules we share with the chemist, and matter in its various forms is investigated by all men of science, but a study of the æther of space belongs to physics only. I am not alone in feeling the fascination of this portentous entity. Its curiously elusive and intangible character, combined with its universal and unifying permanence, its apparently infinite extent, its definite and perfect properties make the æther the most interesting as it is by far the largest and most fundamental ingredient in the material cosmos. As Sir J. J.

He gain sweetness and in moral height,
Nor lose the wrestling thews that throw;
She mental breath, nor fail in childward care,
Nor lose the childlike in the larger mind;
Till at the last she set herself to man,
Like perfect music unto noble words."

The Calcutta University.

Mr. C. C. Ghose's Opinion.

Mr. C. C. Ghose writes as follows to the "Nation":—

I crave the hospitality of your columns to draw the attention of the English public, and especially of the educational world here, to an urgent matter of definite public importance in Bengal which has arisen within the last few months—namely the policy that is being followed by the Government of India, in its Education Department, towards the University of Calcutta.

The Indian Universities Act of 1904 passed by Lord Curzon's Government, enunciated the ideal to which the existing Universities were to come up—namely that they were to cease to be merely examining bodies and convert themselves into teaching Universities. The policy enunciated by the Government of that day and embodied in the Universities Act of 1904 has been religiously followed by the Calcutta University. Since 1904, the University of Calcutta, under the leadership of its distinguished Vice-Chancellor, Sir Ashutosh Mookerjee, has established several chairs—namely the Minto Professorship of Economics, the George the Fifth Professorship of Philosophy, the Hardinge Professorship of Applied Mathematics, the Carmichael Professorship of Ancient Indian History, and is about to establish the Palit Professorships of Physics and Chemistry, Applied Mathematics and Botany. The Calcutta University has also been able since 1904 to institute various courses of lectures by such distinguished scholars as Professor Schubert, Professor Hermann Jacobi, Professor Hermann Oldenberg, Professor Andrew Russell Forsyth, and we in Calcutta are looking forward to listening, in the near future to Dr. Paul Vinogradoff, Monsieur Sylvain Levy and Dr. Otto Straus, of the University of Kiel. The Government of India, in its Education Department, however, are apparently appalled at the adherence of the University to the terms of the Statute of 1904, and their policy as far as one can make out at the present moment is to break up the older Universities like Calcutta by a process of starvation (the Government of India, in its Education Depart-

ment have refused to contribute any large sums of money towards the establishment of the recently proposed University College of Science in Calcutta), and to establish new ones in the provincial towns, where in the nature of things the decrees promulgated by the Civil Service from time to time would in all probability be registered by the governing bodies of the proposed Universities and not subjected to that searching criticism of official acts which had hitherto proceeded from the University of Calcutta.

In the second place public opinion in Bengal has recently been startled by the proposal of the Government to abolish the Matriculation or Entrance examination of the University of Calcutta—an examination which had since 1857 been controlled by the University only—and to replace it by a School Final which is not to be controlled by the University but by the Government Education Department. This would and could only mean that only such schools as the Government chose from time to time could prepare students for admission to the University and that the Government would practically and in actual practice, appoint the schoolmaster—that is to say instead of a small modicum of liberty being allowed to Indians in the very important matter of the education of their boys and girls, the existing privileges such as they are, are to be taken away.

The proposal has caused the most widespread alarm in Bengal and it is reasonably certain that, unless the Government very largely modifies the scheme, there will be a tremendous agitation in Bengal, as loud and as vigorous if not more so, as the agitation against Lord Curzon's Partition of Bengal. What Bengal wanted and prayed of the English people was to be left alone for a number of years. We have just passed through the throes of an acute agitation and we would beg of the English people and of their agents in India, to be left in peace, and to be allowed to develop the education of our boys and girls on normal lines. If England granted that prayer such progress would be made in Bengal as would rejoice the heart of every true Liberal and of everyone who takes a just pride in India.

(FOREIGN)

Indian Students in America.

The careful attention of students in India is drawn to the following points by the Bulletin of the Hindusthan Association, U. S. A.:—

(1) There are nearly 20 first class institutions in the U. S. A. equal to the best in the world

which teach Literature, Arts, Economics (theoretical and applied), Science of Government, Sociology (theoretical and applied), Education, all the Pure Sciences and the Applied Sciences, like all branches of engineering, medicine and surgery, agriculture, chemistry, physics, etc., in fact, all branches of human knowledge. The equipment of laboratories and libraries in nearly all of these is complete, to be found only in some of the best Universities of Europe. There are many technical schools and colleges where practical and theoretical training in all branches of engineering can be had at a moderate cost.

(2) Graduates in the science courses of the Indian Universities will find here unlimited opportunities for practical training and research work in the laboratories which they can never find in India and only with much expense in Europe. After graduating from here they can also find profitable employment as assistants in various experimental stations and as engineers and chemists in factories as many of our students are doing, and in this way they can get valuable experience, and command good salary.

(3) Graduates of Indian Universities who have studied systematically the history, philosophy, art, literature, and civilisation of India, can find opportunities as lecturers and professors in the American Universities and will thus be doing an immense service to both the countries.

(4) No one should come to America as a student unless he has passed the Matriculation examination in India and he should then be prepared to study in the high schools of America for about two years before he enters the University. To be able to enter the American University and pursue their studies with satisfaction, students must have passed the Intermediate examination (First Arts) in India or at least have read up to its standards. We would not advise anybody to come who does not possess good health, earnestness of purpose and good character.

(5) Self-support is possible all throughout the country, but it is difficult, though not impossible to work and go to college at the same time. Only those that are resourceful, energetic, hardworking, and earnest can succeed. A few of our self-supporting students have failed, though many have succeeded. The life of an entirely self-supporting student is very hard and trying and they should be prepared to undergo all kinds of hardships which are recompensed, when successful, by the supreme joy of a self-made manhood.

(6) We would advise students intending to be

self-supporting to have a practical knowledge of the following, before they start from India, carpentry, surveying, drafting, brick-laying or plastering, which are well-paid trades in America.

(7) No student without any serious purpose should come to America. Life in America is no plain sailing, but full of hard knocks. Neither is education or degrees easily obtainable. They will require just as hard and more conscientious work as in India, but with the difference that it will bring increasing interest in the work and power and faith in one's ability. Sentimental young men with exaggerated opinion of their powers should not come as students.

(8) Students, whether self-supporting or otherwise, should have at least Rs. 350 to 400 with them when they land in America as they will be required to show Rs. 150 to the immigration officers before they are allowed to land. It is advisable that they should have more money for expenses for at least four or five months. To avoid trouble we would advise students to land in New York or in Seattle and between Europe to America or Japan to America they should travel second class. Information about steamers and rates can be obtained from the steamship offices in Calcutta and Bombay. Students should better bring their University certificates and also of the college of last attendance with mention of subjects studied. If the students should write to the local officers of our Association in advance, the name of the steamer and the date of arrival, they will arrange to meet them at the time of landing and help them in all possible ways. A little study of the map of America will be very helpful.

(9) One of the main purposes of our Association is to help our fellow-students in India to come to America for education. The benefit of our experience we will be always glad to extend to them. We pray earnestly that worthy and serious students may come in larger numbers as there is room for thousands of our students in the schools and colleges of America. The general Secretary will gladly furnish all information about education in America.

English Literature in the Modern University. Sir Sidney Lee's Views.

Sir Sidney Lee, who has been lately appointed by the Senate of the University of London to a new chair of English Language and Literature, delivered his inaugural lecture at East London College, where the Professorship is tenable. The

chair was taken by Sir Cornelius Dalton. The following are extracts from the lecture:—

True literature had in matter and manner to stir intellectual or emotional interest, transcending any impression produced by the record of a liberal experience. It made a threefold appeal—to the mind, to the heart, and to the ear. Shakespeare's work was the greatest contribution to English literature. But the student would not wisely ignore any book which had been admitted by recognised authority to a permanent place in the scale of fame. The study of English divided itself into four main branches—criticism, history, philology, and composition—all which asked for concurrent treatment. Criticism was at the root of the whole matter. The ultimate good derivable from the academic study of English literature largely depended on the Professor's practical interpretation of that chameleon-like term. Criticism of English literature was best defined as 'exegesis'—the leading out of a book all that was in it. It embraced all means of throwing light on the text of a piece of writing and of drawing forth its full meaning; it examined the form, described the modes of composition, traced the sources of inspiration, showed the strength or weakness of the author's thought and feeling. It sought to ascertain the true force and value of literary matter and manner. Room must always be left in the fabric of literary study for the play of the student's individual taste and judgment. The reading of books should be a bracing exercise, a wrestling with ideas greater than any the student could create for himself. By the special student comparative criticism of literature could not be safely ignored. No great national literature ever subsisted without foreign nutrition. 'A people,' wrote Walter Pater, 'without intellectual commerce with other peoples' had never done anything conspicuous in literature. A piece of great literature was a mighty chain of which the links were forged in many workshops. In literary history, the second division of the study, they sought the external circumstances—political, social, economic—in which literature was produced. Literary history co-ordinated the phenomena. It should be no skeleton of dates and names, no charnel-house of dry bones. It should be a thing of flesh and blood, a living guide to the practical expedience of the author and a moving picture of his environment. Philology dealt with words, the raw materials of literature. It had all the characteristics of an exact science and had the same disciplinary value. It embraced every aspect of language, and included the study of phonetics—the science of pronunciation which was a potent force in the formation and transformation of

words. Turning to the last branch of literature—the practice of composition—Sir Sidney laid down the axiom that no one wrote good English who had not read good English with appreciation and intelligence. Assimilation was a main element in effective literary composition. 'Ex nihilo nihil fit' was a pertinent maxim.

Originality usually meant the saying, in a more convincing, more impressive, more beautiful way, of something nearly resembling what had been said before. That conclusion applied not only to men of mediocre capacity, but to men of the highest genius; Shakespeare's work was an exemplification of it. R. L. Stevenson became a writer by 'playing the sedulous ape to Hazlitt, to Lamb, to Wordsworth, to Sir Thomas Browne, to Defoe, to Hawthorne.' Students should form the habit of drinking in the matter and manner of their author intuitively, instinctively. Impressive passages should be read aloud or committed to memory. The way in which paragraphs were built up should be carefully noted. The student should come in the light of his reading to realise that the merit of writing was proportioned to its simplicity, directness, good taste, and sincerity. Whatever one's walk in life, whether they became men of science or engaged in commerce or in work of administration, the power of writing well would always increase their efficiency and contribute to their success. Complaint was commonly made that, owing to defects in their educational system, command of clear and pointed language was more narrowly distributed in England than in other countries. It was sometimes alleged that Army officers, men of science, and schoolmasters could not write intelligible English. Such defects, if true, might be remedied if every student devoted some part of his time to an intelligent study of great English literature. All great literatures held in solution the spirit of liberal culture, such as Universities exist to disseminate. But their own literature now enjoyed a patent of precedence in the world at large. In France, Germany, Russia, and Italy it was reckoned to be a liberalising agent; it was hard to dispute that English literature at an English University should fill a foremost place in the hierarchy of literary studies. It was to be hoped that special students would follow the stimulating examples of foreign students of English in foreign Universities and engage in original research. There was room for fresh labourers in the field, and the best proof of the Professor's success would lie in the endeavour of one or more of his students to better his instruction and to make paths for themselves in unknown territory. The laboratory of the English student was the college library.

The student should have at hand the best texts, edited on scholarly lines, of every author who had contributed to the nation's literary achievement. He should have, in addition, wise and pertinent comment and all treatises of philology and literary history, which lent genuine help in interpretation. The test of a good commentary lay in its terseness and relevance; its value was in inverse ratio to its bulk. Up-to-date bibliographies were valuable implements of work. At the same time, the student should seek to form a library of his own. The cheap reprints which abounded gave the student whose pecuniary resources were small the opportunity of acquiring for himself the records of great thought, great ideas, great emotions. In conclusion, Sir Sidney said that, apart from any purely academic aspect, literary sympathy and enthusiasm made for human happiness, giving consolation in times of sorrow and adding zest to the enjoyment of good fortune. He held that academic training could stimulate the healthy growth of a love of right reading and even create it in those in whom it had not been implanted by environment. His hope was that in the succession of students who would graduate from East London College there would be many who would spread far and wide in the outer world the glad tidings of literature's saving grace.

THE UNIVERSITIES.

CALCUTTA UNIVERSITY.

Special Meeting.

A special meeting of the Senate was held at the Senate House, College Square, on Saturday, the 15th instant, to transact the following:—

1. The Syndicate to recommend to the Senate that a Congratulatory Address be presented to His Excellency the Viceroy and Chancellor of the University on the occasion of his forthcoming visit to Calcutta.

2. The Syndicate to recommend to the Senate that a Special Convocation be held for conferring Honorary Degrees.

3. The Syndicate to recommend to the Senate that Honorary Degrees be conferred upon the following gentlemen on the ground, that by reason of eminent position and attainments, each of them is, in their opinion, a fit and proper person to receive the degree proposed to be conferred upon him:—

Dr. Paul Vinogradoff, M.A., D.C.L., LL.D., Dr. Hist., Dr. Jur. F.R.A., Corpus Professor of Jurisprudence. Oxford—Honorary Degree of Doctor of Law.

Dr. Hermann Jacobi, Ph.D., Professor of Sanskrit in the University of Bonn—Honorary Degree of Doctor of Literature.

Dr. William Henry Young, M.A., D.Sc., F.R.S., Hardinge Professor of Mathematics—Honorary Degree of Doctor of Science.

Dr. Rashbihary Ghose, C.S.I., C.I.E., M.A., D.L.—Honorary Degree of Doctor of Philosophy.

Mr. Rabindranath Tagore—Honorary Degree of Doctor of Literature.

Mr. Henry Herbert Hayden, C.I.E., B.A., B.E., F.G.S., Director, Geological Survey of India—Honorary Degree of Doctor of Science.

Dr. Sylvain Levi, D. Litt., Professor, Collège de France, Paris—Honorary Degree of Doctor of Literature.

Ordinary Meeting.

An ordinary meeting of the Senate was held at the Senate House, College Square, on the 15th instant, immediately after the special meeting of the Senate to transact the following among many subjects of importance:—

To recommend the appointment of Mr. C. J. Hamilton, M.A., to the Minto Professor of Economics for a term of five years on a salary of Rs. 12,000 a year; to recommend Mr. Robert Knox, M.A., as Assistant Professor of English for five years on Rs. 750 a month; to recommend that Mr. P. Chakrabatti, M.A., be appointed as University Lecturer in Mental and Moral Philosophy for two years.

Dr. William Henry Young.

Dr. William Henry Young, the distinguished mathematician, who has accepted the post of Hardinge Professor at Calcutta University, has arrived in India and has been paying a short visit to Simla. He will lecture on mathematics at Calcutta University during the ensuing cold weather.

PUNJAB UNIVERSITY.

The Board of Studies in History of the Punjab University decided on the 20th October that the attendance of B.A. Honours students at the University Political Science Lectures should be optional, but that for M.A. students the attendance at all lectures should be compulsory and that a list of absentees should be forwarded to the Colleges

concerned. The lectures on Political Science will be given on Fridays at 6-30 P.M., at Forman Christian College, Lahore.

ALLAHABAD UNIVERSITY.

O'DWYER MEDALS INAUGURATED.

Rai Bahadur Pandit Nand Lal, I.S.O., has just sent through the Agent to the Governor-General in Central India a 3½ per cent. Government promissory note for Rs. 1,800 to the Comptroller-General, Calcutta, who is the Treasurer of the Endowment Funds. This amount was subscribed by the people of the Indore Residency Bazaar to commemorate the memory of Sir Michael and Lady O'Dwyer for the deep interest they took in the cause of education. From the interest of this amount, a silver medal, styled the "Sir Michael O'Dwyer Medal," will be given every year to the boy of the Indore Residency School who stands first in the Matriculation examination of the Allahabad University, and the rest of the money will be utilized in giving a medal or prize for the girls of the Lady O'Dwyer Girls' School, Indore, which will be styled the "Lady O'Dwyer Medal or Prize."

TECHNICAL EDUCATION.

TYPEWRITER TOPICS.

UNDERWOOD VICTORIOUS IN TYPEWRITING

CONTESTS.

Miss Bessie Friedman, of New York, was the winner of the professional typewriting championship contest held at the business Exhibition at the Coliseum in Chicago. Operating an Underwood typewriter, Miss Friedman beat her former record of 107 words per minute, by writing at the rate of 118 words to the minute for thirty minutes.

Miss Bessie Linsitz, of St. Louis, won the championship of the Middle West by writing at the net rate of 109 words per minute for thirty minutes. Miss Linsitz also operated an Underwood machine. The Chicago city championship was won by Miss Winifred Kenna, operating an Underwood typewriter, at a net rate of 84 words per minute for a period of fifteen minutes.

The typewriting contests were the chief attractions of the show and drew thousands of visitors to the Exhibition.

THE BIG L. C. SMITH BUSINESS BLOCK IN SEATTLE.

An important event in the typewriter world is the fact that the forty-two story L. C. Smith building at Seattle is nearing completion. This building is the highest in the world outside of New York City. Plans for it were started by Lyman C. Smith, who, with his brothers, Messrs. W. L., M. C. and H. W. Smith, founded the L. C. Smith & Bros. Typewriter Co. This building will be the home of the Seattle office of the L. C. Smith & Bros. Typewriter Co.

REMINGTON NOTES.

The last number of *Remington Notes* gives us an opportunity to say something highly complimentary about that organ. Published solely in the interests of stenographers, it gives diverse reports of the proper methods of typing that aid typists immensely in their practical business work. A few noteworthy features of this last number of *Notes* are some splendid views of the Panama Canal, pictures depicting the right and wrong method for stenographers sitting at their desks and an interesting article and photograph portraying a Chinese typewriting class in Shanghai.

Type under Topier.

STATE SCHOLARSHIPS.

It will be remembered that a Committee was appointed by the Secretary of State to enquire into the system of State Technical Scholarships established by the Government of India in 1904. The Committee, which comprised Sir Theodore Morison (Chairman); Sir K. G. Gupta, Mr. J. H. Reynolds, Prof. W. E. Dalby, Mr. P. H. Dumbell (Secretary) and Mr. R. E. Field (Assistant Secretary), have submitted their report. The Committee held its first meeting at the India Office in May 1912 and then visited Glasgow, Leeds, Manchester and Birmingham and recorded evidence. Altogether during the provincial meetings the Committee took evidence from 75 witnesses, of whom 29 were professors and other representatives of the Universities and technical colleges, 28 gentlemen intimately connected with various industries as owners and managers of works, etc., and 18 Indian technical students. Further evidence was recorded at the India Office in July of the same year when among others Sir R. N. Mookerjee, Sir D. J. Tata, Sir D. M. Hamilton, Mr. Ambalal Sarabhai and Dr. A. D. Denning were examined.

The Committee make the following general recommendations: Students sent to this country

should ordinarily have read in India up to the standard of the B.Sc. or B.A. with science or have obtained an equivalent diploma; wherever possible students should be familiar in India with the industry which they are sent here to study. They recommend elasticity in the system of selection, i.e., the principle of choosing the man rather than the industry. Local Governments should, in making selections, consult the business men and Directors of Industry in the province. They recommend training after selection: period to be extended so as to include works experience. The method of securing works experience is a matter of continued organisation and dependent on the continued co-operation of British employers. 'Should the appeal to the patriotism of British manufacturers,' write the Committee, 'meet with less response than we expect, it may prove possible to exercise influence through the Stores Department of the India Office.'

The recommendations then deal with the question of the amount of scholarship, revision of the rules for Government scholars, return to India within a specified period and measures for assisting returned scholars to secure employment. They recommend that a record be kept of the after-careers of Government scholars and regular reports be sent to the India Office.

The financial effect of the recommendations will be additional expenditure, but the Committee think it will be amply justified. They urge that only the *elite* should be trained at the public expense.

The general conclusions are stated as follows:— 'The results attained so far justify the continuation of the system of Government Technical Scholarships, and with the modifications which we have suggested the system may be expected to yield even better results in the future, but this expensive form of training at public cost should only be given to a well-chosen few who may reasonably be expected to help the industrial development of India. We recognise that the openings for such men are not at present numerous, and that the most urgent demand of Indian industry at present is for skilled mechanics, and we are in complete sympathy with the efforts now being made for giving in India a better training to men of that class. But the necessity for educating the artisan does not preclude the desirability of having a limited number of men with the highest technological training, capable of holding posts of control. Both classes are needed for the development of Indian industry, and opportunities for the improvement of both should be given simultaneously.'

THE GOVERNMENT SCHOOL OF COMMERCE, CALCUTTA.

The Hon'ble Sir Alfred Bourne, Director of Public Instruction paid a surprise visit to the Government School of Commerce on the 23rd ultimo, where he was received by Rao Sahib S. Vydianatha Iyer, the Headmaster, and taken round the several classes at work. The Director, before leaving, expressed himself very much pleased with the efficient working of the institution and has also asked the Headmaster to submit to him a scheme for re-opening the special commercial training class in the school from July next for training a fresh batch of graduates and under-graduates to be qualified as teachers in commercial subjects for secondary schools.

CALCUTTA SCHOOL OF COMMERCE.

Mr. G. K. Sen, officiating Principal of the Government Commercial Institute of Calcutta, had gone to Bombay on deputation by the Government of Bengal to investigate the working of the commercial schools and colleges of Bombay. He had a long interview with Mr. K. S. Iyer, Honorary Principal of the newly-created Sydenham Commercial Institute.

Reviews and Notices.

THE GOSPEL OF ST. LUKE, EDITED BY J. F. RICHARDS AND T. WALKER. PRELIMINARY EDITION. (UNIVERSITY TUTORIAL PRESS.) 1s.

The editors have brought out a very useful aid to Biblical study in this volume. The introduction is a mine of valuable information and there is hardly anything wanted by the student missed there. The summary and the maps are noteworthy features. Now that such handy editions of various parts of the Bible are available, we hope there will be a more extensive study of that masterpiece by students of literature and there are hardly any books in English prose which can give such a valuable training to the student of style, as the Bible. The editors might probably have paid greater attention to the purely literary aspect of the book.

BURKE'S THOUGHTS ON THE PRESENT DISCONTENTS, EDITED BY W. MURISON, M.A. (CAMBRIDGE UNIVERSITY PRESS) 2s. 6d.

'It is a book always in season,' says Andrew Lang, of Burke's *Thoughts on the Present Discontents*

and we are glad to have such a handy edition as this, by the Cambridge University Press. There is an unfortunate tendency on the part of the authorities of Indian Universities to avoid the writings of Burke as if they were dangerous in the extreme. There cannot be a greater blunder than this, for it deprives the Indian student of English literature of the privilege of reading one of the greatest of English writers, remarkable alike for his nobility of sentiments as well as logical coherence of thought. It is not only the students of History and Political Science that ought to go in for the book, the lay reader will find it sufficiently interesting and instructive to deserve his attention. Mr. Murison has brought together all the material necessary for a comprehensive understanding of the book. He has furnished the book with an introduction remarkable for its thoroughness and fullness of detail. May we suggest to the Cambridge University Press that the book may very well be cheaper?

THE PRELIMINARY ENGLISH COURSE, BY A. M. WALMSLEY, M.A. (UNIVERSITY TUTORIAL PRESS.) 1s. 6d.

This book is intended to meet the requirements of High School classes in the matter of the study of English Grammar and Composition. Two or three valuable features of the book strike us as specially qualifying the book for the purpose for which it is intended. Grammar has not been rendered unnecessarily complex; there is sufficient attention bestowed on its relation to the practical work of composition and there are a number of valuable exercises.

THE CHILDREN'S ANTHOLOGY OF VERSE: JUNIOR, INTERMEDIATE AND SENIOR. (MACMILLAN & CO., LTD.) 4d.

Messrs. Macmillan's *Children's Classics* are working a revolution in the literature provided for the young student at school. The books under review bring before the child a number of pieces of English poetry, particularly interesting as appealing to childhood. Quite a successful attempt has been made to include only pieces of literary merits. The illustrations—some of them representing English poets—must prove a great attraction. The books will be found very useful for detailed and non-detailed study in Indian schools.

THE CONTINENT OF EUROPE, BY PROFESSOR LIONEL LYDE. (MACMILLAN & CO., LTD.) 7s. 6d.

The suggestion was made by a distinguished Indian educationist a few years ago, that the subject of geography might very well claim attention even in the College classes of our Universities. It was then felt in some quarters that the literature on the subject was not of a sufficiently high quality to merit being studied by students in the University classes. We confess a reading of Professor Lyde's book on Europe has convinced us of the great possibilities there are, of making it a subject of sufficient interest and usefulness to the College student. Professor Lyde is quite an authority on the subject on which he writes, and he has the most convincing theories of his own, on such questions as land-formation and so on. There are a very large number of maps and illustrations, intended to make the matter more vivid to the reader. We have nothing but praise for the clearness with which the materials have been arranged and for the thoroughness and grasp displayed by the writer. Dealing with the continent of Europe as a geographical entity, it was probably not possible for Professor Lyde to devote much attention to some of the more recent developments of industry and civilisation in the various countries. There is not in the book again any adequately descriptive writing of the great cities of Europe and places of interest in the various countries. Everything is subordinated to physical geography—but it is clear by the title, *The Continent of Europe*, the author did not intend anything else. We wish however the work had been made more comprehensive by a treatment of these aspects also. We have however no hesitation in saying that every teacher of the geography of Europe in this country must provide himself with a copy of this book.

1. EXERCISES IN LOGIC, BY F. C. BARTLETT. (UNIVERSITY TUTORIAL PRESS.) 2s. 6d.

2. CHILD MIND, BY BENJAMIN DUMVILLE. (UNIVERSITY TUTORIAL PRESS.) 2s. 6d.

The "collection of exercises is mainly intended for the use of candidates offering Logic at such examinations as the Matriculation and Intermediate Examinations of London University." The purpose is modest enough and it is adequately fulfilled by this small volume. The exercises (about 40) are all good. Clean and concise directions are given for solving the exercises in every

chapter. Within its own limits, the volume is excellent. The necessity for it, however, is not apparent. We fear that too much attention is being devoted to the 'practical side' and too little to the profound theoretical movements. Even granting the paramount importance of 'practical work,' we cannot see the necessity for this volume, since, not to speak of the excellent exercises in text-books such as those of Mellone and Creighton, the Tutorial Press itself has published an excellent little volume of "Questions on Logic" by Messrs. H. L. Man and Irwine. Were the book cheaper, there might be some excuse. But, as it is, the price is too high for a mere volume of exercises.

The *Child Mind* is "an introduction to psychology for teachers." Mr. Dumville has performed his task admirably. The volume is uniformly interesting. It blends psychology and teaching in a most happy manner. The latest psychological methods and results are adopted and applied. Teachers have not yet got rid of the notion that the mind is a *tabula rasa*, a blank sheet of paper that can take in any impression. Books like Mr. Dumville's will soon serve to dispel their ignorance and teach them that "*we learn by doing*" (p. 25). Chapters VI and VII based on McDougall's *Social Psychology*, deserve special notice. Attention may also be drawn to the last chapter treating of "back-wards and super-normals." These are by no means rare in our colleges, where the classrooms are (physically) full, and the suggestions made in that chapter, are, consequently, well worth attention. On the whole, it may be said without disparagement to works like those of Prof. Drummond and Mr. Spiller, that, since James' *Talks to Teachers*, this is the best and most interesting volume of pedagogic psychology in a small compass.

SHORTER ALGEBRA, BY W. M. BAKER, M.A.
AND A. A. BOURNE M.A. (BELL AND SONS.)
2s. 6d.

Most of the Text-books on Elementary Algebra are voluminous and "contain a great loose reasoning. As a result, the Text-book is used only for the sake of examples." Messrs. Baker and Bourne have, in their "Shorter Algebra" carefully avoided all such drawbacks. The Shorter Algebra is an adaptation of the Elementary Algebra by the same authors, remodelled on modern lines to suit the Syllabus of the Madras School Final Examination and that of the Matriculation Examinations of the Indian

Universities. They have omitted the more complicated portions and added a considerable number of useful examples especially on quadratic equations. The examples at the end of each chapter are graduated and well selected, and we have no hesitation in recommending this useful book as a text-book for High School classes.

THE ATANK NIGRAH PHARMACY ALBUM.—We are in receipt of an excellent album brought out by the Atank Nigrah Pharmacy, Jamnagar. The album is full of pictures consisting of the sites of the various branches of the business all over India and also of the proprietors, the managers and the staff of the head office at Jamnagar.

THE CALCUTTA BOYS' SCHOOL CHRONICLE.—This is published in the interest of the boys of the school at 72, Corporation Street, Calcutta, once a month, the yearly subscription being Re. 1-8-0. The Principal is the Editor-in-chief and the staff of the school are the Assistant Editors. We wish the Magazine every success.

THE MALABAR LITERARY SOCIETY, CALICUT. The first Annual Report of this Society has been published. The Hon'ble Justice Sir C. Sankaran Nair, C.I.E., is the Patron. Seeing the good results of the work of the Society during the year, the future is very hopeful, and we hope the Society will, as years roll by, become the centre of light and learning for the Malabar District.

Indian Educational Notes.

MADRAS.

His Excellency's visit to Salem College.—His Excellency was received at the Salem College by Mr. E. S. Ramasami Aiyar, Municipal Chairman, and Mr. S. A. Sbutie, Principal of the College. Mr. J. H. Stone, Special Director of Public Instruction, and Mr. A. G. U. De Rozario, Assistant Inspector of Schools, were also present.

His Excellency was taken round the various classes which were at work and then inspected the Laboratory, where students were engaged in conducting some experiments. There were three girls working at the laboratory, and one of them told His Excellency that she proposed to take up the study of Medicine after taking her B.A. Degree.

His Excellency and party left the College after spending a few minutes there, and accompanied by Mr. Stone inspected the site proposed for the construction of a new building for the College, for which purpose the Government has announced a grant of Rs. 80,000.

His Excellency's visit to Government Girls' School, Salem.—The Government Hindu Girls' School is located in a small building enclosed on all sides by high compound walls in a lane abutting the Big Bazaar Street in Salem. The school has on its rolls 364 girls and the attendance is about 280. The staff consists wholly of qualified female teachers. Instruction is imparted in English and Tamil up to the seventh standard and three higher standards are attended by about 25 grown-up girls, the majority of whom, however are non-Brahmans. His Excellency the Governor was accompanied by Mr. Bedford, Mr. Cotterell, and Captain the Hon'ble Coulson Fellows, A. D. C. and were received at the school by Miss Lynch, Inspector of Girls' Schools, Central Circle, and Mr. J. H. Stone who had been there at the time. His Excellency was conducted into the premises, where he saw the classes at work. After the inspection some of the younger girls entertained His Excellency the Governor and party with action songs, dancing, and dialogues which were much appreciated, the performance having been given in a graceful and charming fashion. The big hall of the school and the verandahs were decorated with paper festoons and mottoes of welcome.

The following remarks were made by His Excellency the Governor in the visitors' book:—"I visited this school to-day and saw all the classes, some dancing, and some drawing, and some practising first aid to the wounded; and also heard some singing, both in English and Tamil. The children look well and cheerful. The staff seem capable and attentive, the buildings airy and convenient, perhaps a little overcrowded and when more surrounding playground or open space is possible, it will be a useful addition. I am much pleased with all I have seen of the school."

Education of Convicts.—The following G. O. has been issued.—With a view to provide for the education of convicts, the Government in G. O. No. 1573, Judicial, dated 10th October 1911, directed that a system of instruction confined to reading, writing and arithmetic should be introduced tentatively in three selected jails, viz., the Penitentiary and the Central Jails at Cannanore and Rajahmundry. Reports on the working of the system since received from the Superintendents of those Jails show that the experiment has been attended with success and the Government are therefore pleased to direct that similar arrangements for giving instruction should be introduced in the remaining first-class Central Jails in the Presidency. The system followed at the Rajahmundry Jail is, in the view of the Director of Public Instruction, well suited to requirements, and the Government consider that it may be adopted with advantage elsewhere.

A Prize-distribution.—The annual distribution of prizes of the Catholic Elementary Girls' School, East Gate, Madura, was held in its premises on the

23rd ultimo at 5.30 P.M. The Hon'ble Mr. K. Rama Iyengar was in the chair. The premises of the school and the hall were tastefully decorated and there was a large gathering of ladies, both European and Indian, gentlemen of the town, besides a good contingent of school girls present. After a welcome song by the children the report of the school was presented. The report showed progress and activity throughout the year ending 31st March 1913, the attendance having risen remarkably. Nine new mistresses were employed, a teacher in English being also employed. The scheme of studies, as prescribed in the Educational Rules was strictly followed; details of management were given. The report over, an English song was sung and the Chairman distributed the prizes, which was followed by some drills. The Chairman made a few concluding remarks of much interest in which he referred to the liberal grants made by Government for education and the enormous efforts that are necessary to educate the girls especially in the Madura District where they had only about 60 schools for girls in 4,135 villages. Rev. Father J. A. Planchard proposed a hearty vote of thanks to the Chairman and with the singing of the National Anthem, the function terminated.

Poor Scholars' Fund of the Rajahmundry College.—It is notified that the Governor of Fort St. George in Council, in exercise of the powers conferred by Section 4 of the Charitable Endowments Act, 1890, doth order and direct that the securities and money now in the hands of the Accountant-General of Madras of the value of Rs. 2,200 shall vest in the Treasurer of Charitable Endowments for the territories subject to the Government of Madras and be held by him and his successors (subject to the provisions of the said Charitable Endowments Act, 1890, and to any rules which may from time to time be framed thereunder by the Governor-General of India in Council) upon trust for the purposes and subject to the conditions set forth in a scheme under Section 5 of the said Charitable Endowments Act, 1890, for the administration of the said Poor Scholars' Fund of the Government College at Rajahmundry.

It is also notified that the Governor of Fort St. George in Council, in exercise of the powers conferred by Section 5 of the Charitable Endowments Act, 1890, has settled the following scheme for the administration of the above securities and money vested in the Treasurer of Charitable Endowments.

The Principal and the Senior Lecturer for the time being of the Government Arts College at Rajahmundry shall be the administrators of the said Poor Scholars' Fund of the said College.

The interest accruing on the said Poor Scholars' Fund shall be distributed annually in the form either of scholarships or grants to poor and deserving students in such proportions as may seem fit to the said administrators, having in view the amount available and the needs of the applicants.

All interest on the said Poor Scholars' Fund that may not be required for the purposes of the said scholarships or grants shall be accumulated and such accumulations shall from time to time be invested in the securities of the Government of India and be added to the principal of the endowment.

Board High School, Amalapuram.—The anniversary of this institution came off on Saturday evening, the 15th instant with Mr. J. J. Cotton, M.A., I.C.S., the District and Sessions Judge of Rajahmundry in the chair. The new Sub Collector, Mr. H. R. Bardswell, M.A., I.C.S., was also on the platform, and there was a very good audience, all the elite of the town being present. The proceedings began with the Headmaster's report which showed steady progress in all directions. Reference was also made to the visit paid to the school by the Director of Public Instruction a couple of months ago. The Chairman then distributed the prizes including the "Ashes Memorial Gold Medal" instituted by Mr. Ganti Lakshmanan, B.A., B.L., an alumnus of this institution, and awarded to the VI Form boy who stands first in English. The prizes to the winners at the Sports Competition held here recently were also given away on this occasion. The Chairman complimented the school on the good work done by it and on the reputation it has earned in the Circars. A vote of thanks proposed by the First Assistant, a loyal song in Telugu sung to accompaniment by a few girls, and three cheers to Their Imperial Majesties which were lustily responded to, brought the proceedings to a close.

The Brennen College.—It has been practically settled to hand over the above institution to the Government. The Director of Public Instruction was at Tellicherry in connection with this proposal.

Educational Grants.—Out of Rs. 55,000 sanctioned by the Malabar District Board towards grants to the Elementary Schools in Malabar, Tellicherry Taluk Board gets Rs. 16,286, Wynad Rs. 8,307, Calicut 7,099, Malappuram 15,941, and Palghat 7,367.

Government Subsidy for Lower Elementary Schools.—The Government have sanctioned the distribution of a sum of Rs. 28,500 to the District Boards and Municipalities, for the purpose of providing additional teaching establishments for the lower elementary schools in their charge which have the third as the highest standard. Out of this, the Malabar and South Canara District Boards get Rs. 2,450 and 1,800 and the Calicut and Palghat Municipalities Rs. 264 and 456 respectively.

A Government grant.—The Madras Government have sanctioned Rs. 1000 from provincial funds to

the Rev. Dr. Steichen, S.J., Ph. D., Professor of Physics, St. Xavier's College, Bombay, towards the expenses of conducting certain experiments in connection with the radio-activity of the thermal springs in this Presidency. He will submit to the Government a detailed report on the results of his researches. Collectors of districts have been requested to render all necessary assistance to the Rev. Dr. Steichen in carrying out the proposed investigation.

Scholarships to Moplah Students.—The Government has been pleased to award a scholarship of Rs. 9 per mensem to each of the four Moplah students studying in the Intermediate class of the Bremner College, Tellicherry.

The P. S. High School Literary Society.—The fifth anniversary meeting of the Pennatur Subramanyam High School Literary Society was held at the Ranade Library, Mylapore. In spite of the stormy weather there was a large gathering of students and others interested in the cause of education, and among others present was Mr. Justice T. Sadasiva Aiyar. The Hon'ble Mr. Justice F. B. Tyabjee was in the chair and Mr. S. Srinivasa Aiyangar delivered the usual address to the students.

The proceedings of the evening commenced with the school prayer and a long but interesting programme consisting of recitations and the enacting of special scenes from Mr. P. Sambandam Mudaliar's 'The Two Friends' and Shakespeare's 'As You Like It' lasting for two hours was then gone through. In the interval the Secretary of the School Committee presented the report for the last year, the main feature in the report being the increase in the strength of the Society and the flourishing state of finances, the balance at the end of the year being Rs. 170.13.0 as against Rs. 128.9.0 in the previous year.

Mr. S. Srinivasa Aiyangar then delivered his address to the students, the subject chosen being "What our boys need." The meeting terminated after the Chairman's remarks with the usual vote of thanks to the chair and the lecturer.

ALLAHABAD.

Principal Jennings and the Muir Central College.—A meeting of boarders was held in the Balrampur Hall, MacDonnell University Hindu Boarding House, to bid farewell to Principal J. G. Jennings and to present him with an address. There was a large gathering and among those present were the Hon. C. F. de la Fosse, the Hon. Dr. Sunder Lal, Mr. S. G. Dunn, Mr. A. P. Cox, Mr. C. P. W. Lloyd, Mr. Pelly, Mahamahopadhyaya Pandit Aditya Ram Bhattacharya, Rai Bahadur Lala Ram

Charan Das, Dr. D. R. Ranjit Singh, Munshi Ishwar Saran, Dr. Mulchand Tandon, Babu Prushottam Das Tandon, Babu Ram Bali Rai, Mahamahopadhyaya Pandit Ganga Nath Jha, Mr. U. C. Ghosh, Babu Abhay Charan Mukerji, Pandit Shivadhar Pandey, Pandit Ram Dulare Bajpai, Pandit Kali Pratap Dube, Pandit Baldeo Ram Dave, Babu Satish Chandra Deb, Pandit Daya Narayan Bajpai.

The proceedings commenced with the reading of an address to which Principal Jennings replied in suitable words. In the course of his reply he gave some advice to his students. He said that that was perhaps the last occasion on which they would expect him to give them some words of advice and therefore he would do so then in a few words. He wanted them to think what was the object of the education they were receiving? To him it appeared that the object of learning was to know their duty to the State—not to any future State that might come, but to the present State. But what was their duty to the State? It was a difficult question, but Carlyle would help them to decide what it was. He said that it was the duty to their neighbours. They would be doing their duty to the present State, if they did their duty to their neighbours. He asked them to endeavour to cultivate a sense of that duty—the duty of kindness to their fellow-students and to one another.

The Harish Chandra High School, Benares.—The annual prize-distribution of this school took place recently under the presidency of Mr. Molony, I.C.S. Commissioner, Benares division. In view of his approaching departure from Benares, the Commissioner took this opportunity of presenting a Sanad and title publicly to Rai Bahadur B. Abhaya Charan Sanyal, F.C.S., late Professor, Queen's College, Benares. The gathering consisted of educationists and of boys, who all rejoiced to see their respected old townsman and teacher honoured by the Government. The ceremony of the presentation of sanads was performed with due solemnity and the Commissioner eulogized the services of the recipient of the honour.

The report of the school read by the headmaster briefly narrated the progress made by the school and referred to the need of extending the school building. He thanked the Government for the generous grant of Rs. 9,500 for science laboratory.

The Commissioner then made a lengthy speech in which he referred to the services in education of Rai Abhaya Charan Sanyal, the late Rai Sahib Priya Nath Ghose of Jaunpore and of B. Vaidya Nath Das.

COCHIN.

A Scholarship Fund.—Vadakkathala Poovathil Devasy Suveed and Vadakkathala Thottumkal Chacku Kunjippalu of Kandakkadavu requested the Government to purchase their buildings with

compound in which the Sirkar L. S. School at Kandachankadavu is held and invest the capital amount and utilise the interest thereof in awarding scholarships, in memory of H. H.'s Shastipoorthi, to the best students of the school for prosecuting their study in any of the high schools in the State. The above petitioners in a subsequent petition agreed to accept the price offered by the Durbar amounting to Rs. 8,000 for the buildings and the compound. The Dewan Peishkar was therefore asked to take necessary steps for acquiring the above buildings and compound. The Dewan Peishkar has now forwarded his award amounting to Rs. 8,000 relating to the same. The award is accepted. The Chief Engineer is requested to take necessary steps for placing the award amount at the disposal of the Dewan Peishkar who will take necessary further steps in the matter and hand over the site and buildings to the Director of Education after completing the transactions. The amount of award will, as proposed by the petitioners, instead of being handed over to them be invested in the name of the Director of Education in the National Bank at the usual rate of 4 per cent. interest and the interest of Rs. 320 per annum shall be utilised for the award of scholarships as required by them. The Director of Education is requested to submit definite proposals, in consultation with the petitioners for the award of the scholarships to the extent of the interest amount every year for the approval of the Dewan.

Foreign Notes.

Registration of Teachers.—An important stage in the scheme providing for the registration of the teaching profession in England was reached recently when the Teachers' Registration Council, approved of regulations under which teachers may be admitted to the Register. These regulations will now be submitted to the Technological Committees in accordance with the provisions of the order in Council of February 29, 1912. It is expected that the regulations will be officially published after the next meeting of the Council at the end of November. The former Register, which was abolished in 1907, proved unacceptable to some sections of the teaching profession for the reason that mainly it classified teachers in two columns—Column A for teachers in Elementary Schools and Column B for those in Secondary Schools. By section 16 of the Education (Administrative Provisions) Act, 1907, power was given to provide a Register in alphabetical order and in one class, but five years elapsed before the Teachers' Registration Council was constituted by an order in Council. In the new Register Secondary and Elementary teachers will be entered on the granting of a certificate by the Board of Education. It is now stated that the conditions which have now been framed will meet with acceptance from teachers of all classes; that the body of registered teachers will, in time, represent all grades of the profession and will form a valuable means for expressing the collective views of the profession on matters of

educational policy. It was pointed out by one closely associated with the movement that the Registration Council will not only promote the solidarity of the teaching profession, but will act in an advisory capacity to other bodies concerned in educational administration. The effect of the Register will, it is hoped, be to bring all sections of education in touch so that the University Professor will have the opportunity of meeting teachers in technical institutions and Elementary Schools, and thus promote the organic unity of education.

LITERARY NOTES.

It may be taken for granted that no book of verse published during the present season will have a more eager welcome than Mr. Kipling's "Songs from Books," which is shortly to be issued by the house of Macmillan. It presents a complete collection of the poems and fragments of verse with which the author has interspersed the text of so many of his prose books, and consequently includes some of his happiest metrical work.

Principal J. G. Jennings of Muir Central College has abridged and briefly annotated selected passages in the non-political speeches, addresses and writings of Mr. Arthur James Balfour. The selection has been made from the collection entitled 'Arthur James Balfour as philosopher and thinker' selected and arranged by Mr. Wilfrid M. Short. Of Mr. Balfour's eminence both as a politician and a philosopher it is needless for one to speak. He is easily the foremost debater in the House of Commons and his speeches are always a delightful reading, if not often convincing. 'Clear modern English, always cultured, often elevated, and at times rising to heights of elquence; touching upon themes of varied and living interest; human, sane, with a happy mingling of gravity and humour': this is how Principal Jennings describes Mr. Balfour's speeches, and it is a correct and happy characterisation. Being interested in the Indian University education, Principal Jennings felt that here was matter more capable of holding the attention of our students of English literature than the essays of writers who died in ages 'that even for the average Englishman can scarcely be made to live again. Here was English, Mr. Jennings further felt, that is written and spoken now, and which a foreign student might adopt without fear of speaking a quaintly antiquated tongue. Simple, direct, virile, it should influence his speech and mind for good. The publishers are Messrs. Longmans, Green and Co.

"The New Encyclopædia" which Messrs. T. C. and E. C. Jack have just published contains in its 1,600 pages, it is claimed, as much matter as is usually to be found in six large volumes, and the publishers, in the confident expectation of a wide circulation, have wisely fixed the price at an ex-

tremely low figure. A very useful and practical feature is the arrangement whereby the various subdivisions of a subject are all grouped together thus facilitating reference and enabling a student to study the subject in all its bearings. The editor has paid special attention to scientific and philosophical matters, and the intention has been to provide for the needs both of the ordinary reader and of the serious student, and in the department of geography the number of places dealt with compares favourably with the best known gazetteers. In so comprehensive a work as this, conciseness and compression are of course indispensable, but the editor believes that this object has been obtained without any sacrifice to clearness or accuracy. Particular care has been taken that the book shall be quite up-to-date. If, for example, we take the article Adrianople, or the account given of the French President, M. Raymond Poincaré, the reader will find him or herself supplied with the very latest and most up-to-date information.

The new issue of the "Oxford Dictionary" is a double section including the words "Tombal"—"Trahysh," and has been prepared under the editorship of Sir James Murray. It completes the words in To, and enters on those in Tra. It contains 1,601 main words, while the total entries are 3,295. Among the most interesting words are Tory, Town, Trade, Torpedo, Top, Tortoise, Touch and the double section contains a good representation of the chief constituents of the English vocabulary. The present section is part of Volume X., and gives some indication that the conclusion of this famous undertaking is at length approaching.

An illustrated edition of "Tom Brown's School-days" is expected from Messrs. Sidgwick and Jackson this month, edited by F. Sidgwick, with a preface by Lord Kilbracken. The illustrations will include coloured and other plates and reproductions of portraits and contemporary views.

The fifth of Mr. E. V. Lucas's biennial collections of Essays, "Loiterer's Harvest," is announced by Messrs. Methuen for publication.

SCHOOL AND COLLEGE SPORTING NEWS.

Triplicane Wesleyan Mission High School

Sports Club.

Under the auspices of the above Club, several Cricket, Football, Badminton, and Hockey matches are being regularly played. One of the most interesting was the Football match recently played between the Teachers and the Students on the Marine grounds. Though the teams were unequally matched, they were highly spirited and the game took a fairly interesting turn right through. Mr. D. G. M. Leith was himself one of the players on the Teachers' side. Some of the teachers acquitted themselves well, and the students were eventually left winners of the field by 1 goal to nil.

M. C. A. Association Football League.

MEDICAL v. PACHAIYAPPA'S.

The match between the above teams was played recently on the Medical College Ground. As on the previous occasion, the match ended a draw, one all. Loganathan and D'Costa were the most dangerous of the Medical forwards while Ragavendra Rao stood out prominent in the Pachaiyappa's attack.

ENGINEERING COLLEGE v. THE TEACHERS' COLLEGE, SAIDAPET.

A rather one-sided game was witnessed in the return match between the above teams played on Monday evening at Saidapet. With 4 goals to the lead, the Teachers played up and one of the Engineering defence handling the ball inside the penalty area when hard pressed, they obtained a penalty kick which Parthasarathy improved upon, and lessened the margin. No further scoring taking place before call of time, the Engineers were left winners of the match by 4 goals to 1.

LAW COLLEGE v. THE ROYAPURAM MEDICAL SCHOOL.

The return match between the above teams were played recently on the S. I. A. A. ground. While the Royapuram Medicos were at full strength, the Lawyers in the absence of a host of their good men had only a very indifferent team. The match ended in a very easy win for the Royapuram Medicos by 6 goals to nil.

PRESIDENCY v. WESLEY.

The above teams met for the second time this season, on the Presidency College ground recently and as before the homesters scored a victory by a comfortable margin. The Presidency was left winners of the match by 3 goals to nil.

MEDICAL v. PRESIDENCY.

Ideal weather favoured the meeting of the above teams in their return fixture recently on the Presidency College ground. Though both teams were ready in time, an early start was rendered impossible by the unavoidable absence of the official referee who was unfortunately taken ill suddenly. The play was fast and fairly even and the Medicos who have been showing remarkably good form in the second round scored a thoroughly well-deserved win by 2 goals to nil.

PACHAIYAPPA'S v. LAW.

The above teams, neither of whom has a proper ground of its own, met in their return fixture recently on the S. I. A. A. ground. The Pachaiyappa's won the match by 3 goals to nil, a score which hardly does justice to the splendid fight put up by the Lawyers.

Hockey League.

WESLEY v. PRESIDENCY.

The first match between the above teams in connection with this Tournament, was played recently on the Presidency College ground. When time intervened, the Wesleyans were left winners by what appears to be a decisive margin, namely 3 goals to nil, but the Presidency had only themselves to blame for this, for two out of the three goals registered by the visitors could have been prevented, if there had been a good goal-keeper.

M. C. A. Association Junior Football Tournament.

TRIPLICANE WESLEYAN MISSION v. PACHAIYAPPA'S.

The match between the above teams was played on Friday the 14th Nov. 1913 on the Madrasa grounds. Both sides played exceedingly well, but in the end the Wesleyans were left winners of the match by 1 goal to nil.

Bishop Cotton School Sports, Bangalore.

The annual Athletic Sports of the Bishop Cotton Boys' School was recently carried out on the school ground. The Band of the Bangalore Rifle Volunteers added in large measure to the liveliness of the proceedings. The programme was a generous one, running to as many as sixteen events, of which seven were got off on the opening day. The most notable event was the mile race, won by Guy Adolphus in 5 mins. 6 secs. which the Warden said, on good authority, at the prize-giving, was a local record for six years. There was generally much enthusiasm displayed in all the contests, the entries being unusually large. R. Price won the 100 yards in fine style, C. Johnson running a good second; C. Johnson won the high jump at 5 ft. 1 in.; and also carried off the shot put, his throw reaching 40 ft. 6 ins. A tug-of-war between the school and its staff resulted in victory for the staff, the struggle lasting 3 mins.

12 secs. The 220 yards went to R. Price, and the long jump to the same competitor, who also won the 440 yards with C. Johnson second. The tug-of-war lay between the boarders and day-scholars, the former winning easily. There was an interesting race for parents and the staff which was won by Mr. Ince of the staff, and a race for the servants of the school was run off for three prizes. It was quite dusk before the last event went through and then an adjournment was made to the school hall where Mrs. P. A. Barton gave away the prizes.

A FOOT-BALL MATCH.

The 23rd ultimo witnessed a momentous incident in the shape of a *melee* between the local Santa Cruz High School Foot-ball Team and the Cosmopolitan Club of Ernakulam. The players of Cochin being invited to a friendly match by those of Ernakulam gladly assented and set out in buoyant spirits accompanied by many of their teachers including the Headmaster himself. The memorable match which eventually proved somewhat detrimental to the Ernakulam team was played in the Durbar Hall grounds. The contest was a drawn one, each side scoring one goal while the Ernakulam team had the disadvantage of 6 "Corners" and their rivals only 2.

Baldwin High School Sports at Bangalore.

The annual Athletic Sports of the Baldwin High School were held on their ground near Richmond Park there being seventeen events on the programme, half of which were got off before breakfast and the rest during the afternoon. The weather was exceptionally fine for the purpose and the attendance was quite good, especially in the afternoon, when the Band of the B. R. Volunteers played under the neighbouring trees. Bishop and Mrs. Robinson were among the principal spectators, and the sports, were conducted under the immediate supervision of the Rev. A. B. Coates, the Principal of the School. The grounds looked brave with several large Union Jacks blowing in the breeze. The distribution of prizes took place at dusk amidst considerably enthusiasm.

Cricket at Bangalore.

GYMKHANA v. LONDON MISSION HIGH SCHOOL.

The above match was played on the Gymkhana ground and resulted in the School getting a big thrashing. For the Gymkhana Lucas, Sykes and Cunningham contributed largely to the score and with 36 extras the Gymkhana totalled 277 runs for 9 wickets against 69 by the School.

Madras University Convocation, 1913.—The annual Convocation of the University for conferring Degrees was held on Thursday, the 20th instant. His Excellency the Chancellor presided and the Hon'ble Dewan Bahadur L. D. Swamikannu Pillai delivered the usual address.

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The Educational Review.

We, as being the oldest educational magazine in India, offer a most hearty welcome to Their Excellencies Lord and Lady Hardinge to our midst. In a recent number we reviewed elaborately his views on education and the statesmanlike policy of educational expansion he has boldly initiated, and it is unnecessary to enlarge on it further here. We shall merely content ourselves with pointing out that the future History of India will set more store by Lord Hardinge's Educational Policy than Delhi Durbars and legislative reforms; the effect of these is immediate but evanescent. As Carlyle never wearied to assert, it is not the method of voting but the elevation of national character that will improve the country; we must look to the schools and not to the hustings for being potent factors of national growth.

History now-a-days cares more for describing the life of the people, than the grandeurs of courts; the economic difficulties of England are now known to have been more powerful in bringing about and keeping up the Hundred Years' War than the ambitions of individual kings; the desire of a people to move away from an outworn form of faith brings about a change and not so much the eloquence of a great preacher. The movement is more important than the man. Levees and Legislative Councils do not touch, much less mould, the hearts of the common people, who alone make real history: but education will and that is why we attach such a great importance to Lord Hardinge's activities in the expansion of education in India where the night of ignorance is so thick.

It is peculiarly fit that the principal public function to be held by the University Viceroy is the foundation of the University Library.

The Madras University *claims* to be a modern University (though the impartial critic has to admit it is far from being one since one can hear in its meetings the most primitive, quite ante-diluvian educational principles). And so far neither the contents nor the organization, neither the locality nor the habitation of the University Library is a credit to the University. The University Library is not a place to which you drive in the cool of the evening to read the most recent ingenious justification of the violation of the Seventh Commandment in the shape of a novel or the latest tale from spook-land, but a place where the research-worker can make himself acquainted with all that has been achieved in the special department of science or history he is interested in. It is not costly apparatus that the research-worker wants so much as up-to-dateness. Now, books, however necessary for a Library, *can* never be up-to-date enough for a research-worker. Specialist-magazines, papers read before learned societies in England, France, Germany, Italy, Austria, Russia, the United States, Canada, Australia and South Africa, it is these that he wants and their provision in easily available form ought to be the objective of a useful University Library. Not things that help teaching or examinations—these College Libraries ought to provide—but things that sum up human achievement day by day.

We publish elsewhere in this journal the text of the Mysore Elementary Education Regulation—Regulation V of 1913. We congratulate the Govern-

ment of His Highness the Maharaja, and the beneficent, enlightened ruler, for having placed on the Statute Book a measure of such far-reaching import as this one on education. This measure embodies in spite of its moderation the recognition of the responsibility of the State for the education of the masses—a responsibility which has long since been recognised in theory, though no effect has been given to it so far in point of fact. The following passage occurs in the Despatch of the Court of Directors of 1854: 'It is one of Our most sacred duties to be the means, as far as in Us lies, of conferring upon Natives of India those vast moral and material blessings which flow from the general diffusion of useful knowledge and which India may under Providence derive from her connection with England.'

This declaration was interpreted by the Education Commission of 1882 as the equivalent of an acceptance of responsibility that 'the education of the whole people in India was definitely accepted as a State duty.' The Despatch went on further to say: 'Our attention should now be directed to a consideration if possible still more important, and one which has hitherto, We are bound to admit, been too much neglected, namely, how useful and practical knowledge suited to every station in life should be best conveyed to the great mass of the people who are utterly incapable of obtaining any education worthy of the name by their own unaided efforts, and We desire to see the active measures of Government more especially directed for the future to this object, for the attainment of which We are ready to sanction a considerable increase in expenditure.' The Education Commission of 1882, which among other subjects was asked to enquire 'how far the

policy laid down in the Despatch of 1854 in regard to elementary education had been carried out,' made the following two, among other, recommendations:—

(i) 'While every branch of education might justly claim the fostering care of the State it is desirable in the present circumstances of the country to declare the elementary education of the masses, its provision, extension and improvement, to be that part of the educational system to which the strenuous efforts of the State should now be directed in still larger measure than heretofore.'

(ii) 'An attempt be made to secure the fullest possible provision for an expansion of primary education by legislation suited to the circumstances of each province.'

These were recommendations made in 1884 and that a measure of compulsory education should be adopted in 1913 in an enlightened Native State would be ordinarily no matter for particular satisfaction, had it not been for the circumstance that in this important concern the Native State takes precedence of the Government of India. That is not all. It must be said to the credit of the British administration of this very Native State that even before the Commission of 1882 formulated their recommendations, a scheme of free education had been adopted, and adopted two years before the great Education Act of 1870. It is this that is at the foundation of the Education System of Mysore. It was in 1867-68 that sanction had been received for the establishment of 146 hobli schools in the State as a beginning in 'a system of national schools for the Province,' a beginning was made by selecting 146 out of the 645 hoblis in the Province and these schools were to be supported by the proceeds of a cess. Education was therefore made free except for those

not contributing to the local fund. These schools, though under departmental control, were still subject to the general supervision of the influential residents in each hobli. The difficulty then, as it is now, was the paucity of qualified teachers and care was taken to train them before appointment and for this purpose a Normal School was established. The feature of the scheme that calls for notice in this connection is that education was practically free, and it has continued to be free all along but for a brief interval of retrogression about a decade ago.

There are two aspects in which this measure may be criticised: first the principle underlying the measure, and secondly the practical working of it. In regard to the first, so far as this particular measure is concerned, the principle of free elementary education has been recognised almost fifty years ago. The expectation of the authors of the measure referred to above have been quite adequately realised though it must be stated that there is a great deal yet to be done to carry on the system to the fullest expansion possible. Education is free, according to the system in vogue and capable of indefinite expansion, limited only by the funds at the disposal of the Education Department under this head. There have latterly been no expansion in the local funds set apart for this purpose, and for years past the Government had to supplement this by large grants from the general revenues, so much so that it was practically becoming a charge on the State revenues. As it was, however, the principal drawback to expansion was not so much in the lack of funds as in the lack of teachers and educational enthusiasm on the part of the people. This latter defect is meant to be remedied by

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the application of the principle of compulsion. So far very good.

The other side of the question, however, is not quite so simple to answer, nor does the position taken appear to be quite satisfactory. So long as education is declared free and compulsory, the State takes upon itself, under all circumstances, the education of the masses as a first charge upon its revenues. The Regulation we are considering does not place the matter so absolutely; but it follows none the less, once the principle is recognised as the measure actually does. The educational system of the State is already under the Government almost exclusively. This regulation will have the effect of throwing education entirely upon the State, so far at least as elementary education is concerned. There are about 2,177 elementary schools under public management with 80,175 pupils, both boys and girls. The total expenditure on these schools is Rs. 4,03,567 giving an average per pupil of Rs. 5.03. The total population of school-going age, according to the Report on Public Instruction for 1911-12 is 817,470. The total cost of education of this population would on this basis be about Rs. 40 lakhs. This takes us on to the practical aspect of the measure but before going to that we would point out that the measure is in principle the natural, if somewhat tardy, result of the policy inaugurated so long ago as 1867-8, but would seem not quite to realize the whole bearing of the question.

Passing on to the practical aspects of the Regulation, the first point that strikes a reader is that the Regulation can be so worked as to make no departure whatsoever from what obtains already in regard to the working of the Department in respect of this very branch of education. There is nothing in the Regula-

tion to give us the least hint what degree of expansion in this matter may be looked forward to in the more or less proximate future. There is nothing to indicate what is the actual machinery that is to carry on such a far-reaching and important measure, excepting section 7 which provides for the appointment of committees in select areas. No general system of local agencies or organisations is indicated. How is the rapidly rising expenditure under this measure to be provided for? Even the very moderate beginning made in 1867 provided for a cess. Of course this is only a legislative measure and not an administrative scheme. All the same when a measure of this magnitude and far-reaching importance is passed one is accustomed to expect the measure to indicate the complete machinery that is to be the means of carrying out a regulation of the magnitude and gravity of the one under consideration. In the absence of any such in the Regulation itself we ought to take it that the Government is prepared to take it upon themselves entirely to work out the measure. If this assumption is not unwarranted, as we believe it is not, then it amounts to this : that there is to be a complete State organisation for elementary education consisting of schools started, equipped and worked by State agency without the intervention, except very indirectly, of any local agency. Fancy eight lakhs of boys and girls to be provided for not in a very remote future and all on the sole resources of the State, in men, material and control. Does this seem practicable at all? The answer would, of course, be that all this will not come into existence at once, and as the Department expands the working agency will expand likewise. Quite so. The expansion must be fairly rapid not to be outstripped by the normal

growth of population. The answer to this perhaps would be that the measure is intended only to arm the Government with power to compel people to send in their children to fill in the existing schools. If that is really all that is intended that the measure should ultimately be, we have no quarrel whatsoever. We have hopes, however, this is not all that is intended.

If we are not in error then, the Regulation is defective in that it does not provide for the creation of a network of local organisations to work these schools under the control of the Department. This ought to be the first to receive attention. In closing the session of this year's Representative Assembly the Dewan foreshadowed certain changes in regard to the constitution of the Economic Conference and the Assembly itself. It would certainly be a step in the right direction if instead of an unwieldy Representative Assembly, this body should be reduced in number to say not more than 100, and District and Taluk Assemblies constituted to help in the local administration. These bodies could take over much of this educational work. Even this is a matter that will require time, but a beginning ought surely to have been made in this connection. A network of small assemblies would prepare the way for the satisfactory realisation of what is contemplated in a measure like the Regulation under advertence.

With an organisation such as this, the financial aspect would also receive sufficient attention and the question how far education could be a local charge and how much must necessarily fall upon the State can be usefully discussed to arrive at a practicable distribution of the burden of compulsory education. Without either it would be more than human to hope

that the scheme would be really productive of all that we are accustomed to associate with the adoption of a measure of compulsory education in European countries. It would be going too far to discuss the scheme in the fulness in which its importance would require it should be, in the space of an editorial, but we do think we have indicated enough to show what the scheme will be in practical working. There are already a few more than 4,000 elementary schools with about a lakh of boys and girls. The Department, as it is, finds it impossible to exercise over these anything like the control that it ought to, for proper, not to say efficient, working. There are Government Orders sanctioning schemes for opening 1,000 schools more in the course of the next few years. If this could be done in the only satisfactory way it ought to be, a great deal in the expansion of primary education would have been done. The Regulation could well be made use of in a subsidiary way to help this scheme of expansion on. So far it would be excellent good work. To do more requires more than meets the eye in the Regulation itself. The first essential would be departmental agency far more active and efficient than hitherto available; local organisations and general sympathy and co-operation of the various administrative departments than would appear to be available from all that one is ordinarily able to see; and lastly more sinews of war, and what is more than this, the men to carry on the great work that this implies.

We do hope that all this in time would be brought into existence and the best hopes of those that wish well of the State would be realised; and nothing would please us more than that proper steps are taken to put the scheme well on the way not merely to meet the

immediate needs of the hour, but the ultimate goal of statesmanship which cannot fall short of ennobling the life and improving the material and moral condition of the toiling millions of humanity of whose destinies disinterested statesmen are the appointed guardians.

The season when Fellows of the Senate are chosen annually is approaching and we desire to urge on all people connected with the choice the duty of seeing that educationists are not kept out of controlling education. We hold that the University Senate ought to find room for every Principal of every College and every Professor of every First-grade College, excepting those who are known to be cranks, of perverse views or otherwise objectionable characters. Now of the Second-grade Colleges, a handful are represented in the Senate by their Principals and such large and well-conducted colleges as those in Madura, Tinnevely, Coimbatore, Palghat, Calicut, Salem, to mention only a few, are not represented at all. We think it is scandalous that the Principal of every Second-grade College has not been able to get into the Senate either by nomination or by election. It is equally bad that Professors of First-grade Colleges, who are known to be efficient in their duties, who are on the Board of Examiners have yet been unable to find their way in to the Senate which is the body that devises the courses of study. We blame the Government and we blame the electors who will not choose the right men but will introduce into the Senate, Collectors and Judges, practising lawyers, professional patriots, printers and merchants (such men as know nothing of the conditions of work in our colleges, whose one ambition is to seek cheap

notoriety by speaking on every subject introduced and who have by their garrulity compelled the Senate to pass, in self-defence the ten-minutes rule), though educationists of more than a quarter of a century of experience offer their services. We deliberately shun mentioning names, for we are concerned only with the principle—educationists first, others after them. The privilege of electing two Fellows a year to the Senate will prove a curse and not a blessing, if this is to be turned into an engine for keeping out educationists from the Senate and if the methods of the party politician and the platform orator are thereby to be made to override the interests of sound education.

This section was presided over by Sir R. C. Temple, Joint-Editor of the *Anthropology at the British Indian Antiquary*. His opening address concerned itself with the practical aspect of the general subject of anthropology, that aspect which will be of practical value to those engaged in guiding the administration of their own or another country. In the course of his address, he admits that "we are still, however, very far from being able to understand in all their fullness of development even the crudest of human communities," a remark which we wish to commend to the notice of young civil-ians who write Census reports and those Christian missionaries that are equally cocksure about the aims and aspirations of the various peoples of India and last, but not least, of those foreign religious teachers who, in these days, aspire to teach Hindu religion to Hindus, without the least respect for or knowledge of Hindu feelings and Hindu ideals. Sir Richard Temple then passed on to a tabloid account of the British Empire and pointed out how every language of the world was spoken,

every possible religion, every kind of routine of daily life followed, every variety of social relation practised, in the British Empire and that this it afforded the widest area of work for the field anthropologist. This complicated empire is governed from the British Isles, which send every year a body of young men to administer the affairs of its various parts. It is requisite therefore that these young men should be trained in the methods of acquiring "a working knowledge of the habits, customs, and ideas that govern the conduct of those peoples and of the conditions in which they pass their lives," so that their administration might not prove a disastrous failure. Tact that is born of "intuitive anthropological knowledge" is necessary for success. This can come only from the imbibition of the "anthropological habit." Sir Richard Temple hopes that the Public Services Commission will point out the need for the official training in anthropology of candidates for the consular service and of the Indian and Colonial Civil services. In recent years an Oxford school of anthropology has been created; in Cambridge, this year an anthropological Tripos has been instituted. The London University has now a Board of Anthropology and is going next year to include anthropology as a branch of the Science Honours degree. But what has the Madras University done for a study of anthropology, notwithstanding the fact that this Presidency is a complete anthropological museum illustrating all stages of culture, from the lowest to the highest? Echo answers what.

Far and away the most humanly interesting Geography at the British Association Address this year was the one delivered to the geogra-

phical section by Prof. Dickson. The continuance of our modern civilization depends upon the unfailing supply of food energy and of mechanical energy and lastly on the lines of transport of crude and finished materials. With regard to the first factor, notwithstanding increased acreage of cultivation, and the possibility there yet is of still further increasing it in North America and elsewhere, "it is clear that the available proportion of the total supply from 'extensive' sources has reached, or almost reached, its maximum, and that we must depend more and more upon intensive farming, with its greater demands for labour." Meanwhile present conditions by which certain definite areas set apart for the production of the food-supply of other distant areas are now changing; in the near future there is the likelihood of such a redistribution of mankind that every region will have "a moderate dense population, more uniformly distributed over large areas, capable of providing the increased labour necessary for the higher type of cultivation, and self-supporting in respect of grain-food at least. So much for food-supply."

Now for the next factor. So far the presence of coal has determined the location of manufacturing industries; in England about 300 millions of tons of coal are consumed every year; and at the present rate of increase the whole available supply will be exhausted in about 170 years. In other countries coal may last for some time more, but, "to the best of our knowledge and belief one of the world's largest groups of coalfields (our own) is not likely to last three centuries in all." Here again conditions are changing. The conversion of energy into electricity not only utilizes hitherto neglected sources like waterfalls but affords easy means of conveying

energy in a cheap form to places where crude materials are found. Thus the energy of the waterfalls of the Alps transmitted as electricity is converting North Italy into one of the world's great industrial regions. In the near future coal might be burnt *in situ* and turned into electricity; and when the use of electric power is universal, it will affect the distribution of population. A small electric motor is a much more efficient apparatus than the small steam-engine. Hence whereas the steam engine in the past concentrated people in factories, electric power will effect a uniform distribution of men on the surface of the earth and the distinction between agricultural and industrial areas will cease.

Such a redistribution will react on transport. If each region becomes self-contained as before the days of the factory, the amount of long-distance transport will diminish. If the raw materials of the tropics, now transported to distant manufacturing centres and retransported as manufactured goods, are used up in their place of origin by manufacturing electricity from waterfalls in that region, how little east-and-west transport will there be. But to be able to answer accurately the numerous questions that will arise in discussing in detail the above general considerations, a complete geographical survey of the whole of the world, much more thorough than the incomplete physical or biological or economic survey of some parts that has been done so far, is necessary. Prof. Dickson pleads for such a survey. One possible means of getting it done will be for every University in the world to develop its own school of Geography (such as exists in Oxford and in Cambridge) in the British Empire and conducting the survey of the region accessible to it.

Another noteworthy feature of this year's meeting of the British Association was that one of its sections—section K, Botany, was presided over by Miss Ethel Sargant. She prefaced her address on Vegetable Embryology with these words: "There is one more event of the past year to be mentioned before entering on the professional portion of this address: Section K has made a great innovation in choosing a woman for its President this year, and I will not refrain from thanking you in the name of my sex because I am the woman chosen. And though I must and do feel very keenly the honour you have done me as a botanist in electing me to this position, yet that feeling is less prominent than gratitude for the generosity shown to all women in that choice. Speaking in their name, I may venture to say that the highest form of generosity is that which dares to do an act of justice in the face of custom and prejudice." The highest form of generosity in our country is to talk on platforms on Gargi and Maitreyi and Lilavati, to deliver eloquent orations on female education in the Legislative Council and to withdraw our daughters from schools before the age of ten lest the ancient ideal of Indian womanhood be destroyed!

Mr. J. M. Robertson, M. P., writes an interesting criticism of the English of the Bible in the current number of the *Journal of English Studies*. It is true that in the Bible was reached the high watermark of English prose style, so far as clearness and vigour are concerned, but all the same it is refreshing to read a great authority say all that he has to say from the opposite standpoint. Mr. Robertson begins by demolishing the fallacy, so frequently uttered even by such

well-informed men as Prof. Saintsbury and Sir Arthur Quiller-Couch that the forty-seven men that collaborated in producing the English translation of the Bible had absolutely no good models of English prose before them to imitate. The fact is that "The Bishop's Bible (of 1568-72), of which the authorized version is avowedly a revision, supplied *verbatim* four-fifths, if not nine-tenths, of the whole text in the King's translation; and the great Bible, [of 1540, often called Cranmer's, really Coverdale's revision of his own, with general resort to Tyndale and Rogers] of which the Bishop's Bible is a revision, supplied *verbatim* four-fifths, if not nine-tenths, of all the Bishop's text." Thus the birth of the authorized version was not a "miracle" that suddenly befell to English prose, as over-emotional critics have sometimes asserted. Another noteworthy point that Mr. Robertson makes is one made long ago by Selden and repeated by Hallam. It is that "the Bible is rather translated into English words than into English phrase. The Hebraisms are kept, and the phrase of that language is kept..... which is well enough so long as scholars have to do with it; but when it comes among the common people, Lord, what gear do they make of it." Mr. Robertson gives some illustrations of this imposition of Hebrew idiom on English. We quote a few; italicizing the phrases he claims to be "not a natural way of English speech:" "Blessed is the man that *walketh not in the counsel of the ungodly*, nor *standeth in the way of sinners*, nor *sitteth in the seat of the scornful*." "So they *established a decree to make proclamation*." It is to us a novel idea that the English Bible contains un-English phrases. As we are ignorant of Hebrew we cannot verify the statement. But we know that the Tamil Bible and Telugu

Bible are excellent specimens of what is worst in translation. The words are all Tamil or Telugu, but one can read pages after pages without being able to understand anything, unless one has by the English Bible and reads it at the same time. An eminent Christian missionary once bitterly complained to us that the common man in the Telugu country could not make head or tail of the Telugu Bible; and we humbly added that we too were one of those who attempted to read some pages of the Telugu scriptures and though we were tolerably acquainted with them in their English garb could not make any headway with the Telugu rendering. The art of translation requires the possession of the *sprachgefühl* of two different languages: if not, the language of a translation will be no better than the Government translation of their laws and notifications, published in the *Gazette*.

Teachers of Chemistry have perhaps been faced by the following **C h e m i c a l** nomenclature. posers from over-intelligent pupils, why do we speak of mercury sulphide and not call it sulphur mercuride, why write HgS. and not SHg. why hydrogen oxide and not oxygen hydride, why again nitrogen chloride and not chlorine nitride, why in ethyl sulphide, ethyl goes before sulphide, but in zinc ethyl, it is degraded from the place of honour? Mr. Martin solves this puzzle in the columns of the *Chemical News* and traces it to mediæval superstition. The alchemists of the middle ages, who were the forerunners of our modern chemists were chiefly concerned with reducing metals into demetallic form and to them, therefore, the metals were noble and non-metals base. So when a metal and a non-

metal combined, the noble metal was given the place of honour. This ancient custom is kept up in modern chemistry and hence notwithstanding the all-important role oxygen occupies in chemical phenomena, when it combines with a metal, it is robbed of its individuality in the name of the compound and we get oxide of this metal or that metal. In the case of hydrogen or carbon, "the more positive element or radical," which apes the metal in the compound was, presumably from custom," given the first place. Oxygen being the least metal-like or most electro-negative element known has therefore become the cinderella of Chemistry—doing plenty of work and yet getting no name for all that.

In our editorial note last month on "More Inspectors and Inspectors," we said, "it the Vernaculars. will not be too much to institute an examination for them in the vernaculars as it is in the case of Civilians and others." We regret that for want of space we could not have explained our meaning better than by this highly ambiguous remark, which we now proceed to do. We know that Inspectors now do pass an examination of sorts in a vernacular. But we want them to be able, before confirmation, to attain such mastery of the spoken idiom that they can give model lessons, in the vernaculars, in subjects taught through that medium, just as they now do or rather are supposed to do, or at any rate, a good Inspector, up to his work, can reasonably be expected to do, in the case of subjects taught through the medium of English. We certainly do not want them to expound vernacular poetry; but a lesson in Geography, in Elementary Science—subjects so indifferently, if at all, taught now—in the

Vernacular in a II Form will be an immense stimulus to the form teacher, much more than general remarks that such and such a teacher is not up-to-date. While on this subject we may also point out that we have frequently noticed that when an Inspector of Schools passes his examination in one vernacular, the D. P. I. straightway transfers him to a place where the vernacular is different from what he has learnt. Thus one who knows Telugu well is sent to a Tamil district, one who passes in Canarese is sent to a Malayalam district and when he learns Malayalam also, he is immediately sent to a Telugu district. The motives for the transfers are inscrutable, but the knowledge that an Inspector of Schools acquires of a vernacular does not weigh any thing in the minds of the head of the Department.

As announced in our last issue, the Government College of Commerce commenced work in the Elphinstone College Buildings, Bombay, on the 22nd of last month. The Bachelor of Commerce Degree was instituted by the University of Bombay early last year, and it was announced in a Press Note of June 1912 that the necessary funds had been secured for starting a Government College to prepare candidates for this degree. It was announced by Government and expected by the public that the College would be started in October this year. We are therefore glad to find that the Government of Bombay have been able to keep their promise and start the College this year in spite of the usual difficulties and delays inseparable from the organization of a new institution. We must congratulate the Government of Bombay on the successful and satisfactory manner in which

they have been able to arrange for the first year's working of this College.

Permanent staff.—The course extends over three years, the 1st year's course being confined to literary subjects and elementary professional training. Advanced Economics and Advanced professional training are reserved for the 2nd and 3rd years of the College course. The services of the two expert Professors sanctioned for this College who have to be selected by the Secretary of State from among the graduates in Commerce of British Universities are really required for the 2nd and 3rd year courses; it would have been a waste of money and teaching power to have brought them to Bombay at the very commencement, as for the elementary teaching prescribed for the Intermediate Examination in Commerce, such highly trained and highly qualified British Professors would be wholly unnecessary. For purposes of organizing the College on the right lines, the arrival of the permanent Principal from England would have been useful. This difficulty has been overcome by entrusting the initial organization work to Mr. K. Subramani Aiyar, the originator of the whole scheme. It may also be said to be an advantage to the College that its initial organization should have been entrusted to Mr. Subramani Aiyar, who has for years been devoting so much attention to this question instead of to an imported Principal who, however eminent an expert he may be, will for sometime be lacking in the local knowledge necessary for making it a success.

The Acting Principal.—The College has been



placed under the management of Mr. K. Subramani Aiyar as Acting Honorary Principal. He is a Bachelor of Arts and a Licentiate in Teaching of the University of Madras, and has been connected with the organization and teaching of private and Government commercial schools and colleges for more than quarter of a century. He is the senior partner of Messrs. K. S. Aiyar & Co., Incorporated Accountants, one of the leading firms of Auditors practising in Bombay. He is also the Manager of the Bombay Life Assurance Company, Limited. He is, therefore, not only an educationist of wide repute, but is also a practical business man with a knowledge of the requirements of business men. That he commands a wide practice as an auditor and that he has been entrusted by some of the leading financiers of Bombay with the management of a Life Assurance Company started by them, go to show that he enjoys the confidence of a good portion of the mercantile community of Bombay. He is an Honorary Fellow of the University of Madras and an Ordinary Fellow of the University of Bombay. He is also a Justice of the Peace and an Honorary Presidency Magistrate. His enthusiasm for, and interest in, higher commercial education require no proof as he has been consistently working for the advancement of this branch of education

for so many years. We are glad to note that the Government of Bombay have generously acknowledged his services in the cause of commercial education and have confidently entrusted him with the initial organization of their College of Commerce.

The Provisional Lecturers.—Four provisional lecturers have been appointed by Government for teaching the four subjects prescribed for the Intermediate Examination in Commerce. Permanent appointments will be made after the arrival of the permanent Principal from England. This is certainly a wise arrangement as it is necessary to first ascertain the qualifications of the Principal and the senior Professor to be imported from England before selecting the Indian lecturers. Government must first know the subjects in which the two imported Professors are experts, so that Indian lecturers may be selected for teaching those subjects which the imported Professors are not qualified to teach. We give below the names and the academic and professional qualifications of the four provisional Indian lecturers who have now been appointed:—

Mr. N. S. Takakhav, M.A., who has been appointed Lecturer in English has, we find, passed all his University Examinations in the First Class and been awarded the Chancellor's Medal for having stood first at the M.A. Examination in English and Latin. He has been a Professor of English in two first-grade colleges for some years past, and is said to have made a name for himself as an efficient teacher of that subject. His work in this College is confined to the teaching of English for the Intermediate Examination, precisely the kind of work which he has been doing for some years past in the Arts Colleges.

Mr. R. M. Joshi, M.A., LL.B., who has been appointed Lecturer in Political Economy, has passed the M.A. Examination in History and Economics with Honours, has been a teacher and an Assistant Professor for some years past and is besides an Examiner in English to the University of Bombay.

Mr. Bhaskerrao V. Mehta, M.A., LL.B., M.B.A.S., who has been appointed Lecturer in Mercantile Law is a practising Advocate of the High Court of Bombay, and a Director of the Bank of Baroda, Limited. He is, therefore, not only a lawyer, but a businessman in the active exercise of his profession.

Mr. S. S. Engineer, B.A., F.S.A.A. (London), who has been appointed Lecturer in Accountancy is a graduate of the University of Bombay and an Incorporated Accountant of London. He served his apprenticeship under Mr. Subramani Aiyar for three years, went to England and passed the Incorporated Accountants' Examinations, and returned to Bombay about five years ago. He has therefore had about eight years' audit experience in Bombay. He is still a practising Auditor. The arrangements made for the first year's teaching, though called provisional, and though made in a hurry, seem to us to be eminently satisfactory. We congratulate the Government of Bombay on their having been able to secure, at short notice, the services of such an efficient Principal and a satisfactory staff of lecturers.

Admissions.—We understand that there has been a very large rush of applicants for admission and that the College authorities have been obliged for want of room to refuse admission to a large number of eligible applicants. We have not yet ascertained the exact numbers that have been admitted ;

but we understand that over a 100 students are now attending the lectures. This is further evidence not only of the popularity of the new course, but of the confidence of applicants and their guardians in the qualifications and capacity of the provisional Principal and his staff.

The terms.—As prescribed by the University, the first term is from 22nd October to 22nd December, the second is from 1st February to 30th April and the third and final term is from 15th June to 15th August. Students belonging to the first batch will be sent up for the Intermediate Examination in Commerce to be held by the University of Bombay in the first week of September 1914, and for the Bachelor of Commerce Degree Examination in the first week of September, 1916.

Practical training.—Though the University does not prescribe any practical course, we understand that the College authorities will arrange facilities for the practical training of the College students during their vacations. The College has an Advisory Board consisting of a number of prominent merchants and representatives of the chief mercantile associations. It will, therefore, be not difficult to arrange for the students serving as apprentices in different mercantile offices and under auditors, during their vacations, especially in the case of the 2nd and 3rd year students.

Appreciation by Government.—We are glad to reprint below the concluding paragraph of the Press Note issued by the Government of Bombay on the 10th October 1913 :

"His Excellency the Governor in Council
"in announcing these temporary arrange-
"ments desires to acknowledge that their

"early introduction has been rendered
"possible only through the energy, zeal, and
"resourcefulness of Mr. K. S. Aiyar, who
"has consented, pending the arrival in India
"of the permanent Principal of the College,
"to give his services in an honorary capacity
"to the College. The Bombay Government
"are glad that this institution, which so
"largely owes its inception to Mr. Aiyar's
"labours in the cause of commercial educa-
"tion, should first commence operations
"under his Principalship."

We are glad that the University of Madras has recently found-
University Pro- fessor for Indian History, &c. Indian Economics and
another for Indian History and Archaeology. What the duties of the Professor who is to be appointed for the latter chair are, have not been defined with precision ; yet from the advertisement by the Registrar inviting applications for this chair we may presume that he is not merely to retail information contained in published works on Modern Indian History such as those of Orme, Mill, and Mangleson but that he is to build up the history of ancient and mediæval India especially of Southern India from such materials as epigraphical, numismatic and literary as are abundantly available for that purpose, and to familiarise the students with the methods of historical research and to open up to their minds fields of Indian History which have not yet been adequately treated

in books published by Western authors. We venture to say that this is the proper function of a University Professor of Indian History and Archaeology and that the University had this in its view in founding this chair. If each University will similarly do so for the better elucidation and working up of the history of its respective province, the history of ancient and mediæval India can easily be worked up and the reproach that our graduates have done nothing in the field of historical research will no longer be heard. Confining our attention to our own University Professor of Indian History and Archaeology, he must be a man well-acquainted with the vernaculars of our Presidency and their literature, especially Tamil literature. The materials, epigraphical, etc., for the construction of South Indian History are very abundant and most of them are in Tamil. Tamil literature itself contains a wealth of historical information which throws a flood of light on ancient institutions, manners and customs. The requisite qualifications for a Professor who will do justice to his work, we may affirm, can only be found in an Indian of our Presidency who combines in himself a scholarly knowledge of Tamil and its literature with a first-hand knowledge and practical experience of epigraphical and archaeological research work and we hope the University will be able to find such a person for this newly-founded chair.

SCHOOL-MANAGEMENT AND THE WORK OF THE STAFF.

(Continued from page 22, Vol. XIX.)

II.

IN the January (1913) number of the *Educational Review* was mentioned the manner in which the management and the headmaster might co-operate to make school work efficient and popular. The reasons for some of the statements made therein seem to be necessary to make matters clear and understood in the spirit intended.

2. In the first place, it must be seen what need there was for saying that the professional representative must be one who finds time and takes interest in the work. Some examples may be found in which he was pressed or invited to take his seat in the Board of Management but for all the time supposed to be in it, he was never known to do anything which ever had the object of improving the condition of the schoolmaster, the course of instruction or the relationship of the school to the parents of the youths undergoing their training in it. The presence of a professional gentleman has tended to make people disbelieve the utility even in matters in which his experience may be of use to the public. He has probably contributed to worse treatment of teachers and to more frequent changes in the staff. His more intimate knowledge of the poor condition of graduates especially of such as are in the earlier stages of struggle to find posts has only made him advise the lay-people to employ them on low pay one after another, so that the trained teachers may not be more highly paid and longer kept at school. Without him, the lay-gentlemen might have felt some

diffidence in following the course and at least some concern lest the Department should view it with disfavour. But his knowledge of the rules has only taught him to point out that a certain proportion of trained teachers is enough for purposes of recognition and that the Department can by no means withdraw it. The other members of the Managing Committee are then led to say "when an expert helps us in this way out of our difficulty, why should we trouble ourselves?" He whose presence ought to have contributed to devising some plans by which teachers may be better treated and the school may be manned by as permanent a staff as possible, so that the children may not suffer by constant changes has probably only served to intensify the disaster and embolden others outside the field of teaching into taking steps which, unaided, they might have hesitated to adopt. Thus, the possibility or the chance of an effort the management might have made to improve the financial condition of the school for maintaining a staff at least relatively permanent is altogether lost for the time being. No professional representative is needed to follow the methods of the London 'Sweater,' specimens of whom may be easily found everywhere. The great difficulty is only to see whether the Department may be moved to give a larger grant, or whether the public may be successfully appealed to, to contribute sums for efficiency notwithstanding the pressure in all directions or whether it is possible to create and afford greater facilities for a fresh class of self-sacrificing teachers whose devotion will place the school beyond any anxiety for sustained work of a high order on a much smaller expenditure than is now incurred. No such difficulty is ever either faced or even attempted to be faced.

This is a sorry spectacle by itself; but, matters do not stop here. The professional representative presents himself as a specimen of intolerant dogmatism in matters of methods of teaching. He thinks that those he likes are only the best and that the teachers of the school must be forced to follow them whether they are suited to their tastes and capacities or not. But, the less is said of this the better it is for us to avoid mention of unpleasantness in school work. This state of affairs makes the public feel that, if only the managers either literate or illiterate can succeed in securing a headmaster who will make the best of the school-fee collections and manage his staff out of that resource without any serious prejudice to the fairness of results in public examinations or to the favourable impression on the mind of the Departmental officer or officers who inspect or visit the school, they have done their duty by it. These remarks do not apply to those who helped in the past or help at present the progress of institutions. To them thanks of the public are due for their self-sacrifice in over-working themselves though their energies are well-nigh exhausted in doing their own tiresome duties.

3. In the second place, the serious question of the headmaster's position presents itself. On theoretical grounds, it is easily conceded that he ought to be the lord within the school and that the example of public schools in England ought to induce every management to imitate the valuable example. But, it must also be seen that they are mere theorists who in a transitional state of things wish to follow the educational work of institutions settled after many years of experiment and struggle. Fresh experiments are now being made and fresh lines of policy are being formulated by different people in differ-

ent places. Matters are unsettled and in a state of confusion. Neither the Department of Public Instruction nor the various managing boards are quite sure of the ground. In this condition of affairs, the headmaster is made the supervisory authority of the school. It is not difficult to mention a number of instances in which headmasters are efficient in exercising supervision. But, whether what applies to these should also be granted to the majority of them who do not seem to know what to do with the spare time at their disposal is a matter in which no definite pronouncement need be made but in which the intelligent observer may form his own impressions based on observations of actual facts. One thing may, however, be easily noted. If, in the case of the professional representative on the Board of Management, some regrettable features were noticed, no less are the heart-burning characteristics of people engaged in teaching and supervising who instead of making allowances for the limitations in actual work go to the extreme of expecting too much, because they have themselves forgotten the difficulties of handling classes for the whole day with only nominal leisure in the midst of school-work, the greater part of it as shown in the timetable being taken up with work for absent teachers or teachers who have left the school without their places being filled up within a reasonable time.

4. What the nature of supervisory work ought to be has been indicated in the January number of 1913. It ought to be chiefly in the giving of model lessons and in securing uniformity with continuity of work. It is most unfortunate that the nature and the importance of supervision are not quite so commonly understood by the generality of headmasters

whose schools contain the three upper forms of a secondary school. Their attention is mainly directed to the production of good results in the public examination of the highest form and to the arrangement of such work in the next two lower forms as will enable them to secure a name there. When any defect is noticed in the upper forms, they think it enough to find fault with the lower secondary and primary teachers for not having sent up pupils properly trained. The idea that they have not only to examine the condition of work in the lower departments from the view-point of the upper forms but also to see how they must daily prepare the lower pupils for duly profiting by the instruction in the higher course is not quite so commonly realised even from a theoretical stand-point as it deserves to be. They think it enough to get information from the L. T. teachers of the upper forms as to what they are doing or to make them work harder. When the reality is understood, it is not these that require supervision so much as those of the lower departments who should be looked after by the headmaster with due care and regularity. Taking the staff of the primary school as it is, its members need help not only in methods of teaching but also in knowledge of subjects. The deficiency in the latter respect has been tried to be rectified in Madras by the lectures on general subjects to primary teachers—lectures organised by the energetic efforts of the Inspector of Schools, IV Circle. Though this is a decided advance on the position of things as they stood sometime back, a considerably greater improvement is needed in each school by the headmaster having to make thorough in a higher degree the knowledge of subjects as required for the particular school by each

headmaster than general lectures to a large number can, to benefit the primary teachers. The headmaster's work in this line to however small an extent demands labour and skill. Even leaving this apart, ordinary supervision of the primary school containing only one division in each of the four standards takes up two hours per day at half an hour for each, if the headmaster takes care to be sure that the knowledge already stored up by the staff without need for fresh instruction is imparted to the children in the proper way suited to them. Similarly the supervision of the lower secondary forms at half an hour for each takes up an hour and a half, if there should be only one division in each of the Forms I, II and III. If the headmaster comes into contact with upper secondary teachers for half an hour each day, the total number of hours in which he will have done good work comes up to four. If he spends an hour in office work, he does five hours' active work which ought to be enough to please the management. Matters are certainly complicated with more than one division in each of the standards and forms. How few are the managers that appreciate the value of supervision of the kind described? It must be borne in mind that only one person—the headmaster ought to exercise supervision in the primary and lower secondary departments. Of course, he has to take a great deal of trouble and work a sufficient length of time everyday to acquire and improve the general knowledge required for efficient guidance to the staffs of the lower departments. This alone can secure the advantages of centralised authority demanded in a school. The amount of general knowledge required is not too high for any graduate-headmaster of ordinary attainments to gain. Patience and

pains-taking are the only essential requisites.

5. In the inspection reports of more than one school may be found the inspecting officer's remark that the headmaster of a secondary school might secure the co-operation of teachers of upper forms in special subjects in the supervision of those in the lower forms. The Inspectors ought not to be misunderstood. Do they speak of 'co-operation'? Yes, co-operation, strictly co-operation. Why? The headmaster is the chief person to do the business; now and then, by way of help to him, they may also take a little part; for, if their own work is to be satisfactorily done under existing conditions, they can spare only a very short time in the course of the month. If it is a lamentable feature of school-life that the value of the right kind of supervision is not appreciated, not less regrettable is it that the significance of work properly directed and supervised is not generally understood. Examples are not wanting in which it is found that time is, out of all proportion, spent on matters of little or no educative effect. Again, the reader is requested to warn himself that these remarks do not apply to the minority of supervisory headmasters capable of turning out excellent work. All that has to be understood to be the vital and fundamental affair in the teaching in schools is the proper influence of sound supervision on the conduct of work in the whole school—sound supervision in which the headmaster will exert his personal influence with the occasional co-operation of his senior assistants.

6. So far, the management and the headmaster have come in for a large share of comment. There yet remains to be treated of, the work of the assistant masters; but, it is natural that much more should be said of managers and headmasters than of assistants because on their control depends the nature

of their subordinates. But, the aspect of school work from the teachers' view has its own importance. They may serve in different kinds of management—Local Board, Municipal, Missionary and private indigenous schools. In the Local Board schools, the assistants have no difficulty. The headmaster has to get on with the President of the District or the Taluq Board. If they get on well, no interference of any kind disturbs them. In a Municipal school, the headmaster is responsible to the Chairman of the Municipality. But neither for the headmaster nor for the assistants is the path quite smooth. If there are factions amongst the councillors, the staff has to decide which will be more profitable to them. Even if no factions disturb, the councillors expect some sort of respect from the subordinates in schools. But, even then, the difficulties are far less than in Missionary or indigenous schools. The non-Christian teachers of Mission schools cannot be sure of their posts when Christians are available. However, so long as the former are retained in the service they are treated with kindness and respect. Amongst indigenous schools, a small number is managed by teachers who are themselves proprietors. Their individual gains affect the prosperity of their institutions and the considerate treatment of the staffs. In other private schools managed by committees, the indifference of the latter and any differences between them and the headmasters places the staffs at a considerable disadvantage. Whatever may be the nature of institutions in which teachers serve, one fact must be remembered as of supreme importance. The parents and the public know nothing of the internal relationship between managers and headmasters or between headmasters and assistants. In this country, the tradition of ages has accustomed people to look upon

schoolmasters with confidence without doubt, yet, the notions of utility in an advancing age of complex modern civilization force men to inquire whether teachers are properly paid and treated. But, this is a matter of only recent growth. The influence of long-established tradition is still paramount. If there is one thing more than another which teachers should take into account with conscience and with feelings of pity for the public, it is this element of people's trust that should weigh with them. It is not of any use for assistants to excuse themselves on the score of some fault either actually found in headmasters and managers or imputed to them. They ought to recognise the actual conditions that prevent even well-intentioned headmasters and managers from doing all that they wish to see done by the staffs though they may not outwardly show signs thereof, lest they should lead to later disappointments which are worse than loss of hope. They ought to feel that Managing Committee members of indigenous schools give their time, energy and intelligence without any reward in the shape of money, whatever may be said of them in other ways. As a matter of discipline, they ought to feel that, if they only make their representations to the official superiors, they have done the little that they can but that, at the same time, it is their duty to make the best use of the resources and materials available to them. So long as men are employed in any service they ought to adjust themselves to the requirements thereof. No management can be smooth if its subordinates mean to question the authority of their superiors. If these think it to be to the interest of the institutions managed by them to consult their staffs and yield to their wishes as far as possible, it is well and good. If they do not, assistants ought not to fancy that they have legitimate grievances against official heads. Sometimes, no reasons may be assigned, as these are not desirable in certain conditions. These need not be questioned at all. Sometimes, may be noticed weaknesses too plain to be concealed and too serious to be tolerated from any standpoint. As an example, a manager who had spent a good number of years in bringing his institution to the front

by saving money may not easily spend the money needed for the improvement of school work, may much less think of increasing the pay of teachers except under unavoidable pressure. It is, of course, creditable to him to consider duly altered conditions and treat the assistants accordingly; if he does not, they must only think that it is a natural human weakness on his part and that they must, by no means, do their own duties less vigorously or willingly, on that account. In the interests of the assistants' future prospects in life, it is but reasonable that they should exercise their patience under different conditions of management and that, if they would only attend to the needs of discipline necessary for the various kinds of institutions, they might have their own days of influence and prosperity. If, in spite of these, they do not succeed in work and life, theirs will not be the fault. This consolation ought to and does support them. Their own obedience to disciplinary rules is the *desideratum* in school-life in the interest of the future citizenship of the large number of youths committed to their charge. However successfully attempts may be made to conceal breach of discipline on their part, the children of schools do somehow or other come to know of them. This knowledge has a deterrent effect on the training of pupils. Nobody ever contends that this is at all desirable. Particular care must, therefore, be taken that nothing reaches the ears of pupils which tends to lower their respect for teachers and superiors. Managers and headmasters ought to be guarded, if they are wise, that they keep confidential, matters which ought not to be known to pupils. But, whether they are wise or not, it is not the duty of assistants to do anything calculated to damage the tone and discipline that ought to prevail in schools, if they are to be centres imparting instruction in subjects and preparing future citizens for the performance of civic duties.

C. R. SRINIVASA RANGACHARY.



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SOME NEW IDEALS IN INDIAN EDUCATION.*

Mr. Chairman, gentlemen and young friends: The system of education which our young men are now going through is not altogether a thoroughly well thought out and organised one as yet. It is still groaning under the burdens of the traditions of the past, a system which had admirably served its purpose. When the Government of the country had to face the problem, their needs were uppermost to them and education was accordingly

* An Address delivered by Mr. K. Sesbu Aiyar, B.A., L.T., Headmaster, Municipal High School, Mayavaram, at the Anniversary of the National Association, Velipalayam, Negapatam, on the 4th October 1913.

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fashioned to serve the purposes of Government, to secure to them able and willing servants to execute the mandates of the supreme authority, to serve as excellent judges and lawyers who would help them in the administration of the law, evolve order out of chaos in the Revenue administration, in the settlement of land disputes and in the gradual subjugation of the criminal population of the land. Therefore, the Madras University when it was newly constituted paid most attention to the development of such capacities as would produce Government servants and lawyers expected to be co-adjutors with Government in the administration of the country. We all know how very well that system had worked and had served its purpose. But when once as a result of the settlement of the country into a state of peace and contentment, a generation had sprung up absolutely unacquainted with the troubled times of a past age and therefore with new ideas and aspirations, we are no longer content with having a peaceful Government, no longer content to occupy those positions which had hitherto been open to our fathers and grandfathers, and symptoms of the beginnings of a national life are visible. We begin to learn of what is going on around us out of India and many of you here doubtless know of what is going on in the far east in Japan and what has been

achieved even in those countries which hitherto were regarded amongst the most backward races of the world. Your impulses are naturally roused and as men who have been profited by lessons of such history as you have learned, meagre as it is, you desire that in your turn you also should enroll yourselves among the members of what should in course of time become a nationality. Looking around, you find that though we have a thoroughly organised Government, a stable Government, a peaceful population, happy and contented within, protected by the mighty arm of the British Empire from without (and we shall always be content to be that), you are not really contented. Signs of it are already visible and Government know it. We desire naturally that we should develop along several lines of national activities which are the characteristics of a nation in modern times. Contented for several thousands of years to be purely an agricultural race, with a large percentage of our population leading more or less a parasitic existence upon the rest, hoarding in our minds the traditions of a forgotten past, we now begin to see that in all that constitutes an organised life of a civilized nationality in the modern sense of the term, we are absolutely backward, far behind, I cannot say, any other race, far behind most of the races of the world. We desire therefore to acquire some of those capacities not in one generation or two, but in 3 or 4 or 10, when we may expect that we also shall be called human beings, men with whom even the Boers would shake hands and whom they would think fit to live in any land as members of a civilised nationality. I believe you have hopes and because I thought you have that, I agreed to speak to you about it, how your expectations could be realised, not in your

life, but at a very distant future. Many of you imagine that while Japan had suddenly sprung up into national consciousness fully armed as if from the earth and capable of shaking the mightiest nationalities of the world, you think that because Japan, a small nationality had been able to do that, we also in a short time ought to be fully equipped to be entitled to equal attention. The conditions are so entirely different and I cannot attempt at this stage to tell you in what respects they are different. Japan had never been a subject race, had never known divisions internally of the kind known in our country. It was one solid nationality always. Within, one portion of the population may have been subjected to another, but in all that concerned Japan and the Japanese, they were united in manners, customs and religion. What therefore they had to acquire was only that power and might that comes of solidarity which had not till then existed. The elements of solidarity had already existed and they had only to develop it and it was therefore so easy. We, on the other hand, have yet to acquire the elements of solidarity within us and therefore you must be much more patient, be content to do the work of laying the foundation of the structure the uprising of which we may not live to see. Our education has to undergo a thorough modification, if we really desire that in the very far distant future our children and children's children should enjoy that pleasure which we can only dream of. In what directions should our educational system be changed? It is changing already. I only want to draw your attention to those particular directions in which the changes are coming and of which you, of this generation, should derive as much profit as possible.

PHYSICAL EDUCATION.

The first and foremost direction of this new change is, that before everything else you should grow into a healthy strong vigorous animal. Think of your self as a being to exist, to perform certain functions and that those functions can only be performed by developing your animal powers, muscular powers, physical powers. This is the most crying need of the hour. Animality has been used in a grosser sense, but in the purely physical sense you have to develop it. If ever you do want to see specimens of the most decrepit animals you have only to see an assembly of highly cultured men of 40 years of age and above. Yes, myself and my predecessors are responsible and have been responsible and so I am here to confess to it. We are responsible in the sense we have been called upon to do certain things just in the same fashion you are asked to read certain things, the purport of which you do not understand. We, teachers, are merely wheels, springs and screws of a clock work mechanism which has been set for us and we can only go on turning and grinding and grinding as we are told we should do. Unless and until our nation wakes up and comes forward to maintain teachers who would devise for them that system which is best for them and the nation would insist on getting what they want, that they shall get their very best men, physically, morally and intellectually, you have no right to claim that the teachers shall be any better than what they are. What have they done to elevate their position, to improve their status, how have they been treating their own teachers, what respect do they show to the profession, what prospects do they hold out? Go into the ranks of lawyers, Munsifs, Sub-Judges

and Deputy Collectors, count how many who are now in the higher ranks had begun as teachers. Finding that they had no prospect of an honest livelihood as teachers, they jumped from one profession to the other. The teaching profession is therefore merely a refuge of all who cannot get better places elsewhere. When I speak to you elders, it may be necessary for us to discuss how we shall improve the profession; but for the present I shall confine myself to the young men.

The effect of the education of the past is to grind your brains, leave you no time to think of the development of your physical powers. A great many of you rise up in the morning, read from 4 to 6, write up your home exercises from 7 to 10, and again read away in the evenings and night. No wonder you are asked to work if you are depended upon by your parents for support in their after-life. Finding the examination approaching the anxiety for passing which the boy does not understand, the poor anxious mother wakes up the exhausted child, tries to open his eyes, and it is a loving mother that calls him, and as in duty bound, the boy sits near the flickering lamp and sits up with his books, mugs up and before it is day time he has his bath, comes and works at the exercises. If the boy is found in the street to play at marbles, he is called and addressed thus, "My boy, do not waste your time, do not play, come here, what did you read to-day, how many marks did you get" and it is no wonder the boy is exhausted. We at 35 or 40 know what exhaustion is, but boys under 20 do not know it. Passing through this grinding mill of bookish education, it is no wonder that more than 50% of us perish before we fulfil at least a quarter of the ex-

pectations which our parents had entertained on our behalf. In other countries public life has this advantage, the advantage of the guidance of the mature wisdom of men who having passed through the hard struggles of life had retired into a decent competence and with the advantage which public esteem and private wealth affords, the leaders of the people in the West maintain a high standard of civic virtue. They form, as it were, a reserve of intelligence and capacity. Where have we such reserves? Our wisest men drop down before they have provided for the meagre wants of their families and how many are surviving! I shall not describe the condition of those that survive. Directly they are old, they are no use for the guidance of the race. If I were to be given the options as a famous Rishi of old was said to have been given, do you desire to have the wisest boy who could live for 16 years and die or a dull stupid boy who would live long, and if the definition of wisdom is to be that of many of our University graduates who with weak health will fight their way through for a first class diploma or for the law and live for a short period of 20 and vanish like a meteor I would not accept the Rishi's choice. I would therefore say first attend to your animal wants, do not rush through your food because the school bell is already heard. Sit at your food in advance of your bell and grind it well, assimilate it, get health and strength first before you would go to compete to be a 1st class graduate of a University, and I would say that even at the risk of failing in the examination, you should attend to your animal wants, for the very fundamental necessities of the physiological existence is against the fulfilment of your intellectual desires. Sacrifice your inordinate intellectual desires, give prominence to phy-

siological necessities. An educational system in order to be satisfactory should be such that for boys under 10 or 12 there should be absolutely no need to look into a book so long as the boys are at home. The education given should be such as to draw his attention to facts of external nature, attention by bringing the child into direct contact with nature and in a fashion that he would never forget what he has learned. There should be no need to know what he has been told by the teacher—no telling at school. It is direct first hand knowledge that he should have and therefore no anxiety to read at home. At home he may be doing a little drawing, sketching, things which would come spontaneous to a child and above that age, for 3 or 4 years, half or one hour's study should be enough and beyond that 2 hours study. If we take our school working period to be nearly 5 hours, I do not think that any educational system can be regarded as sound which would demand more than 7 hours' devotion to intellectual studies in the course of the whole day including school or college work. You, young men, you have not the option to decide what you shall read. I can only say you have this option, viz., to decide that you read only so much a day and that you do play the rest of the time, notwithstanding the demands of your unfortunate parents, who, in their anxiety to save you from a failure, would demand that you should sit by the twilight and go on laying the foundation of a physical wreck of a later period. Sports in the evenings do form part of education. A strong healthy animal has certainly virtues which we know are altogether absent from the present race and if you do want to develop such virtues, you must possess health and vigour. We are speaking of sports and games

not merely to fulfil the physiological needs of the body, but for the much more important purpose of developing the faculties incidental to health and vigour.

CHARACTER.

The second advice I would give you is to grow into a manly man. If you do develop into a healthy strong animal, you will naturally be expected to be a manly man. That is to say, you should possess character. The functions of any educational system will be fulfilled ^{if} this, provided this fundamental necessity of a national life was thoroughly provided for in the educational system. Are we now wanting in character, we may ask. I do not propose to analyse wherein the defects of our elders are; I can only tell you what you should become. We have certain very good elements of character. We are very good peaceful citizens, with very quiet going virtues which have become latent in us perhaps from our birth, virtues which through long centuries we have acquired as the fundamental necessity of self-existence and self-preservation in a country torn by internal political dissensions and martial disorders. We have all the virtues which the Despot of an absolute country like Russia would like to see developed among his subjects. We have all the virtues of a subject race, but very little of those virtues of a nationality. What virtues do we require which we should try to develop among ourselves? Since I said these virtues evolve naturally out of a healthy animal, the virtues that I want to specially draw your attention to, are such as developed from, by and through sports.

OBEDIENCE.

The first and most important of such virtues from every point of view is the virtue of

implicit obedience to the authority constituted above, the Captain of a Football team, or the Vice-Captain of the Badminton ground. Every member of the football association must feel that the Captain has eyes to see things which others have not and that his orders, right or wrong, should be instantly obeyed. If you would learn to govern yourselves in the distant future, as children, learn the virtues of obedience; we have not learned obedience in the sense in which it is demanded, absolutely loyal obedience to a chief who has been placed over us for a particular purpose; we have learnt the obedience of necessity, not the obedience of purpose. Since many of you are still at school I would recall to your minds the two famous lines relating to the historic Balaclava charge where the 600 men rushed at the cannon's mouth at the order of their General.

Theirs was not to reason why
Theirs was but to do and die.

It is that kind of obedience that you should develop in every walk of life wherever you are placed. You may be placed above a certain number of men, but you may be placed also below certain others. Whatever be the walk of life, no man can perform the functions allotted to him unless he carries out to the very letter the order of the superior authority. Once you accept a place and serve in it, it is not for you to enquire why you are called upon to do a particular thing, but do it to the best of your might. It is because most of us begin to reason on the orders that are given to us that we fail in discharging our duties. This characteristic can only be developed in youths as pupils as students. You may turn the pages of the history of any nationality and you will find no nation has ever come to the front wherein

thousands and millions have not rushed to inevitable death at the word of a Commander. You should learn the virtue of absolute, implicit obedience to authority. You appoint a President or Secretary in an association and you give him certain powers to exercise in his own discretion. It is your duty therefore to bow to his decision, to obey that authority. If, later on, a time comes when you want to change the authority, it is in your hands. If you are not satisfied with the Secretary in the discharge of his duties, appoint another, but during his term of office, do not fail by any means to act in obedience to his authority. I am giving you the position of Secretary only as an example. It is so in every walk of life. Take any industrial concern, there is a company which appoints a Manager or a Director; he gives an order, he has all the strings of the concern in his hands, there are many things which in his judgment may not be divulged to any other member of the Company. There may be many branch firms or agents and as soon as a telegraphic order is received, it is not for the Agent to ask why he should carry out that order and say "If I delay, I will gain." If he does so, the whole Company may go to dogs. It is the duty of a subordinate officer in every walk of life to carry out the orders of the superior officer and if you want to learn this, you must learn it at school in your games and sports.

CO-OPERATION.

Having developed the virtue of obedience, the next thing to learn is to co-operate among equals. The virtue of co-operation has been freely talked about of late, but wherein the real trouble comes has not yet been properly understood. Co-operation means subordina-

tion of self. When you want to work and rub shoulders with another, you must put up with all sorts and conditions of men. Co-operation requires that you should draw within yourself all those inequalities in you which would prick your neighbour. Some people think that others also should think like themselves and that is exactly the situation at present. Many of us have none of the virtues of co-operation with the result that few of our movements flourish. Learn to compromise and if your friend does not keep pace with you, try to start with him and make his pace at least half as fast again as before. Give him encouragement in every way, do not make it hopeless for him to proceed by your side. Your football, cricket, tennis, hockey, every one of these sports illustrate forcibly the virtue of co-operation. Unless the half backs would act in unison, and unless the goal-keeper can pass the ball to one of his own party and be ever on the alert in order to fulfil the functions of his place, unless there is co-operation, the opposite party would have a goal every 5 minutes. Football is intended not merely to develop your muscles, but to forcibly impress on your minds the necessity for co-operation. It may be, a friend of yours has missed a very fine kick or kicked a wrong half side and has placed the team in an awkward position. It is no use finding fault with him. He had probably done his best. You must learn to get on with good, bad and indifferent friends in life and make something out of them. You must begin to learn this virtue in the football ground. It is not a mere incident of a game, it is a virtue and you thus begin to learn the elements of self-sacrifice in later life.

SELF-SACRIFICE.

To the Indians as a race, self-sacrifice does not require to be taught. It is instinct in you. Your past history, your religion, everything inculcates self-sacrifice of a kind, perhaps to an extent unknown to any other race. Every Indian, Hindu, Muhammadan or Christian, has one virtue unknown to other races of the world, never to allow any one of his kith and kin to spoil the family name or prestige. If you have the means, you would never allow any kinsman to beg for food. You have an idea of family prestige, no matter what it is, in the interests of your brothers and yourself. The elements of self-sacrifice are there, only you have to enlarge it. You have to learn sacrifice not merely for the prestige of your family but to learn to do it for the prestige of your nationality. It is this kind of self-sacrifice which has to be acquired and can only be acquired by trying to practise it in your early life at school. Later on, it may become difficult, if we become accustomed to the conventions of the world, if, in your school, you never learn to value something higher than self, to value your society or town or national advancement and make a resolve that if ever you are going to profit and improve yourself, it shall be by methods which shall never do harm to a fellow-countryman, to a town or your nationality. I am often tempted to enquire how large fortunes are made by some men in high positions and in a few individual cases. Many instances there are which would not bear such an examination or analysis, but to you, young men, before you begin to enter into the world, before you form high ambitions,—to become a Collector, a Judge or the head

of a Shipping Co., I would first insist on one or two things, i.e., you should resolve to die a beggar than live a dishonest scoundrel in high position. Would you spurn the public opinion of your own race? Would you sell your nearest and dearest countrymen and rise up to high position? You would die content to be a beggar. Your ancestors had not only preached, but had practised this virtue: begging was not an offence in ancient days. It was practised by men of the highest character whose duty it was never to take thought of the morrow, to address the highest authorities of the land as regards their duties. Your Rishis carried their life in their hands, entered majestic and pompous, durbars and looked kings in the face. A beggar clothed in mere rags told the sovereign that he did wrong. Now, we require beggars of that kind, fortunately not to go and talk to the sovereign, but to talk to our own people and people in high positions. Many of our own countrymen have to be addressed by beggars even at the risk of losing their livelihood, to reclaim our people, to develop civic virtues, which is merely the collective name for these three fundamental elements, viz., implicit obedience, co-operation and self-sacrifice. If you develop these characteristics, you have developed the civic virtues. None of these would develop satisfactorily without a strong physical animality at the back ground. The young man who has developed these has fulfilled the purpose of a good educational system.

KNOWLEDGE AND LEARNING.

Now, I come to what has been regarded, by a mistake, as education proper. I mean education in our schools and colleges. As young men it is not your duty to enquire into why you are asked to do certain things, but

to some of you who are in the higher classes, the privilege is still given of choosing what subject you are to study. Therefore I propose to lay before you a few ideas which would guide you in determining in what particular directions you would allow to develop yourselves.

The education of the past has been summarised in the word, learning. Our country was a land of learning and our Universities were seats of learning in the true sense. The requirements of modern life demand that our Universities should cease to be merely centres of learning, but should be centres of knowledge. You may ask what is the difference. The difference is that between "to learn" and "to know." Our Vakil friends are accustomed to witnesses who say, "I know this" but when cross-examined these same witnesses would say, "I meant when I first said 'I knew', I learnt it from so and so." That illustrates the difference between learning and knowledge. Our Universities should become centres of knowledge and not centres of learning. Learning had its own place, but the time has come when mere learning has ceased to be of value and knowledge is the supreme requisite of the hour. It is not your fault that opportunities for knowledge are few at schools. We are just making a beginning, just beginning to try to give knowledge. I want you to avail yourselves to the fullest of such opportunities as your schools afford to obtain direct first-hand knowledge of facts and things. Learning is acquired through your storing up in the brain a concatenation of words, but knowledge is that which you discover yourself, of which you are certain and if anybody says that what you know is wrong, you would have a tendency to give a good hit on his head and it is this kind of knowledge

that is wanted. (The lecturer here narrated his own experience with a science graduate of 45 who maintained that the eclipse may be due to the intervention of the snake). We want nowadays young men who would learn to do things. There is no use students going up for employment after mere general education as it is or a training in shorthand and typewriting. You should learn to do things with your hand, to refashion some objects. The time has come when the school should devote at least half the time for knowledge and half the rest of the time for the old-fashioned and time-honoured method of feeding the brain through the ear and the rest to manual training. Learn to do things and for this purpose there are few opportunities now provided. But wherever such opportunities are provided, take the fullest advantage of it. In a commercial town like this (Negapatam) there are splendid openings for young men to learn to do things if they would give up their time-honoured prestige of securing a billet in the Government offices. Accept a job as fireman in the Railway Workshops where they pay decent sums for unskilled labour. Start with high ambitions, learn one bit after another, in the carpenter's or smith's shop, and, in a couple of years you will find you will be able to do things yourself and you will be in a position to make very fine chairs such as are unknown in the domestic circles of Negapatam. We are paying 5 times over for flimsy chairs imported into the country and if they could be made by workmen here, it will more than pay their wages. It is for you to develop higher ideals and for this purpose you must voluntarily, cheerfully, bear the burden of physical labour toward the acquisition of skill in the finer grades of

workmanship in every kind of industrial life. No commerce can flourish unless you have skilled workmen and such men we want from those who have been at schools and colleges, not merely men who know how to read and write, but those who know to do things, who dare to do things and depend upon their mental and physical powers and who do not seek the recommendations of distant relatives who have high connections to recommend them for places. In your educational system, wherever opportunities are provided for direct first hand knowledge, make use of it and try to enter other walks of life of unskilled labour. The history of the advance of commerce in Europe, the history of the inventions of the 19th century, is one continual history of inventions and designs, made, not merely by research scholars in the University libraries, but by workmen who rose from factory hands to heads of factories. Do not continue to place a low value on mechanical training, obtain direct first hand acquaintance, use your hand and the eye and train your brain. I will not disclose what the result will be if our country can only boast of even a few youngmen brought up under such a system, who would go about establishing small industries, small workshops, here and there. The time may come in 2 or 3 generations when we need not continue to curse ourselves as being purely an agricultural race.

CONCLUSION.

I have tried to indicate the directions in which I want your ideas and thoughts to diverge from its accustomed channels. May God grant to all our youngmen health and strength to grow into strong and vigorous citizens who, fully conscious of the history of the past, would do something so as to say to themselves that they have also contributed

to the building of a distant nationality. (Loud Applause.)

LIGHT: A DETAILED SYLLABUS.

RECTILINEAR PROPAGATION.

LIGHT a form of radiation. Scientific hypothesis never proved or disproved, but amplified or rejected. Ether exists only in the imagination of the physicist. Opaque and transparent media. Translucent bodies. Gold and silver in thin leaves. Ray, pencil, divergent, convergent, parallel. To show that light travels in straight lines. (Exp. 1, Sinclair); *Inverted images produced by a pin-hole*. (Exp. 4, Sinclair); Explanation. Construction of a pin-hole camera. The effect of changing the shape of the hole; increasing the size of the hole; making several holes. Uniform illumination. Intensity of illumination.

Shadows:—(a) when the source of light is a mathematical point, (b) when it is of definite dimensions, (c) when the luminous body is smaller or larger than the opaque body. Umbra, Penumbra. Eclipses of the sun and the moon; annular eclipse of the sun illustrated experimentally. *Formation of shadows*. (Exp. 2, Sinclair). Calculation of the length of the earth's shadow. Experimental determination of the sun's diameter (Gregory and Hadley, pages 239-40). Determination of the size and shape of a shadow by graphical construction.

PROBLEMS.

What are the chief differences between a shadow and an image?—How would you mark out a straight line on a lawn without using a line?—Hold your pen between a sheet of paper and the window, the pen being close to the paper. Move the pen away from the

paper. What happens to the shadow? Why?—A penny is held (1) edgewise between a small flame and a screen. What is seen on the screen? Would there be any difference if the flame were large?—Three candles are placed quite close together in a row at the centre of a room, and a wooden rod is held in a vertical position at a distance of about a foot from the candles. Explain giving diagrams, why it is that, as the rod is moved in a circle round the candles, the shadow cast on the walls is in some positions sharp and in others very ill-defined.—If the sun's rays make an angle of 45° with the horizontal plane, how long is the shadow cast on level ground by a vertical pole 50 ft. high?—A vertical rod 10 ft. in height casts a shadow 12 ft. long on a level side walk. How tall is a tree whose shadow at the same time is 72 ft. in length?—How could one find the height of a building by employing the method suggested by the previous exercise?—How would you use a pin-hole camera to find the height of a tree?

PHOTOMETRY.

The law of inverse squares. Experimental verification of the law. (Exp. 1, Woolcombe; Exp. 2, Glazebrook). Explain why in this experiment the calculated results do not agree with the experimental ones. Scale drawing to illustrate the truth of the law. The law of inverse squares established by means of Rumford's shadow photometer, Bunsen's Grease spot photometer and Jolly's Paraffin wax photometer. (Exp. 6, 7, 8, Sinclair, Gregory and Simmons, sec. 38; Watson, Ex. 99). See Chute's Laboratory Manual for particulars of construction of Jolly's photometer. Illuminating power; standard of illumination; Measurement of candle power of a lamp by means of each of these photometers, in parti-

cular, the shadow photometer. Explain why the results do not agree.

PROBLEMS.

A standard candle is 210 cm. from a 19 candle-power electric lamp. Where should a screen be placed between them in order that its two sides may be illuminated equally? Where else, along the line joining the lights, might the screen be placed and yet be illuminated equally by each source of light?—How would you arrange an experiment to determine the percentage of light that is transmitted through a neutral tinted glass plate?—Two lamps are placed on opposite sides of a screen, and their distances from the screen so adjusted that the two faces are illuminated equally. A semi-transparent sheet is then placed between one of the lamps and the screen, and it is found that the other lamp must be moved to twice its original distance from the screen in order that the two faces may be illuminated equally again. What fraction of the light falling upon it is cut off by the sheet?—If the sun were at the distance of the moon from the earth instead of at its present distance, how much stronger would sunlight be than at present? The moon is 240,000 miles and the sun 92,000,000 miles from the earth.

REFLECTION FROM A PLANE SURFACE.

Reflection and refraction; regular and irregular reflection; consequences of reflection; why a sheet of paper or powdered glass appears white; diffused light; twilight. Laws of reflection of light. Pin method of verification (Exp. 9, Sinclair; Watson, Exp. 100, 101; Gregory and Simmons, Part II, sec. 39; Crevand Tatnall, Ex. 85.) Equality of distances of image and object from a plane reflecting surface proved geometrically. To determine the

position of an image in a plane mirror (Exp. 10, Sinclair, first method; Gregory and Simmons, sec. 40; Watson, Exercises 102, 103.) To compare the size of an object and its image in a plane mirror. (Exp. 12, Sinclair.) Lateral inversion of image in a plane mirror (Exercise 104, Watson). Characteristics of image formed in a plane mirror. Compare and contrast with image in a pin-hole camera.

* Measurement of the Angle of a Prism.

(Exp. 17, Sinclair, Chute Problem 68; Woolcombe, Exp. 6). To study the effect of rotating a mirror round a vertical axis through its centre (Exp. 15, Sinclair). To study the effect of rotating a vertical mirror round a vertical axis at one end (Exp. 16, Sinclair). The anglemeter; the Sextant.

PROBLEMS.

A mirror is inclined upward so that the reflecting surface is at an angle of 45° with the ground. A plumb-line is held in front of the mirror. What is the position of the image? Draw a line to represent the inclined mirror, and so confirm the exercise by drawing.—Prove that the position of the image of an object in a plane mirror is independent of the position of the observer.—Prove that a man can see the whole of his person in a mirror the length of which is half his own height.—What deviation is produced by reflection at a plane surface when the angle of incidence is 60° ?—A ray of light from a point A falls on a mirror and is reflected to the point B. Show that the path of the ray from A to the mirror and then to B is the shortest possible.—ABC is an angle drawn on a sheet of paper; how would you bisect it with the aid of a mirror and some pins?—At what angle must a mirror be placed to turn a beam of light through an angle of 90° ?—The

reflected image of a small speck on the front of a mirror appears to be just one inch behind it. Explain with the help of a diagram, how you can find the thickness of the glass.—The rays of the sun, reflected from a pool of water, are observed when the sun is high and again when the sun is low; what difference is noticed?—Make a drawing to find the image of an object AB, 3 cm. long placed in front of a plane mirror; the distance A from the mirror is 6 cm., and the inclination of AB to the mirror is 60° .—Two lines AB and BC make an angle of 60° with each other. Show how to place a mirror so that AB may represent an incident ray of which BC is the reflected ray.—Explain how the phases of the moon show that it shines only by reflected light.—Explain the phenomenon "the old moon in the new moon's arms."—The earth reflects 16 times as much light to the moon as the moon does to the earth. Trace from the sun to the eye of the observer the light by which he is able to see the dark part of the new moon.—Why can we not see the dark part of a three-quarter moon?—Soon after the moons of Mars were discovered in 1877, some one announced in a newspaper that one of these moons could be seen near Mars by looking at the reflection of that planet in a common mirror. It is true that a faint bright speck appeared near the image of Mars as thus seen, which did not appear when the planet was looked at directly, but the true moons could be seen only by the aid of powerful telescopes. Can you after trying the experiment with any bright star, explain the appearance seen in the mirror?—A horizontal ray of light strikes a vertical mirror at any angle. The mirror is rotated through an angle of 30° round a vertical axis through the point where the ray strikes the mirror. Find, by drawing, the

angle through which the reflected ray turns.—A ray strikes a mirror obliquely and the mirror is turned so that the new reflected ray is at right angles to the former reflected ray. Find the angle through which the mirror has been turned.

MULTIPLE IMAGES.

*To find the number and position of images formed by two inclined mirrors. (Exp. 13, Sinclair; Exp. 105, Watson; Gregory and Simmons, sec. 40c.) The Kaleidoscope. Images in parallel mirrors (Exp. 14, Sinclair; Exp. 106, Watson; Gregory and Simmons, sec. 40b).

PROBLEMS.

Place the two hinged mirrors at an angle of 120° , and see if the rule for the number of images, as found by the experiment, is true for angles greater than 90° . Try with other angles up to 180° . What happens when the angle is greater than 180° ?—What is the angle between two inclined mirrors when a ray, reaching the first mirror in a direction parallel to the second mirror, after two reflections is parallel to the first mirror?—Draw two mirrors inclined at 30° . Draw a ray striking one mirror in a direction parallel to the second mirror, and find if after several reflections the reflected ray becomes parallel to either of the mirrors.—Two mirrors are placed at right angles. A ray of light strikes one of the mirrors at any angle, is reflected to the second mirror, and again reflected. Prove by drawing and by geometry that the ray after this second reflection is parallel to its original direction.—Two mirrors are inclined at 45° . A ray strikes one at an angle of $22\frac{1}{2}^\circ$. Find by drawing and geometry the direction of the ray after four reflections.—A glass flame is enclosed in a lamp which consists of

four vertical square sheets of glass in the shape of a box. How many primary and how many secondary images will be formed?—Two mirrors are inclined at 90° . A ray strikes one of the mirrors at an angle of 45° . What is the direction of the ray after two reflections?

REFLECTION FROM CURVED SURFACES.

Spherical mirrors:—Concave or convex—centre of curvature, centre of mirror, principal axis, principal focus and focal length. Real and virtual foci. Path taken by rays: (1) passing through the centre. (2) Rays parallel to the principal axis. (3) Rays passing through the principal focus. Distances how measured, positive and negative.

Concave mirror:—The appearance, position and size of the image of the object placed at different distances in front of a concave mirror. (Exp. 18, Sinclair; Gregory and Simmons, sec. 41 (e), (i); Watson, Exercise 107). To find a relation between the distances of an object and the distance of its image from a concave mirror (Exp. 22, Sinclair; Gregory and Simmons Sec. 41d). Conjugate foci (Gregory and Simmons, sec. 41h). To find the radius of curvature of a concave mirror. (Exp. 20, Sinclair first, second and third methods; Exercise 1, Exp. 22, Sinclair; Spherometer method, Exp. 21, Sinclair). To find by drawing, the nature and position of the image in a concave mirror (Exp. 23, Sinclair). To find a relation between the size of an object and of its image in a concave mirror. (Exp. 26, Sinclair; Gregory and Simmons, sec. 41f). Verify by drawing to scale. Reflection from a large reflecting surface. Cow's foot in the milk. The convex mirror.

To find the radius of curvature of a convex

mirror. (Exp. 24, Sinclair, 1st and 2nd methods; Exp. 187 Gregory and Hadley; Gregory and Simmons, sec. 42b). To find the nature and position of the image in a convex mirror. (Exp. 25, Sinclair.) To find by drawing the relation between the size of an object and its image in a convex mirror. (Exp. 28, Sinclair) Comparison and contrast of images seen in a plane mirror, a convex mirror and a concave mirror. Numerical problems.

PROBLEMS.

Draw graphs of the corresponding values of U and V and of $1/U$ and $1/V$. Find from the general formula for mirrors where the image in a plane mirror should be.—A mirror is silvered on the front and so cannot be touched with the fingers. How would you find out whether the mirror is plane, concave or convex?—In a concave spherical mirror, where must the object be placed so that image will be situated half way between the centre of curvature and the principal focus?—Why does the nose appear relatively large in comparison with the ears when the face is viewed in a convex mirror?—Can a convex mirror ever form an inverted image? Give reasons for your answer.

REFRACTION OF LIGHT.

REFRACTION AT PLANE SURFACES.

Refraction at one plane surface. General idea of deviation experienced by a ray of light (Gregory and Simmons, sec. 43). To study the laws of refraction at a plane surface and to find the index of refraction. (Sinclair, Exp. 30; Gregory and Simmons, sec. 44; Watson, Ex. 109; Crew and Tattall, Exercise 86) Geometrical construction for refraction at a plane surface. To find the effect of placing a slab of glass across the path of a ray of light (Exp.

31, Sinclair; Gregory and Simmons, sec. 45c; Watson, Ex. 110; Crew and Tattall, Ex. 88) and hence to find the index of refraction of glass. Observe that the amount of shifting varies with the angle of incidence and the thickness of the slab. Geometrical construction for refraction at two plane surfaces.

To find the index of refraction of a liquid. (Gregory and Simmons, 45a; Exp. 32, Sinclair; Expts. 177, 180, Gregory and Hadley). Refractive index of glass, by locating the image due to refraction at a plane surface. (Gregory and Hadley, Ex. 181; Gregory and Simmons, sec. 45b.) Broken appearance of ruler; apparent position of stars.

Refraction through a prism:—The angle of the prism, base, apex, edge, light always refracted towards the thick part. Image of an object viewed through a prism always shifted towards the edge. That portion of the image towards the edge is tinted violet while the portion towards the base is tinted red. Reserve explanation. Pin method of tracing deviation by a prism. (Exp. 33, Sinclair; Gregory and Simmons, sec. 46a; Watson, Exercise 111; Crew and Tattall, Exercise 89a). Note that the path of the ray within the prism is not necessarily parallel to the base and the deviation varies with the angle of incidence. Repeat experiments with prisms of different angles, different kinds of glass and establish that the deviation depends upon the refracting angle; material; angle of incidence; nature of the incident light. Minimum deviation, angle of incidence equal to angle emergence. To find the path of minimum deviation through a prism. (Exp. 34, Sinclair; Gregory and Simmons, sec. 46b) * Calculation from data obtained of the refractive index of the prism. Graphical construction for solution of problems on prisms.

(Critical angle; determination of the critical angle for glass; total internal reflection; mirage; geometrical construction for critical angle. Sinclair, Expts. 35, 36, 37; Gregory and Hadley, pp. 262-263. Prismatic compass; Luxfer Prism glass).

PROBLEMS.

Explain with the aid of a diagram, how a fish sees the image of a tree on the bank of a river.—Why is a metallic mirror or a glass slab with darkened back better than a glass mirror with silvered back, for experiments in reflection?—How do you account for the quivering motion noticed above an ordinary flame?—Explain the twinkling of the stars.—Find the effect of placing two slabs of glass in the path of a ray of light.—Find the effect of placing different media in the path of a ray of light.—Why do clouds appear black?—Why is the deep sea almost black?—Hold a lighted candle in front of a thick sheet of glass and note the images produced when viewed obliquely. Make a drawing to account for their formation.—Explain why a mixture of two transparent liquids is sometimes opaque. Why is a piece of writing paper white, and how can it be made transparent.—A glass rod is immersed in a beaker of Canada balsam. How do you account for the fact that it is invisible?—A person looking at a fish swimming in a tank at an aquarium, is surprised to see two. Explain this with the aid of a drawing.—A glass tumbler is half filled with water, and wrapped with tissue paper so as to leave a narrow gap between the ends of the paper. When the slit is placed before a burning lamp in a darkened room, two images are seen on the other side. Why?—A bright bead is placed at the bottom of a basin of water and a person stands in such a position

that he can just see it over the edge of the basin. While he is looking, the water is drawn off. How will this affect his view?—A thick layer of a transparent liquid floats on the surface of water. Trace the course of a ray of light from an object immersed in the water through the floating liquid to the air.—The minimum deviation produced by a hollow prism filled with a certain liquid is 30° . If the refracting angle of the prism is 60° , what is the index of refraction of the liquid?—Draw normals to the surfaces of a prism at the point of incidence and emergence and find the index of refraction of the incident and the emergent ray. Is there any relation between the answers?—Find the connection between the angle of refraction at one surface of the prism and the angle of the prism when there is minimum deviation.—Exercises 19, 20, 31, 32, Gregory and Hadley, Chapter XX.

REFRACTION AT SPHERICAL SURFACES.

Convex and concave lenses. Converging lens. Principal focus, Principal axis, optic centre, focal length. Images, real, virtual. Simple means of distinguishing between converging and diverging lenses. *The convex lens*:—To find the position and size of the image formed by a convex lens. (Exp. 39, Sinclair; Crew and Tatnall, Ex. 92 a, b, c, Watson, Exercises 118, 119). Comparison with results obtained with a concave spherical mirror. Direction taken by rays passing through the centre of the lens, parallel to the principal axis, and proceeding from the principal focus. Rule of signs. Construction of diagrams affording information as to position, nature, and size of the image. Burning glass; Photographic camera and object glass of telescope; Focometers; magic lan-

tern, object glass of microscope; light house lenses; magnifying glass, eyepiece of telescope and microscope. Examination of each of these instruments. Illustrative diagrams. *Relationship between the focal length, and the position of the object and the image established.* (Crew and Tatnall, Ex. 92d; Sinclair, Exp. 41, second method.) Conjugate foci. *To find the focal length of a convex lens.* First method (Exp. 41, Sinclair; Watson, Ex. 117) Second method. (Exp. 41, Sinclair; Gregory and Simmons, Sec. 48a; Crew and Tatnall, Ex. 92e.) Third method (Ex. 41, Sinclair; Gregory and Simmons, Sec. 48 b; Watson Ex. 121.) Fourth method. "If a telescope is accurately focussed on some clearly marked object, as the side of a house a mile or more distant, it may be said to be adjusted to view parallel rays of light, since rays coming to the eye from a point that is far distant are sensibly parallel. If rays diverge from the focus of a converging lens, and pass through the lens, they issue parallel. Hence a telescope adjusted to parallel rays is adapted to view light that comes through it through a convex lens if it emanates from the focus of that lens. These considerations suggest the following:—Focus the telescope on some distant object. Now place the lens in front of the telescope, and look through the telescope and lens at a printed card fastened to a vertical screen. Find by trial a position for the screen at which the words are most clearly seen. Measure the distance of this screen from the lens. This will be the focal distance sought. Obtain the mean of several trials and compare with that obtained by other methods."

To find the magnification produced by a convex lens. (Exp. 42, Sinclair; Watson, Ex. 120; Gregory and Simmons, Sec. 49c.)

To find, by drawing, the position and size of the image formed by a convex lens. Astronomical telescope. (Exp. 48, Sinclair; Watson, Ex. 123; Gregory and Simmons, sec. 50; Crew and Tatnall, Ex. 93) Compound Microscope (Ex. 47 Sinclair.) *The concave lens*:—To find the position and size of the image formed by a concave lens (Exp. 40, Sinclair; Watson, Ex. 122.) Compare results with those obtained in the case of a convex mirror. *To find the focal length of a concave lens.* (Exp. 44, Sinclair, first and second methods, also exercise on same; Gregory and Simmons, sec. 51.) To find by drawing the position and size of the image formed by a concave lens. Galilean telescope (Exp. 49, Sinclair; Watson, Ex. 123.) Field and opera glasses.

Power of a lens. Dioptry; positive and negative: contrast with signs of focal lengths.

The eye. Sclerotic membrane. Cornea. Crystalline lens. Aqueous humour. Vitreous humour. Iris, pupil, retina, optic nerve.

* To prove that images formed on the retina are inverted (Exp. 21, Glazebrook.) To illustrate the process of accommodation in the eye. (Glazebrook, Exp. 23.) Short sight or Myopia. Use of concave lens in correcting short sight. Long sight or Hypermetropia, use of convex lenses in correcting long sight. Problems of a numerical nature. Loss of accommodative power. Near point and far point.

* Determination of near point and far point (Exp. 194, Gregory and Hadley). The Visual angle. * Magnifying power of a lens or a telescope (Millikan and Gale, Exp. 47. Chute problem 80. Crew and Tatnall, Ex. 93.)

PROBLEMS.

Problems of a numerical nature on lenses generally. Draw a graph of the correspond-

ing values of U and V also a graph of the corresponding values of $1/U$ and $1/V$.—If one half of a convex lens be covered with an opaque card, what will be the effect upon the real images produced by it? Test your answer by experiment.—A photographer finds that the desired image of a building more than covers the area of the plate to be used. How can the size of the image be reduced to fit the plate?—The picture projected on a screen by a projecting lantern is found to be too large, which way must the instrument be moved in order to reduce its size?—Why is it necessary to focus a telescope or a microscope upon the object to be viewed?—The image on the retina of a book held a foot from the eye is larger than that of a house on the opposite side of the street. Why do you not judge that the book is actually larger than the house?—Explain why a terrestrial telescope shows objects erect rather than inverted.—Compare by geometrical construction, the focal lengths of two convex lenses of the same radius of curvature, one being of glass, the other of diamond.—If a simple camera should be made out of a box and a double convex lens of 12 inches focal length, (a) how deep must the box be in order to give an image of the sun, (b) what should be its depth in order to give an image of a small object which is 10 ft. distant from the front of the camera? (c) if the centre of the image of a flat object is in good focus, how must the distance from lens to rear of box be changed in order to focus the edges of the image?—In what respect does Galileo's telescope prove more useful than the terrestrial telescope? Give reasons for your answer.

DISPERSION OF LIGHT.

To show that white light can be decomposed (Exp. 51, 52 Sinclair; Gregory and

Simmons, sec. 52a; Watson, Ex. 112.) Describe the coloured band, a rectangle rounded off at the ends due to the overlapping of a number of circular images of different colours. Image of a slit as seen through a prism (Watson Ex. 113). Describe the appearance of the slit; Explain by means of a diagram why the slit appears to be tinted violet towards the edge of the prism. Increase of dispersive action (Gregory and Simmons, sec. 52b.) Spectrum, spectroscope.

Composition of white light from its constituents (Gregory and Simmons, sec. 52c; Sinclair, Exp. 53) Newton's colour disc. (Cf. Cinematograph) continuous and bright line spectra: spectra of glowing solids, fish tail burner, candle light, white hot crucible. Contrast with the spectra obtained with Chlorides of Sodium, Lithium, Thallium (Gregory and Simmons, sec. 54)* Effects of the absorption of light. Selective absorption with reference to dark lines in the solar spectrum (Watson, Ex. 114, 115, 116; Gregory and Simmons, Sec. 56; Crew and Tatnall, Ex. 94)* Rainbows. Colour of transparent bodies. Absorption and transmission of rays by Oxford blue solution; Carbon disulphide. Potassium Permanganate; Potassium Bichromate, Colour of opaque bodies; absorption and reflection of rays. Selective absorption and transmission. Mixtures of pigments.

PROBLEMS.

A white cross on a sheet of black paper is examined through a magnifying glass. Explain why the image is coloured at its ends, and describe the nature and position of the colours.—What kind of a spectrum would you expect to obtain by dispersing the light from a live coal by a prism? If you look at a broad sheet of white paper through a prism,

it will appear red at one edge and blue at the other but white in the middle. Explain why the middle appears uncoloured.—Some glass houses in which ferns are grown are constructed of green glass. Describe the appearance to an observer in such a house of a lady in a red costume carrying a book with a bright blue colour. Give reasons for your answer.—Why does a field poppy appear red? What experiment could you arrange to make it appear black?—Bright sunlight falls obliquely upon the surface of the water contained in a white china basin; a penny is held near the surface of the water and in such a position that its shadow falls upon the bottom of the basin. Parts of the shadow are found to be edged with colour. What colours may be observed? On what part of the shadow is each to be seen? How do you account for the colours?—It is sometimes said that "red glass colours the sunlight red," and that "blue glass colours the sunlight blue." Mention facts or experiments which show that this is not accurate. Put the statement in a more accurate form.—A rod painted half blue and half red is viewed through a prism placed with its edge parallel to it. Describe the appearance presented by the rod and give any explanation that may be necessary.

LIST OF PRACTICAL EXERCISES.—(Quantitative).

1. Inverted images produced by a pinhole.
2. Formation of shadows.
3. Measurement of the candle power of a lamp.
4. Pin method of verification of the laws of reflection.
5. Determination of the position and size of an image in a plane mirror.

XIX

- * 6. Measurement of the angle of a prism.
- * 7. Determination of the number and position of images formed by two inclined mirrors.

8. To find a relation between the distances of an object and the distance of its image from a concave mirror.

9. To find the radius of curvature of a concave mirror (any three methods).

10. To find the radius of curvature of a convex mirror (two methods).

11. To study the laws of refraction at a plane surface.

12. To find the effect of placing a slab of glass across the path of a ray of light.

13. To find the index of refraction of a liquid (two methods).

14. To find the index of refraction of glass (two methods).

15. Pin method of tracing deviation by a prism.

16. To find the path of minimum deviation through a prism.

* 17. Determination of the critical angle for glass.

18. To find the position and size of the image formed by a convex lens.

19. Relationship between the focal length, and the positions of the object and the image established.

20. To find the focal length of a convex lens (three methods.)

21. To find the magnification produced by a convex lens.

22. To find the focal length of a concave lens.

* 23. To find the magnifying power of a lens.

24. To fit up an astronomical telescope.

* 25. To fit up a compound microscope.

* 26. To find up a terrestrial telescope.

On the supposition that 60 periods of 60 minutes each are available for the study of light, about 18 double periods may be devoted to practical work, 12 periods to demonstration and discussion of results, and 12 to questions and the marks register. Special attention should be paid to neatness and accuracy of diagrams and to the determination of the position of virtual images by the pin and parallax methods. Only such portions of the subject as are well within the grasp of the average High School boy have been included. Portions marked with an asterisk may be reserved for quicker pupils. A qualitative study of the dispersion of light is recommended.

K. S. PARABRAHMAN

CHEMISTRY AND THE INTERMEDIATE COURSE.

BY A LECTURER IN CHEMISTRY.

I.

IT has often been deplored that, instead of introducing Elementary ideas in Chemistry to cultivate rational experimentation, the Elementary and Intermediate text-books in Chemistry contain mere empirical and superficial facts. The Elementary text-books written for the same class in Arithmetic or Algebra contain the principles and the students acquire ability to reason out in those subjects.

The present day text-books must strive at the idea of treating the subject in such a way as to enable the student to reflect on the available data. By this method of treatment the thinking faculty of the student is increased by his own individual efforts. Knowledge obtained by one's own individual efforts is more valuable than that gained by memorizing certain facts in Chemistry, provided the former is directed along rational lines.

In the Intermediate class (Gr. i), students, who have studied (1) Algebra, Geometry and Physics, (2) Algebra, Geometry and Trigonometry, (3) Algebra, Geometry and Vernacular and sometimes (4) History and Vernacular with high marks in Elementary Science in their School Final Course are admitted. In a class of more than 100, it is often difficult to find more than ten students who have studied Chemistry in their School Final Course. Chemistry taught to them as one of the subjects in Elementary Science varies in quality and quantity—more or less memorization of the preparation and properties of some elements. So that a lecturer in Chemistry has to begin his course of lectures to a class of students who have no proper grounding in Elementary Science. It is merely a sheer waste of time to introduce abstract ideas without a previous survey of general knowledge in Chemistry from which generalization can be drawn. It is the scientific method that must be instilled in the minds of the students and they derive more benefit from it than from mere facts. By this method the student gets accustomed to reasoning which is of inestimable value in education. The historical method of treatment is excellent inasmuch as generalizations have been developed from a contemplation of facts. If such a method is followed although the facts in Chemistry are nearly forgotten in after life, the scientific method is retained as a permanent attitude of the mind which is a source of "success in business or in the profession and often even the mere making of a livelihood."

Students are apt to lean upon the authority of statements and opinions in the text-books even when they are actually experimenting. Any deviation from the code often puzzles them so much that they make the experiments

more a mechanical process, instead of interpreting the results and extracting all that they can teach. Experiments should be followed by accurate observations; and experiments and observations alone do not develop scientific faculty. They should be coupled with rationalization but imperfect observations lead to inchoate rationalization. It is in the laboratory that a student learns the habit of "self reliance, resource and initiation." An elementary student of Chemistry must memorize certain facts; but to discriminate the relevant from the irrelevant rests with the lecturer. The thinking faculties in a student must be created from the very beginning and wherever possible the scientific theories must be introduced. It is a mistake to think that the scientific theories must not be introduced in an elementary course and it is wrong to introduce abstract ideas and theories without proper grounding. Some lecturers seem to treat the systematic Chemistry and Physical Chemistry strictly apart. The result is that instead of rationalizing the descriptive and practical work on the new and modern lines the students find it a burthen and derive no benefit from it.

"The intellect is perfected not by knowledge but by exercise." *The brain must be trained to think clearly and logically, and the hands to do their work skilfully and accurately.* The lecturer has the grave responsibility of equipping his student with these essentials. It is only the lecturer who can find out the desideratum of his students and can give them suitable exercises to train them in the new way. Chemistry is a progressive science and there is no virtue in closely following a certain book or the notes of a particular lecturer. Let not a lecturer be terribly afraid of what he may call 'innovations' the pure

advancement in the treatment of the subject—
theoretical and practical.

The practical work must be correlated with the lecture. Although much is said on this principle, the speakers themselves do not seem to follow this principle. If the laboratory work is conducted by different people with no instruction from the lecturer, the work of the lecturer to 'equip his students' is much hampered instead of being reinforced.

"CHANGE OF STYLE IN VERNACULARS."*

PART I.

1. *Nature of the problem.*—The problem of this paper is directly suggested in these words of Prof. Henry Sweet. He says: "The distinction between the literary and colloquial form of the same language has considerably complicated the problem of learning languages. . . In many oriental languages the divergence is so great that the colloquial is no longer a mere variation of the literary form, but the two practically constitute distinct mutually unintelligible languages." An Anglo-Indian selected Tamil for examination in the compulsory vernacular test. இருக்கிற இப்பொழுது and others of the same type were some of the words taught in the course of his first lesson. The first is said to signify the English word 'is' and the second 'now.' He could not understand the genius of the language which requires innumerable sounds to signify the sense of the single English sound 'iz'. He thought that he will be far from getting the required qualification if he continued this any longer and tried his luck with a North-Indian language with better success. You all know that the fault is not so much in the nature of the language as in the form of the language presented to him. For in ordinary conversation simpler words than these in the way of contractions of the same, or corruptions as the learned call, are used to

* A paper read by Mr. K. Venkata Row, M.A. at a meeting of the Teachers' Association, Teachers' College, Saidapet.

signify the ideas 'iz' and 'now.' The difficulty lies in the divergence between the language of the books and the language of current speech.

2. *Brief history of the movement*—With regard to Telugu the same difficulty must have been felt by one or two strangers to the language. Chief among them was Mr. P. T. Srinivasa Iyengar who is the head of a college where Telugu forms the medium of instruction. He must have seen an uncompromising divergence between the forms used in books taught in the class-room and the forms with which he grew familiar in his social intercourse with respectable people of that country. He must have felt considerable difficulty in reconciling the linguistic atmosphere of the class-room with that just outside. The medium of instruction, he thought, was so difficult that the interpretation of the language rather than the elucidation of the scientific matter of the book formed the sole occupation of the teacher. As the head of that institution he could not tolerate this waste of time and energy on the part of the teacher and the taught and took the effective step of dispensing with all text-books for the communication of knowledge and substituted oral instruction by the teacher in appropriate language approximating to what was spoken outside. He did not stop with setting matters right in his own school but to give the benefit of his observations to the world at large, published a pamphlet entitled "Death or life—a plea for the vernaculars." This new creed—as it is natural with anything new—was first confronted with ridicule which gradually developed into active opposition from the people of those parts. Fortunately for the movement, just at that time Mr. Yates was the Inspector of Schools for the 1st Circle, perhaps experiencing the same difficulty in connection with the secondary and elementary schools with which he had to do much. He immediately caught the spirit of the pamphlet and became the apostle of this faith. He rapidly introduced this way of using language for teaching purposes over the extensive area of three or four Telugu districts under his jurisdiction. Each village in those parts was acquainted with the necessity of this change. Under the authority of their educational head they did not hesitate—at least outwardly—to introduce this change. But even then there was a slight murmur among us as to why people completely

alien from our language should interfere with it. We did not recognise the fact that foreigners or strangers to the language are placed in a better position to note such things than the people who, with some difficulty, have fallen into the habit of using the two forms of the language. This prejudice against the originators of the movement was transferred to the movement itself. A hue and cry was raised that these two people advanced from the corruption of the methods of education to the corruption of the language of the country. As teachers we happily realised what the corruption of the methods of education led us to and hereafter we should attempt to realise the results of the so-called corruption of the vernacular languages. The movement progressed further. Very soon it was brought to a crisis. People of immense leisure and life-long activity in linguistic work like Messrs. G. V. Ramamurti and G. V. Appa Row supported the movement. New books on the reformed lines were written in the Telugu language. These books were prescribed as set books to be studied for the purpose of public examinations. This recognition and passive support of the authorities brought the whole affair to a crisis and active opposition in the way of public meetings, resolutions and deputations was then resorted to. This opposition is, as a matter of course very healthy and necessary to act as a check upon any undue radicalism of the enthusiasts. It is a sure help to clearly bring out the real nature and extent of the change required and it is believed that it will end in a compromise between the two modes of thought by blending the best of both sides in one common cause. The aim is to have a reconciliation between the spoken and the written languages by making the one closely approximate with the other. In dealing with the question one should raise oneself from the polemic to the scientific aspect of it. The consideration of the question is to be based upon scientific principles relating to language in general, the spoken language, the written language and the relationship between these two.

3. *Language and its function*.—Language consists of two elements—thought and its expression. It is the embodiment of thought and there can be no thought without language. Man is endowed with the power of thinking and the power of reasoning. These thoughts and generalisations are to be

expressed in some sort of symbols. The symbols may take the shape of signs and gestures or the words of articulate speech as the result of the modulation of the voice. But vocal language is considered more perfect than any other kind of language, as being better adapted to express the manifold ideas of man's growing intelligence. It is also less arbitrary and conventional than any other form of expression. Gesture language is universally intelligible, but it can not be used in darkness or when men are not face to face. As such its scope for expression is after all very limited. In preference to all the rest, vocal language has, therefore, the advantage of being made universal in limited areas. The essential thing about a language is that it should be "an instrument for the communication of our thoughts to others." Communication of thought involves the elements of society and man is always a social animal so far as language is concerned. "Language is a social product, at once the creation and the creator of the society. It has come into existence by the needs of developing society to satisfy the ever-growing wants of daily life. It is the natural product of a society, the living expression of the mind and spirit of a people ever changing and shifting," says Sayce. The language used by a society reflects the amount of thought possessed by it. Articulate sounds formed the chief means of expressing current thought at any time. For a long time the past was left unrecorded, but when the art of writing was invented attempts were made to preserve the thought of passing ages in these new symbols. Therefore writing was used to symbolise thoughts indirectly and its office is but secondary as forming a symbol of the spoken sounds, the real and original means of expressing thought. This leads us to infer that there is a written language because there is a spoken language previous to that.

4. (a) *The spoken language—its nature*.—We are therefore primarily concerned with the spoken language as the language which forms the basis of the other. The origin of language implies that the spoken should come first. A child is capable of using it. A savage also can use it. Even a civilised man trying to maintain a certain kind of artificiality in his speech for the sake of politeness, in his natural moment as when he is in a passion,

spontaneously reverts to his spoken tongue to express his ideas. Language in the form of speech sounds was in existence long before the art of writing was invented. The faculty of speech, with most human beings, is natural and inevitable. Physiology as well as Psychology require it in man. The innate love of imitation, the necessity of making one's wants known, the healthy desire to exercise lungs, and the natural gift of articulation are some of the causes for the origin of speech faculty. Language, in this very form, is developed later by the society as a whole. Wyld says, "Spoken language is the natural expression of the personality of living human beings; from the nature of the case this must vary along with the change of their mental and bodily habits. A nation, a small community or an individual, is continually gaining new experiences, feeling new aspirations, discovering fresh needs. All these conditions find expression in their speech."

(b) *Change in the spoken language*.—This close association of the spoken language with the society gives it a new and interesting aspect, the aspect of daily change and progress, the aspect of historical and scientific treatment. Thought is infinitely progressive and has a constant but ever-varying evolution. It is conditioned by the uniform laws of outward nature subject to the adaptation and modification of human intellect. Likewise is it with language which is but an expression of this thought, the external symbol of the inward idea. Language undergoes a change in its sound as well as sense. This change is partly caused by the temperament of the individual man, as conditioned by his faculty of imitation, a wish to be clear and emphatic, and a tendency to be lazy and avoid exertion. Besides these there are other natural causes such as climate, food, occupation, geographical boundaries, contact with foreign nations, development of civilisation, playing an important part in the change of language. Individually or collectively a number of causes act upon language slowly but surely and subject it to a process of almost daily change. All these causes can be summed up in "the necessity for transmission from mouth to mouth." Without such a transmission there can be no change and the existence of such a change clearly shows that language is pri-

marily and mainly used for the purpose of daily communication by means of speech-sounds. Therefore, as Sweet says, "The main axiom of living philology is that all study of language, whether theoretical or practical, ought to be based on the spoken language."

(c) *Superiority of the spoken form.*—In the study of languages this one point is generally missed and popular misconceptions about the spoken form of a language are respected. This is the case not only in the Indian languages but also, as Sweet says, "In European languages when the difference between the literary and colloquial is much less than in the oriental languages, most grammarians tacitly assume that the spoken is a mere corruption of the literary language." This is true of the English language too. For Wyld says, "If it is insisted that more attention should be paid, in the teaching of English, to the spoken language, there is an outcry to the effect that English literature is one of the noblest of human achievements, that the ordinary speech of children and even of grown-up people is full of vulgarisms, mistakes in grammar and solecisms of every sort and that by dwelling upon English as it is spoken, these errors will merely be confirmed." With regard to Phonetics, a science of the spoken sounds, a similar misconception exists. "It is still regarded by the majority of educated persons as either a fad or a fraud, possibly a pious one."

(d) *Correctness of the spoken language.*—This leads us on to the question of fancied errors—popular misconceptions—of the spoken language. If the path of development of any language is well considered, from the scientific point of view, the terms *mistake*, *vulgarism*, *corruption*, have no meaning at all. One who is acquainted with the processes of linguistic change and their causes will readily understand that each form has its own place in the general system of language. We are purely concerned with the facts of any language and the endeavour is to form a clear conception of what is and how it arose from what was. Wyld says, "Whatever exists in the natural speech of a community at a given period is right for the speech of that community at that particular moment. . . . Any manner of speech which is foreign to the natural speech-habit of a community at a given period is

wrong so far as the dialect of the moment in that particular community is concerned." The merits of a language are to be judged according to its qualities as a medium of expression. From a scientific point of view there cannot be a better criterion than this for the correctness of a language. Yet for practical purposes an artificial and conventional test of superiority may be applied. What is received and recognised as the correct form of speech in polite and cultivated society may be taken to be the standard of a language. Even then it is only the spoken language of this higher society that should be taken into consideration.

5. *The written language.*—Side by side with the spoken language the written language or, as it is generally known, the literary language finds its existence as a matter of necessity. It is the indirect symbol of the thought to be expressed. Spoken language can represent only the current thought; but the written language is the record of the past thought of a community. Since the sum-total of such a record of any country goes under the name of its literature its language has come to be called literary language. The same respect which is attached to anything of the past ages is given to this language and it has come to be considered the original, correct and standard form of language. Naturally, the moment language is represented in written symbols, it attains a certain degree of fixity and permanence in all directions—sound, sense, grammar, vocabulary. It is full of superfluous words and phrases which the spoken language generally gets rid of. People have fallen "into the habit of considering language as something cut and dried and fixed once for all in a definite mould." They are "apt to forget that all literary languages are to a certain extent artificial products. They are deliberate and bound by tradition and they lack the spontaneity of unstudied natural utterance." As Paul (Strong) says the written language "is naturally an abstraction and one of the first order. It is not a complex of real facts, real forces but merely an ideal norm prescribing rules for speech." "It is nothing but a rigid rule which would bring linguistic movement to a stand-still, if it were always strictly carried out, and is only compatible with change in so far as its authority is disregarded."

6. *Connection between the spoken and written language.*—However, there is always a close connection between the spoken and the written language. Sweet says "it is the spoken which is the real source of the literary language. We may pick out the most far-fetched literary words and forms we can think of, but we shall always find that they are derived from the colloquial speech of an earlier period. . . . Every literary language must indeed in its first beginnings be purely colloquial." As such the written language is in all cases behind the spoken in development "in the sense of being more archaic and generally less flexible and adaptable." In the case of a language which is no longer spoken, i.e. a dead language, there can be no further change or development in its written form. It is because "the literary form of a language which is still spoken, is forever receiving fresh life from the colloquial speech. New words or expressions of the spoken language are gradually transferred to the language of books and there they remain." This close inter-connection between the two forms of a language does not allow the written form to become fixed unless it is consciously and scrupulously neglected. This connection, if allowed to come into play, keeps the written form ever changing and provided with new life which new life comes primarily from the spoken language. This enables the two forms of the language to be fairly approximating in all respects at any stage of their growth. This is what ought to happen in the natural course of events and what has happened in many countries like England where conservatism is not exercised in the wrong direction as it is done in this country. For a long time past for want of a concentrated public opinion in matters like this, individuals with a single bent of mind controlled the literary and the linguistic operations of most communities of this country and the result is that such a divergence of the two forms of language has been created as can not be removed except by tremendous effort.

PART II.

7. *Introduction.*—After seeing why there should be this close approximation between the two forms of language we shall try to see why there is this divergence in at least one of the vernaculars—

Telugu, my mother-tongue—and suggest some remedies to make up the breach. Here I don't trouble you with the point as to how far i.e. the extent and character of the divergence between the two forms, it exists. Those of you that are interested in it may, with great advantage, read the Appendix of Mr. G. V. Ramamurty's Memorandum on Modern Telugu where he treats of this difference in point of pronunciation, declension, conjugation, vocabulary and idiom.

8. (a) *Literature of Telugu: general.*—To understand the reason for this difference, it is necessary to consider but briefly the development of literature in the Telugu language. A student of English literature comes to the end of his subject with a definite idea of the systematic development of that literature in all its aspects. He can see the regular growth of crude forms into perfect types and in each case exactly account for the development. He can clearly gauge the influence exerted upon this national work either by individuals or foreign nations or certain national movements at home, social, political or religious. The slightest change either of the form used, material utilised or metre adopted can be accounted for, in the light of one or other of the above influences. It is so scientifically historical in its development that M. Jessurand proposes to call this national current of intellectual activity not as it is popularly called the history of English literature, but the literary history of the English nation. Individual authors, as a result of their genius, provide the readers with some new quality in each of their works and at the same time keep up the harmony with the national spirit. In this one can fully realise the true function of literature, viz. to embody the growing aspirations of the nation in its record. This unity and gradual flow in the literary current can be better appreciated by contrasting it with what Telugu language represents in the field of literature. The extant literature of Telugu begins abruptly. It has no development, no beginning, no middle, no end, to be so called. It has only one of these whichever you choose to call it.

(b) *First period.*—If the Telugu translation of *Mahabharata* begun by Nannaya in about 1020 A.D. and completed in the course of 300 years afterwards by Tikkana and Yerrana, is the first work, and till

very recently or even now by many, considered to be of such a perfect type in point of language, metre and grammatical applications, that it is sinful to violate them to any extent, we can say that the Telugu literature ended where it began. These three poets are profound Sanskrit scholars and poets of a very high order of merit. They did all that they naturally should do under those circumstances. They showed their individuality by freely altering the matter as well as the manner of the original. Their Sanskrit scholarship is seen in the nature of the vocabulary used by each of them.

Nannaya used $\frac{3}{4}$ Sanskrit and $\frac{1}{4}$ Telugu words
Tikkana used $\frac{3}{4}$ Sanskrit and $\frac{1}{4}$ Telugu words
Yerrana used $\frac{3}{4}$ Sanskrit and $\frac{1}{4}$ Telugu words.

The second Epic *Ramayana* was similarly translated by Bhaskara and other poets. It is also full of Sanskrit words and *samasa*s and is acknowledged by rhetoricians as a standard work. Considering their scholarship, the Sanskrit original which they were translating and perhaps the poverty of the Telugu language in the early days, this abnormal borrowing of Sanskrit words is excusable in them. But there is one unpardonable injury done to the Telugu language by some of this age. Even in this very early stage grammars, books of Prosody and Rhetoric, codifying the usages of this early work, were produced, as some say by Nannaya himself, or at any rate by a group of minor literates of that time. It was passively as well as tacitly imposed upon subsequent writers that there should be no violations from these acknowledged usages. The cart is once started and no further movement is made possible excepting the impatient stamp of the hoof and eager side glances of the animal anxious to move on naturally.

(c) *Second period*.—A second group of poets, in the 14th and 15th centuries, come round *Srinadha* and *Potanna*. *Srinadha* is in his work similar to his predecessors but *Potanna* is less of a scholar and more of an individual poetic genius. The result of it is that his translation of *Bhagavata* did not satisfy the rhetoricians according to the rules already framed and is discarded as a standard work. It is even considered by some as a heap of errors and all those that are guided by it are characterised as bad poets (*Kukavis*).

(d) *Third period*.—Another epoch of poetry commences with the work of *Kristnadevaraya* and the illustrious group of poets that surrounded him (about 1500 A.D.). Hitherto literary work consisted merely of translation of Sanskrit classics. *Peddana* struck an original path in literary composition. He used his imagination in the construction of a good plot on the basis of an original Puranic story and wrote the first *prabandham* in Telugu language. In the manner he is bound down by the rules already laid down. One of his contemporaries *Bhathimurti* imitated *Peddana* in this kind of work and managed the story, construction of plot and the style of writing in a more mechanical way. Poets of subsequent times found it very easy to closely imitate this last work and they have been doing it since then. An original *nada* in all its aspects is laid down and it is closely copied in accordance with the models set and the rules framed in the very dawn of literature.

(e) *Its relation to the present question*.—So one can see that there is no noticeable deviation from the standards laid by the original writers. There is no living national spirit embodied in the literary work. Correspondingly there is no marked change even in the language used. I am of opinion that the works are so stereotyped that there is no need to read more than a few books to form an adequate idea of the whole literature. No doubt here and there works like that of *Pingali Suranna* display wonderful capacities of original plot-construction, development of character and smoothness of style. One pitiable feature to be noted in most of the works is that the individual genius of writers faintly appears now and then and seems to be stifled by the set rules by which they are guided. So much about poetry. Prose of any form was not written till very recently and we may think it a blessing that there was no prose at all. For in prose, the limitations required by prosody being removed, there was a free play in the length of *samasa*s, etc., used. The author of a prose *Ramayana* in very recent years in the preface mentions that the purpose of his work is to make it easy and intelligible to women and children and obviate the necessity of interpreting *Pundits* of the Telugu *Ramayana* in poetry. But some of the first few pages that I read were not easily intelligible even to me. However the writer

is to be congratulated for realising that there is a necessity of such easy prose renderings of Telugu poetry. Another chief department of modern literary work is translation of Sanskrit dramas, etc. One can easily see that most of them are more of transliterations into the Telugu alphabet than translations into the Telugu language. Here I wish to summarise some of the persistent evils of the modern literary compositions as a result of this false respect to ancient literary models. They are, the use of archaic words, plentiful usage of Sanskrit words, *samasa*s and *sandhis*, use of obsolete grammatical forms and constructions, set descriptions of scenery and situations in set phraseology, the use of stereotyped metres and some others necessarily attending upon a spirit of conservatism. Hereafter I should like to suggest some remedies to counteract these evils and how it is necessary for us as teachers to do it.

PART III.

9. *Importance of this question to teachers*.—The inter-connection between knowledge and language has been but recently well impressed upon your minds and you must realise that you are the main imparters of knowledge. Whatever be the national requirements of literature, the business of laying the foundations of the nation, the responsibility of training children to that ultimate goal we have deliberately, with some personal sacrifice, chosen to be our part of work. We are expected to do it mainly by imparting suitable knowledge to the children entrusted to our care. For this we require good text-books and the want of texts suitable for beginners is keenly felt. Mr. G. V. Ramamurti says: "I can openly declare that my diligent search among many Telugu books failed to find a single story book which a child of eight years could read without the help of a teacher, while there are thousands of such books in English, French and other European languages." The pride with which the other day the Kindergarten Superintendent spoke of Kipling's *Just-so Stories* and Stevenson's *Child's Garden of Poetry* as being the best of any European languages is really enviable. But for Tamil she has to make her own primers for infant classes and her reason for doing it is that there are no suitable books in the language. In this connection Sweet says, "The main

foundation of language study will be connected texts. The reader will henceforth be the centre of study, to which grammar, dictionary and other helps should be strictly subordinated. It is only in connected texts that the language itself can be given with each word in a natural and adequate context."

10. *Text-books*.—Here I wish to formulate certain principles for writing text-books which I mainly borrowed from Sweet's *Practical Study of Languages*. The different kinds of texts should be written from the point of view of their fitness to serve as means of linguistic training. There should be a regular sequence in the series of such books. Books fit for the juveniles are to be concrete, objective and matter of fact. As an advancement upon this, books for adults are to be abstract, subjective, imaginative, poetical and sensational. Descriptions, narratives, stories, dialogues, or a harmonious combination of some of these will be quite suitable. Apt subjects for this treatment are mostly to be borrowed from nature and natural phenomena, short modern biographies, fairy tales, etc. Historical narratives and narratives of adventure form good material for the higher kind of readers. Each text should form a connected whole and should be of moderate length. Each word should, as far as possible, have such a context as to leave no room for hesitation as to its meaning. For this the matter must be familiar, treating of situations or incidents with which the student is, or can by pictures, etc., be familiarly associated. The language should be as simple as is suitable for the standard and this again demands the use of the spoken language. Short sentences void of metaphors and other figures of speech make a good beginning. Simple poetry of ballad kind, represented by such epic songs as the battle of Bobbili—as stirring as the ballad of Chevy Chase is to the English child and adult—or the rhyme of Bapparow and similar poetical compositions, form an excellent introduction into the field of poetry. In these there is poetical rhythm obtained by a few limitations imposed upon the ordinary prose-writing. Texts may also be so framed that a gradual development of the grammatical categories are embodied in them and form a good means of imparting some of the essential grammatical principles by the inductive method. The learner as

he advances, will be able to choose his texts with greater freedom, till at last he is able to read with profit the actual literature itself, unmodified and uncurtailed. Beginning with modern prose in its simplest form and that which approximates most closely to the spoken language he can proceed to the higher literature consisting of archaic prose and poetry. The practice of former days and to some extent even now is quite the opposite of this. In our days *Nitimanjari* and *Nalacharithram* (an extract from *Bharatam*) were the two books studied, one in the higher and the other in the lower classes. We were required to master the vocabulary and grammar of these books and that formed the sole linguistic ground work. That is to say, the learner was abruptly introduced to the literature of the language. It was partly because the learned teacher found these quite low and trivial and partly because there were no suitable text-books.

11. (a) *Style, general*—The question of style is one closely connected with the making of suitable text-books. Poetry and prose are the two main heads under which all literature can be brought and a distinction should be made in the styles to be used in each of these. Each has a distinct function to serve. Poetry records the higher feelings, passions and imaginative and ideal thoughts and it requires a correspondingly dignified style. As Prof. Masson says one should go to the pulpit to express such ideas. On the other hand prose is to serve the ordinary work-a-day purpose of scientific exposition, philosophical argumentation, plain narrative and simple description. The former is associated with song, ornament and elaborateness. The latter is associated with conversation, simplicity and plainness. DeQuincey boasts of having written what he calls impassioned prose or prose in which poetic sentiments or sublime passions are expressed. That is, he has done in prose what ought to be done in poetry. Prof. Masson while disapproving this attempt draws a distinct demarcation between the styles to be employed in the two forms of literature. Milton failed in his prose because he adopted the poetic style of classical bombast and Wordsworth is said to have failed in some of his poems as he bordered in them too much on the prosaic style. These examples are enough to show that two

different styles, one for poetry and another for prose are necessary.

(b) *Poetry*.—Telugu literature has but one style. It has poetry with more than the necessary trappings and it has no prose to be so called. Even in the poetic style there is a hopeless fixity. We shall first consider the point of prosody the outward garb of poetry. Telugu by itself possessed certain metres such as శీఘ్రము, కందము, శీఘ్రము, అటవెలది. In their structure these are free from many restrictions and are easy to be written. But along with everything else Sanskrit metres too were borrowed. These, complex by themselves, are made still more complex and fettered by new limitations imposed upon them. In Sanskrit there was only ఊఁ used to denote appropriate stoppages in the course of a line. The Telugu poetry retained this but in a quite different sense, in the sense of letter harmony. In addition to this they introduced *prasa* or letter harmony in the vertical letters. Thus metres are bound in both ways. This relationship between sounds is so minutely insisted upon that Potanna is declared a faulty writer for associating one kind of ఌ with the other kind. Subsequent poets blindly followed these limitations and with difficulty could make themselves versifiers, neglecting the real vocation of poets. In this respect again we have a lesson to learn from English literature; how it freely borrowed metres from France and Italy in addition to its own, how it experimented with all these forms, adopted or rejected them as they were suitable or not for a particular form of writing or a particular age. Rhymed metre, blank verse, stanza form, and doggerel, each had its day according to the needs of literature. Blank verse as free from the limitation of rhyme and most approximating to the prose form, is generally approved as best suited for long narratives. Such a blank-verse freedom is absolutely required in Telugu. Rhythmical arrangement of sounds to the exclusion of any other limitations may be practiced in writing poetry. Examples of such poetry are to be seen in the poem of Bappadu recently written by Mr. C. L. Narasimham.

(c) *Prose*.—Prose again has the danger of following the wake of poetry in its style. In the hands of some it is liable to be ornate and archaic tending

to become fixed and resisting change. This tendency is to be carefully guarded against. The aim of the Royal Society as put forth by Bishop Sprat was "to exact from all their members a close naked natural way of speaking; positive expressions, clear senses, a native easiness, bringing all things as near the mathematical plainness as they can and preferring the language of artisans, countrymen and merchants before that of wits and scholars." It is to be clearly understood that its work is mainly conversational or something nearing it with the spoken language as the medium of expression. But spoken language implies change and the style of writing in the spoken language should correspondingly undergo a change. Literary style changes from age to age. Each generation has its own style. "This is because the literary language is kept living and flexible only by a close relation with the colloquial speech of the age. The best prose is never entirely remote in form from the best corresponding conversational style of the period." This is to be seen in the changes which the plain and simple style of English prose underwent from age to age in the hands of Dryden, Addison, Swift, etc., till it becomes thoroughly racy and vernacular in the hands of Kipling and other modern writers. It is such a vernacularity of style that should be attempted in our prose works. The tendency should not be to value style according to the degree of its departure from the plain colloquial style.

12. *Dialects*.—Colloquial style and the use of the spoken language create, in the opinion of some, the insurmountable difficulty of dialects. We shall now try to solve that question. In language every individual differs slightly from every other. Change in the speech of a community is the result of the tendencies of a host of individuals. In a community where social intercourse is frequent, the same form of speech is generally used. Individual differences are so slight that they are inappreciable and do not progress beyond a certain point. There they are checked by the corrective ridicule of the associates. Therefore for all practical purposes the speech of a community can be said to be homogeneous and any change in the language must be introduced more or less by the unanimous consent of all the members. The unity of a language can be kept up only by

uniform intercourse between all its speakers. The question is whether opportunities of intercourse are freely given to all members of a community? There may be no such opportunities and isolation of any particular part of the community may be created either by the unmanageable size of the community, difference in geographical, political, or social conditions or difference in climate, soil, the general mode of life, religion and many other things. Such isolation due to one or other of these causes results in the splitting up of languages into a number of dialects each differing but slightly from the nearest one. Unless this difference is but small they will no longer be dialects of the same language but languages of the same group. So long as we are concerned with one language and its dialects we may be sure that the dialects "will shade off insensibly one into another" and sufficiently overlap to be easily understood by individuals of two different dialects. The differences are greatest in the case of the extreme dialects which, to some extent, can be counteracted by the influence of the central dialect.

But now-a-days such an isolation is possible only in the case of the inhabitants of small country villages. Under the present conditions of facilities of all kinds for intercourse there is always a class of people in whom there can be no such isolation. By virtue of their occupations and position in society they belong to no one particular community. At one and the same time they are members of several communities brought into relations with people of every class, of all manner of employment and coming from widely different parts of the country. The result is that the speech of such a man does not represent one single dialect as spoken by a single class or community but is a compromise of several different dialects though one or other will preponderate in determining his mode of utterance. The class of people referred to here are the educated upper classes in all parts of the country. Their language can, for all practical purposes, be considered as the standard language of a whole community in which are merged the minor dialectal differences. This degree of uniformity is due to the free inter-mixture of all people of a certain amount of wealth and position, rendered possible by the facilities of modern locomotion. This process

of levelling is greatly helped by those great meeting places of the upper classes—the public schools. Civilisation brings with it the necessity of centralisation and it becomes necessary to use one special dialect as a means of general communication throughout the country. All this shows that even if there are marked dialectal differences in the language of a country yet there is every possibility of picking up the dialect of a particular class of the community as the standard dialect of that particular language and using it for literary purposes without running the risk of mutual unintelligibility.

The practical case of England should help us in this as in everything. It is a remarkable thing how comparatively homogeneous the standard English dialect actually is. Standard English or polite English is not a regional dialect. It springs from the same source as the literary dialect, i. e., the London dialect of the 15th century and keeps itself up by a deliberate selective and eliminating process in the absorption of the other dialects. Yet England, Scotland and Ireland possess altogether innumerable dialects. Skeat in his book on English dialects gives a list of the groups of English dialects and they are 42 in number. It may be noted that they are groups and not individual dialects. Even then he says he "simplified matters by omitting to mention some of them, so as to give merely a general idea of the chief dialectal localities." If England a country of so much speech variation is capable of maintaining a common standard in written as well as in spoken language there seems to be no difficulty to do the same either in Telugu, Tamil or any other vernacular community where after all, dialectal differences are but very few. Another thing which should be noted in this connection is the question of the need of a uniform international language, a movement started of late years. It may or may not be possible but it is argued that "the facilities of international communication are rapidly developing, the geographical isolation of even the mutually remotest countries of the world will in time vanish, etc." Whatever be the merits of these arguments and the case as a whole, it teaches us one very important lesson that we can with perfect success attempt to have a standard in the spoken and as a consequence

in the written language at least for limited areas as are represented by separate vernaculars.

Another thing to be noticed in this connection is that there is no necessity of maintaining an absolutely pure standard. Here again we can learn lessons from English writers. They do not hesitate "to borrow from their dialects, many terms that are still fresh and racy and instinct with a full significance." Tennyson, 'a careful student of English,' not only wrote several poems wholly in one dialect but introduced dialect words elsewhere. Skeat says, "but as a matter of fact nearly all our chief writers have recognised the value of dialectal words." There are plenty of provincialisms in Shakespeare. Burns writes the best of his work in a dialect. Dialects have an equal space in prose also, particularly in the field of novel. Skeat says, "Here is, in fact, no limit to the good use to which a reverent study of our dialects may be put by a diligent student. They abound with pearls which are worthy of a better fate than to be trampled under foot." Therefore I wish to lead you to believe that a universally intelligible standard dialect with a healthy and appropriate usage of the provincial dialects is quite possible for writing purposes. At any rate and under any form it will be far more intelligible than the language up to now used in books.

Certain practical difficulties arising from the variation in dialects can be overcome by explanatory foot-notes if they are few, by glossaries at the end of each book if they are many. An ordinary alphabetical dictionary for practical use will be of immense help in solving this difficulty. In the nature of things it should be mainly a dictionary of the present stage of languages. Its foundation should be the modern colloquial and the proposed literary language. A certain number of archaic words used in the higher literature may with advantage find a place in it. A dictionary written on these lines will not only help this purpose but it will also be a good substitute for the standard dictionary of Telugu at present, viz., a combination of the *Namalinganusasanam* of Amarasimha and the *Andhranama Sangraha* both of which are poetical works giving at the same time the synonyms of one and the same word.

13. *Vocabulary*.—Contact with foreigners is one of the main causes of change in language. The vocabulary of both the languages is markedly effected. A certain amount of new words are incorporated into both the languages as a result of bilingualism. A bilingual speaker will often introduce foreign words when speaking his own language and vice versa. The actual necessity for such loans is felt, to designate ideas or objects familiar to one people but not to the other and for which no name exists in the language in use at that moment. The new word is adopted at the same time as the idea or the object which it denotes. New words and new ideas are learnt simultaneously and this is the natural method. These strange ideas and objects are denoted either by words directly borrowed from the foreign language or by new words coined in one's own language. English language was free in its borrowing from the earliest times. It came in contact with many nations from time to time—Scandinavians, Normans, French, Italian and German—and free borrowing from each of their languages and from Latin and Greek, either directly or indirectly through French, is to be seen in it. The nature of the words borrowed is either scientific, ecclesiastical or court-terms. Even from India they have been borrowing a great number of words—bandy, cooly, curry, katameron and a host of other words. A peculiar example of the freedom with which they respect popular etymology is seen in this. The Hamilton Bridge of Madras is converted into Barber's Bridge simply because the natives of the land by a mispronunciation of the word made Hamilton mean barber. This is a clear case where sentimental objection is to come into play. Yet the force of popular linguistic development can not be effectively opposed. In spite of this extraordinary freedom of spirit in borrowing, the English people once had a tendency to set up a reaction against the undue influence of classical languages. They resorted to the second method of coining words out of their own language. *Un-go-through-someness* is made to replace the word impenetrability. But this spirit soon and naturally died away. It may sound to you something like the translation of తోటపూర into garden-to-come, and చానప్ప పండు into 'its mother's fruit.' Such coin-

ings will be even as ridiculous as these renderings.

Of late the spirit of Telugu literary writers has been similar to this. Telugu language, in the very beginning has drawn too much from Sanskrit in the way of words and *samasams*. Peddana and his contemporaries did not hesitate to borrow even from Hindustani. Somehow, all on a sudden, linguistic transactions with the foreigners ceased. When the literary language has been brought to a final settlement this debit side also is closed. English words have been particularly tabooed from literary language though on the spoken side they have been freely and permanently absorbed. Even children and women are in a position to use words like road, motor car, engine, court, collector, and many others in their most appropriate sense and they even find it very difficult to replace them by Telugu words. But in literary Telugu, as is pointed out by Mr. G. V. Ramamurti in his memorandum on modern Telugu, even such late writers as Mr. Veeresalingam have recourse to un-intelligible coinings such as మండలరక్షక శాఖా ప్రధానకార్యదేహ వేక్షకుడు (Police Head-Quarters Inspector). I am not able to understand it even side by side with the English expression. Writers of scientific books in the Vignana-chandrika Series indulge in coining terms for scientific terminology. This is going too much against the natural current. It deprives Telugu of its only chance of becoming rich and developing along with the other languages. There should be a definite attempt to avoid this tendency in text books to be written hereafter and words of any language in popular usage should find a place in them.

Another evil to be noticed in this connection is the use of enormous Sanskrit Vocabulary and *samasams* in most of our literary books. The reason for this seems to be that for the Telugu writer Telugu by itself was never the object of study. Primarily Sanskrit was taken up. Any one who did not succeed well in that, incidentally took up Telugu. A thorough Sanskrit grounding with some acquaintance with the principles of Telugu grammar was considered quite sufficient to write in Telugu. The evil of it is that Telugu books are overwhelmed with Sanskrit words and *samasams*. A certain amount of this which has been naturalised in the

language should, as a matter of course, be allowed but an undue superfluity in this direction should be avoided. The vocabulary of books should also keep pace with the vocabulary of the spoken language.

14 *Grammar.* Mr. J. Ramayya Pantulu in the conclusion to his *Defence of Literary Telugu* approves of most of the steps suggested in this paper for modernising literary Telugu; but with regard to the use of words and forms he seems to be insisting on their being grammatical. He puts that word in Italics. I also learn that some of those who are professedly working for the change of style in vernaculars are insisting upon the creation of a grammar of spoken language before books in that language are attempted to be written. They seem to be still bound by tradition in giving this undue importance to grammar. They are once more putting the cart before the horse. I think that text-books embodying the spoken language according to the standard agreed upon should be first written and the work of framing a grammar out of it should be left to a subsequent man. The business of the grammarian is something like that of a text-book annotator. If the one tries to present the ideas clearly the other tries to present the forms used in a systematic way. To overlook this point is to mistake the function of grammar. We have seen that language is no artificial product. It is the living and natural expression of a people ever-changing and shifting. Its sole standard of correctness is custom and the common usage of the community, what is accepted by the body of those who speak that language. The standard is not what is laid down by the grammarian. The grammarian "extracts certain rigid rules from the works of a selected number of writers and treats every thing which does not conform to these rules as an exception or a mistake." The work of grammar is merely of an inductive nature. As language progresses words, forms and constructions are classified under separate heads and rules of a general nature governing these various classes are deduced therefrom. As such grammar is to follow and not precede a language. Such grammars are called descriptive grammars and they serve no purpose to the language in current usage as they

are products subsequent to the formation of a language.

Here the question may arise if this kind of grammar has no purpose at all to serve. It has a purpose. It is the record of the linguistic phenomena of a past age systematically arranged. There is a higher kind of grammar, i.e., the comparative grammar the compilation of which necessarily requires such systematic records of a number of languages. This is important as forming part of the science of language and descriptive grammar forms the crude material for it. Even this kind of grammar does not in any way control language in its formation and development but it simply makes one understand how it was done. It is purely of a scientific interest attempting to teach the scientific conception of law with regard to language which like nature is ever-changing but in accordance with fixed inviolable laws. This is the real function of grammar in its higher sense and the lower form of grammar simply forms a means to this end.

To overlook this single point in the proposed reform is to get once more into the error of the old Telugu writers. They undertook to authorship only after mastering first Sanskrit and then Telugu grammar. If such a grammatical grounding is considered necessary even now the times will be very soon repeated. The main attempt of this reform should be to counteract the injury done to language by the long-exercised tyrannical sovereignty of the fixed rules of grammar. To bring the reaction against the too-rigid sovereignty of the old grammar to its climax, grammar of any sort should be suspended for a time. One need not be afraid of anarchy and chaos and even if that contingency should arise we will have the advantage of creating a new republic of language and, if necessary, a grammar out of it on quite modern and scientific lines. This last place given to grammar in the treatment of this subject is partly intended to signify its real place in the consideration of languages.

15. *Conclusion.*—This brings me to the close of my paper. The question as a whole has two aspects—the national and the educational. The national aspect of it does not directly concern us here and indirectly through the educational aspect we have

THE ENSUING UNIVERSITY ELECTIONS.

BY AN ESTEEMED EDUCATIONIST.

much to do with it as teachers. In the latter part of this paper I briefly indicated the connection of the teacher with this question, the aim that he should fulfil in this and the practical means of achieving it. One may be surprised to see that I have not amply illustrated my statements from the vernaculars. I avoided doing it for various reasons. In the first place I was afraid of making the paper more lengthy. Secondly because, if at all I do it, I should have recourse to Telugu language while most of the members of this Association represent languages other than Telugu and I sincerely beg their pardon for referring to Telugu here and there. In considering many of these points I thought it would be advisable to bring in the analogy of English language as it would readily appeal to the understanding of the whole lot. More than all it was my chief aim to make it a general treatment applicable to all vernaculars basing it on principles of the science of languages. As such most of you may be tempted to call it merely theoretical but to make it practical lies in your hands and is left to you. If it only leads you to pay more respect to some of the statements made here I should not for a moment hesitate to aver that I borrowed them from great linguistic authorities and sometimes in their own language my attempt being to present the subject in a convincing way as so much of scepticism in connection with this seems to prevail that some are of opinion that it is not a question worth considering. I wish to end this paper with the belief that it is a question worth considering, worth discussing, worth putting into practice.

IN inviting the attention of the public to an important editorial on "University Elections" in the November issue of this Journal, we venture to offer the following remarks to supplement the same: The registered graduates of the University of Madras are summoned once more to elect two representatives to the University and we should like to draw their attention to the seriousness of the responsibility which devolves upon them. Judging from the previous record of the decisions of the electorate, we have no hesitation in declaring, that at least on some occasions, the franchise was not exercised in the best interests of education. The voters have often yielded to the importunity of persistent and organised canvassers, without bestowing any thought on the question of their special claims for professing to talk on educational matters. It behoves them to examine the claims of the numerous candidates that have now come forward to aspire for the two vacant seats, in a spirit of impartiality and enlightenment. There should then be no complaint of the franchise being abused by the electors.

We are anxious to place before our readers the claims of two educationists of distinction who have entered the field. Principal Raja Rama Iyer is an educationist of considerable experience presiding over an institution which has played no unimportant part in the educational progress of Southern India. We have always known him to be a gentleman of great independence of character, and he has also to his credit powers of speaking of a fairly high order. He is thus eminently

qualified to enter the Senate of the Madras University and we have no doubt he will distinguish himself in that body as much by his fearless criticism as by his expert educational knowledge and experience. It is nothing short of a grave injustice that a large collegiate institution of the type of the Hindu College, Madura, should not enjoy the privilege of representation in the Senate. The electors will only be doing their duty in sending its veteran Principal to the Senate, and they can do it with perfect confidence in the capacity of the candidate to discharge the duties of the place.

The claims of Prof. Vencataroya Sastri of the Maharajah's College, Vizianagram, are equally estimable. A Chief Examiner to the University for several years, a member of the Board of Studies in Philosophy, a gentleman of high character and one of the oldest Indian educationists of our Presidency, he is, again, eminently worthy of being elected to the Senate. The modesty and reserve of the Professor render it highly obligatory on the part of the voters to pay special consideration to his superior claims. He does not belong to the class of self-advertising politicians who are anxious to be in every public body, however remote from the sphere of their daily life and sympathies. And let it not be said of such a cultured body as the registered graduates of the University, that they can recognise the claims of only those who cry loudest in their ears and approach them through all the possible channels of personal influence.

It is a matter for regret there are only two seats open for election, for we need hardly say, there is another very deserving candidate in the Hon. Mr. V. S. Srinivasa Sastri.

It will not be possible for us to maintain that his last term of office in the Senate was distinguished by any signal services in the cause of University education in Southern India. We are not even prepared to bestow any commendation on his recent frustrated attempts to continue to burden the one-year L. T. course with such a subject as the History of Education. But his decided ability and past educational experience entitle him to expect at least one more term of office from the registered graduates, though the path of nomination seems to be quite easy in his case. It was actually declared in high quarters that he was nominated to the Legislative Council itself as an educational expert.

We have only to add that nothing short of some real service, during the first term of office, should qualify a person for a second election, and judged by the test, we are afraid Prof. P. Lakshminarasu cannot urge his claims for re-election with any strength or confidence. Looking over the proceedings of the meetings of the Senate during the period under review, we notice, the Professor's work is more or less negligible. The path of election must be reserved only for the stalwart champions of Indian interests, whose activity is apparent at every step, and we leave it to the voters to decide the fitness of the candidate by a study of his record of work in the Senate during the first term of office. There should hardly be any necessity for offering guidance of this nature to such an enlightened electorate as the registered graduates of the University, but for the painful realisation that at least in a few instances its sympathies have been extended to the loudest voice and the most subtle and unwearied canvassing.

MATHEMATICAL RESEARCH.

THE NEW HARDINGE PROFESSOR
DR. YOUNG'S INAUGURAL LECTURE.

The following is the inaugural lecture of Dr. W. H. Young, the Hardinge Professor of Mathematics, before the University of Calcutta. His Excellency Lord Carmichael was in the chair.

Your Excellency, Mr. Vice-Chancellor, Members of the Syndicate, Members of the Senate, Colleagues, Students:

It is with great pleasure that I address you to-day in my new capacity of Hardinge Professor in the University of Calcutta for I feel that it is at your wish that I am here, and that the purposes for which I am come are such as must commend themselves to all who have at heart the intellectual future of the Indian peoples.

It is no accident that the chair of which I have the distinction to be the first incumbent is named after H. E. the Viceroy, and you may be sure that in affording me your sympathy and help during my term of office you have the highest sanction for doing so. And your presence to-day among us, Your Excellency, is at once one more token of the kindly interest you are known to take in all that concerns the welfare of the people of Bengal, and an official recognition of the importance of local Government attaches to the progressive development of this University.

In recent years, moreover, more especially since the creation of the new department over which Sir Harcourt Butler presides, the Government of India has been at pains to show the interest it takes in the higher forms of intellectual activity by coming to the financial assistance of the Indian Universities in the matter of research.

I use the words "by coming to the financial assistance" advisedly for we are all of us here aware that, at Calcutta at least, the movement in favour of research chairs has been pressed from within the University. And to refer to a personal matter, it need be no secret that my presence among you to-day is due to the enthusiasm for mathematical learning which finds its embodiment in our distinguished Vice-Chancellor.

If sufficient funds can be obtained for the equipment of the University and for the new buildings which will be required we may then hope that in the not-distant future the University of Calcutta will take rank among the great Universities of the world as a place where learning is pursued for her own sake and not merely for the rewards she may

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bestow. The gulf which has been felt to exist between the ideals and aspirations of the best Indian thinkers and Pundits, and the Indian Universities as they have been up to the present will then in all essentials have been bridged. As regards my own science treated as it must be there need be no controversy. All, whatever their official position, whatever their political leanings, whether they be Orientals or Europeans, Hindus or Mahomedans, may without *arrière pensée* unite in furthering the development of mathematical learning here in Calcutta.

THE OPTIMISTIC SPIRIT.

Among the letters I have recently received which have referred to my acceptance of the task which has been entrusted to me in this University, two have struck me specially. The one suggests that wonderful consequences may follow from the creation of a school of mathematical research in India, and expresses the view that I may find in the Indian mind an instrument on which I may really play with effect. The other writes, "What an interesting experience you will have in Calcutta. To found a school of mathematical research in the birthplace of Algebra is an inspiration."

The first utterance is that of an English physico-chemist, the latter that of an American mathematician. In neither of them is there any touch of that pessimism which can be traced among the mathematicians of Europe. The one is at work in a new country—the American Far West—the other on a new Science, concerned with matters judged but recently to be beyond human ken. Both then have had great difficulties to encounter, both realise, I have no doubt, the great difficulties of the task I have undertaken. But both see in these difficulties an incentive to exertion and an omen of success.

And indeed, are not difficulties for the most part to be regarded as forces, hidden or manifest, which, like all the forces of nature, are, even before man has learned in what precisely they consist, at the service of him who cunningly observes their working?

Let me enumerate some of them. I am here as an Englishman, an European, a denizen of the West, one who has lived for half a century without any personal acquaintance with your ancient Eastern civilisation. However careful I may be, I cannot hope always to enter into your thoughts, and sympathise with your feelings. On the other hand precisely because I am not one of yourselves and have not grown up among you, it will be easier

for you to accept guidance from me. Precisely because the milieu in which I have lived has been so different from yours, am I likely to have something new to tell you? To myself the complete change of environment cannot be but stimulating, and you will have the benefit of my first impressions. Like elements in chemistry, human ideas are most fruitful when they are nascent.

I come from the temperate northern zone, and I am precluded from the exercise during the whole of the academic year of a continuous control in the school of mathematical thought and research over whose labours I am called upon to preside. I see in this fact an advantage for me, but I see also in it an advantage for you. A plant too closely watched, too carefully nurtured, will never be a hardy one, and it is not for the purpose of presenting you with the cut flowers of mathematical research, gathered under a cold northern sun, that I am here. My task is not even that of transplanting to this sub-tropical clime a slip from one of our own northern flowering plants. The Tree of Knowledge of the Workings of the Human Mind is indigenous to India. The study of mathematics is a plant belonging to the same family and its seeds have come to us from you. Philosophy has been your study of predilection from distant ages. Marvellous as are the processes of Nature that are going on around you it has never been their study which has most attracted you.

India is the home of pure thought. In the power of abstraction you probably naturally excel us. It is not well that we should be always here to help you to do your mathematical thinking. More than one English University is suffering from excess of guidance, if not always guidance of the right kind.

MATHEMATICS AND THE INDIAN SUN.

But it is difficult, I am told, for an Indian himself to work in his environment. I shall indeed be successful, one of my French mathematical friends writes to me, if I succeed in arousing an active interest in mathematical research among persons exposed to the blaze of an Indian sun.

If there be truth in the objection—its validity has been denied to me—I might say that some find that enforced interruption, such as the summer months even in Calcutta might well be responsible for no origination work from an incentive to fresh effort and gives to it fresh zest. Mathematical studies are some times best pursued by fits and starts.

But I would urge that in essence also this climate

may well be to the Indian of the nature of an asset rather than a drawback.

Your Indian sun keeps indeed the races which inhabit India separate from the rest of the world. But by so doing it must end by achieving for India its intellectual independence.

The peculiarities of your climate are to you what the silver streak has been to us. Political changes have come and gone, but the Englishman has remained for ages different in important particulars from the inhabitant of the neighbouring continent. If isolation had at first its disadvantages, these have nearly all passed away while the advantages have remained. As for you the annihilation of distance will have still more striking effects and India may soon be nearer to Europe than London a few centuries ago was to Paris. But you will remain Indian. You can never be European. With you thought and action can never take precisely the same form as with us. If you are true to yourselves and to the highest ideals of your greatest thinkers, India will add its own peculiar elements to our best civilisation, and in learning and in particular in mathematical science we may expect from you contributions to our knowledge characteristic of your race and clime. This is not the time or the place to discuss the question as to how far the University of Calcutta is ripe and its students fitted for mathematical research. One difficulty has however been indicated to me. It lies in your examination system which you have borrowed largely from us. I am assured that the mode of selection it involves is one which does not give sufficient prominence to the qualities of independence of judgment, originality of conception, and fertility of imagination which are so important for success in creative mathematical, as well as in the finest literary, work.

If this be true one of the results of your system has still been that it has produced men wise enough and enlightened enough to desire to see here a school of research and it will be their aim, as it must be mine, to seek, if need be, so to modify your system as to encourage these more brilliant gifts, gifts which your great national poet has shown that the Bengali may possess to an eminent degree.

I will not, however, dwell longer on suggested difficulties nor will I confide to you others which I may have already felt—more especially as I wish to say something to you to-day about mathematics itself and the possibilities which mathematical research offers.

In the first place I would ask you as I would all would-be mathematical students not to attach too

much importance to statements that mathematical research is extremely difficult.

It is no doubt true that in a certain sense we may with justice say that the climate of India is extremely hot. But just as in India there are many climates, and desirable products are to be found in very different climes, so mathematical research is not one but manifold, and affords employment to very different kinds of ability.

WHAT IS MATHEMATICS?

It would be well perhaps if I develop this idea a little in detail.

But first what is mathematics? It is, as I have already stated, a science of pure thought, one not in itself directly concerned with the phenomena of the universe around us. The integers, it has been said, were given to us from above, but man has made the rest. I am not, you will see, here speaking of the applications of mathematics, for example those to natural science and to statistics. Nor do I forget that, if you will allow me another simile, some of the most beautiful parts of the mathematical edifice have been planned by architects who have drawn their inspiration from Nature herself.

On this structure, planned and executed by man, man is still at work, adding to it, beautifying it, remodelling it. Its dimensions are so vast that even the most enterprising of its devotees are acquainted with only portions of it, and it is here and there very incomplete. The interest is concerned in fact, and has been at almost every epoch, on the progress of the building, and on the modifications which the plan is constantly undergoing, even more than on the harmony of its several parts. We are constantly engaged in training new workers and new problems of construction are constantly presenting themselves for our consideration. Occasionally part of the structure already reared is found to rest on insecure foundation and has to be underpinned. No one pays much attention to more brick-making and the discovery of a new kind of material attracts little attention unless discovered serviceable for the completion of an old or for the laying of the foundations of a new portion of the building.

I have dwelt on this analogy because I think it brings out at once the variety of mathematical research and the necessity for its being directed towards an end.

It enables us also to see how essentially defective a school of mathematical research must be when it is trammelled by a hard-and-fast examination system. We cannot afford to concentrate our at-

tention on one kind of training only. A mere knowledge of the existing edifice, or, what alone is possible, of a portion of it, will not make a worker, nor will a mere knowledge of technique suffice.

To have read a few text-books, to be able to carry out certain mathematical processes, does not make a mathematician. Nay, even the possession of the power of obtaining a new result does not characterise him. If we reflect on the almost interminable series of properties which some of the simplest configurations possess, it becomes clear that by sufficiently complicating the configuration we can be sure of having one which possesses properties not hitherto stated and not too difficult to be discovered by known methods. In the case of formulae, the more complicated they are the greater the number of equivalent forms into which they may be transformed. Ability to perform work of this kind involves some acquaintance with mathematical results and processes—an amount indeed which roughly corresponds to that which is required in a written examination.

Investigation such as these would however find with difficulty a place in any mathematical periodical in the world.

What work are we to expect from our workers and how are we to train them? Let me leave my analogy and attempt to make a list of the kind of workers a great school of mathematics requires:—

(1) Mathematical biographers. Those who devote themselves to the researches of a particular mathematician of the present or of a past generation, who examine in detail the principles such a mathematician is in the habit of employing, the influences he has undergone and the new ideas and processes he has introduced.

(2) The mathematical historian, who traces the development of particular mathematical concepts.

(3) The mathematical logician, who subjects the mathematical structure to critical examination, who scrutinises proofs and exposes their fallacies, and substitutes satisfactory ones for them.

(4) The mathematical philosopher, who concerns himself with the theory of the mathematical tools, and still more than this, with the general principles of each particular branch of the subject, one for whom more results, however elegant they may be, have no interest, unless they throw light on the theory.

(5) The mathematical statistician, who, for example, considers in detail the more important

mathematical theorems with special reference to the character and classification of the various proofs that may be given of them.

(6) The mathematical chronologist, who interests himself in the periods of time at which new ideas have appeared and new theories have arisen, and writes the history of mathematics from this point of view.

(7) The mathematical pedagogue, who seeks to obtain new and, if possible, simpler proofs of old results.

(8) The mathematical literary man, who aims at popularising the more beautiful or the more useful or the more easily understood portions of the subject of which he treats.

(9) The mathematical annotators and commentators of the classical writers.

(10) The mathematical archæologist, who seeks for the origins of mathematics in historic or even in pre-historic times.

(11) The mathematical constructor, who interests himself in examples which throw light on known theorems or serve to show within what limits theorems are possible.

(12) The mathematical translator, who translates from, and into mathematical language, the work of the astronomer, of the physicist or of other scientists.

(13) The mathematical encyclopædist, whose object is to expose the state of a subject at a particular epoch with special reference to the persons to whose work the chief results of the subject are due.

(14) The mathematical journalist who makes it his business to be acquainted with and to record from day to day the new steps taken in his science.

(15) The mathematical writer or author, properly so called, whose work is creative in the narrower sense of the term.

I do not, of course, say that all these workers are necessary or that they all exist in any school of mathematics with which I am acquainted. Moreover, the line of division between one kind of work and another is not always clearly defined. To become a great mathematician it will be necessary to have served an apprenticeship in several of these capacities. The most original of thinkers must follow for a time in the footsteps of his predecessors and the best creative work must be expected from those who have been for a time biographers and historians, or logicians and philosophers. The attempt to obtain new proofs of

old results and examples illustrative of old theorems has not infrequently led to striking additions to our knowledge. Generally we may say that to be a successful work of any one of these types it will be an advantage to be acquainted with the results and to employ the methods of other classes of workers.

But even a person who is concerned with but one of these kinds of work is helping on the cause of learning and is entitled, to a greater or less degree, to the name of mathematician.

"GRADUS AD PARNASSUM."

What steps should a student take who wishes to become a mathematician in this sense? That he must seek that help and advice older workers may be able to afford him is evident. He must endeavour to profit by their knowledge and experience. But this is not all. He must himself study the original documents. And for this purpose he must have easy access not only to the current mathematical periodicals and the proceedings of learned Societies, but also to the collected works of the great classical writers, more especially those of the last century.

How far will text-books be of service to him? Only in so far as they are the work of men to whom their subject is a living subject, one at which they have themselves worked, one which they have themselves assimilated. Otherwise the text-book is likely to be a cause of confusion rather than a cause of enlightenment. So far from being a guide to the student, it will serve at most as a book of reference to the expert. And even the best text-books are soon out of date.

Le progrès des sciences rend inutiles les ouvrages qui ne le plus aid a ce progrès.

But in the case of mathematical text-books it is still far from possible for us to add:—

Comme ces ouvrages ne servent plus a grand' chose, la jeunesse croit de bonne foi qu'ils n'ont jamais servi a rien: elle les méprise, pour peu qu'il s'y trouve quelque idée trop surannée, elle en rit.*

Indeed to speak of what I know, mathematical text-books which have once taken root obtain an immense authority with the young students, as well as with their teachers, often go through edition after edition without any appreciable alteration, and thirty years after their first appearance are reproduced in relief type for the benefit of the blind.

Reports on the state of science at a particular epoch are always useful, more especially when they bear the date of their composition, and are

work of competent mathematicians. Lately, however, work of this kind has too often been entrusted to superficial and partial writers, and the feeling has been growing that it is now only safe to regard such reports as representing the author's knowledge and opinions.

But how may the student hope with the least outside help to obtain a grasp of the branch of mathematics on which he is interested? There is one method which, though it may be long, is sure to succeed: let him study the history of his subject, not however in the works of would-be historians, but in the works of the writers themselves. Let him try himself to be the true historian of his subject, and seek to make clear to himself not how great, but how inevitable, each step in the development was and acquire in this way the conviction that he is worthy to follow in the footsteps of his predecessors, that he too is a mathematician, he too has been touched with the divine flame. How does what I have been saying bear on the question of careers? How may you train yourselves to be great teachers? For many of you here already exercise, or hope to exercise that profession. Only if the subject be a living one to you can you hope to make it a living one to your hearers. You must yourself be a worker.

How will it benefit the employee in an office, the Government official, to have been a mathematical worker? He will have acquired the habit of thinking clearly and incisively, of going straight to the heart of things, and of brushing aside all that is accessory. He will have gained the conviction that life consists in progress, that every problem has its solution, that every difficulty has its use. He will have acquired a reasoned confidence in his own powers, and some knowledge of their limitations. Familiarity with the mode in which mathematical theories have developed carries its own lessons. We learn to look below the surface, to keep an open mind, to realise the importance of the exceptional and even to welcome it, to see in one difficulty the means of conquering another, to appreciate the power of suitable conventions.

Galois was only a young student—he died in a duel at 22—when he saw in the work of Lagrange the fundamental concept of group, whose introduction has revolutionised whole domains of mathematical thought. The apparently trivial attempt of Cauchy to obtain an analogue to a differential co-efficient at a point where the function is infinite, led him to, was indeed almost itself equivalent to the discovery of the great theory of Functions of a Complex Variable.

In the conflict between authority and innovation the former as rarely had the last word. The Theory of Functions of a Real Variable, which was all but ignored and of set purposes, by the more influential mathematicians of the day, a subject which may be said to have taken its rise more than a century ago in what were regarded as heretical views on the nature of a function by one who was as little of a precision as Euler, is now carrying all before it.

The use of the exceptional is one of the leading ideas in the work of Weierstrass and his pupil Mittag-Leffler; but only in the Theory of Functions of a Real Variable and its applications has its full importance begun to be realised.

Even in my own under-graduate days such an experienced teacher as Edward John Routh used to argue: "This being true always must be true in the limit." Precisely in the fact that this is not true, and in the difficulty that fact has created, we have found a means of studying the properties of functions of the most general character and of classifying them.

The necessity for convention and the power possessed by it as an instrument of law and order as well as of progress, are strikingly illustrated by the very existence of mathematical analysis. Without convention the idea of number does not rise beyond the primary one of integer and does not even include that of commensurable or rational number, to which Sir Oliver Lodge, in his recent interesting address to the British Association at Birmingham would restrict it, thereby destroying at a word the greater part of mathematical science.

By suitable conventions we have conquered the impossible and disarmed the infinite.

For all of us, whether mathematical workers or not, our mathematical studies correspond to an elevation of the mind. Mathematical concepts and theories are to the mental world what the masterpieces of music and of art are to the material one. They represent the extreme degrees of perfection of accurate thought of which the human mind has as yet shown itself capable.

As we listen to these pure harmonies and contemplate these ever-changing and beautiful visions we shall be abandoning ourselves to no merely sensuous pleasures.

We shall be taking to ourselves impression of conceptions which seen in their rudimentary forms, have at the turning points of the history of the human mind, been a source of inspiration

to the greatest physicists, the broadest humanists, to the most profound philosophers.

We shall be sharing in the very life of a science which is becoming so indispensable to the modern world that the chief danger to its happy continuance lies in the interest it excites in those who would exploit its conquests.

And our rapt devotion will be hastening the time when perhaps even the crowd of thinkers will acclaim our science to be of all the more fitted to receive and to retain the crown of human learning.

UNIVERSITY OF ALLAHABAD.

CONVOCATION ADDRESS

OF THE

HON'BLE DR. SUNDAR LAL, VICE-CHANCELLOR.

Fellows of the University, Ladies and Gentlemen :

It has been a well-established custom of the University to conclude the function which has brought us together to-day by an address which is expected to present a short *résumé* of the work done during the year, and to deal with some of the more important educational topics which interest us. But closely associated as the Vice-Chancellor of an Indian University is, and must be under its present constitution, with his colleagues in the work of the University in all its departments, it is by no means easy for him to put his finger on any important point in our educational policy in which his views are not known to them or their views to him. Very little, therefore, of what I may venture to say to-day can possibly be new or unfamiliar, or not already considered by you at some time or other in the course of the performance of our ordinary duties as members of the University. I propose, therefore, to refer only to some of the main aspects of our work and to endeavour to present to you, what may possibly interest you,—the impressions of one who, though without the practical experience of a teacher or administrator, has had the privilege of having been associated with you so long in the work of the University and who is keenly interested in the educational advancement of his countrymen.

Before, however, proceeding to do so, I think it is my duty to bring to your notice the loss that the University has sustained in the course of the year by the death or retirement of some of our prominent co-workers. By the death of Rai Ram Saran Das Bahadur we have lost the valu-

able services of one who belonged to that group of Fellows who were appointed by name by the Act by which our University was established in 1887. He was the only surviving member, on the list of our Ordinary Fellows of this year, of that band of devoted workers who met on the day the University was opened and to whom it is so much indebted for the care and thought with which they promoted its development in the earlier years of its existence. He was a regular attendant at all the meetings of the Senate and the Faculty of Arts and his scholarship in Sanskrit was recognized by his appointment to the Board of Studies for that language. He would have very fittingly occupied a prominent place in the newly-constituted Faculty of Commerce had he been spared to serve the University longer. We have lost another scholar of great learning, eminent attainments and high promise in Professor H. C. Norman. The Board of Studies in Sanskrit, which has been rather unfortunate in recent years in losing the services of so many devoted scholars, has lost one more of its indefatigable workers. By the resignation of that eminent scientist, Dr. Imms, and the death of Rev. Dr. Huntley, the Board of Studies in Biology has lost two of its most zealous and able members. The promotion of Mr. Jennings to a higher and wider sphere of activity, viz., to the office of Director of Public Instruction of the sister provinces of Bihar and Orissa, is a well-deserved and fitting recognition of his valuable services. The many Boards and Committees of which he has long been so prominent a member will no longer be able to benefit to the same extent by his sound judgment, scholarship and tact, owing to the call on his time which the duties of his new office must necessarily make. But it is a consolation to think that our loss will be the gain of a sister province, and that his experience will be at the disposal of a younger University which is expected to soon come into existence. Five other Fellows have had to resign owing to their departure from these provinces. Two of the most prominent and devoted members of the University whose names you will find on almost every Board or Committee in the University Calendar and its minutes, I need hardly say that I refer to Messrs. Ward and Cameron, have just ceased to be members by efflux of time. I am glad to announce that His Honour the Chancellor has been pleased to renominate them and that we shall continue to have the benefit of their scholarship, experience and devotion to the best interests of higher education.

But while we regret that the University bark

will be deprived of the services of so many experienced hands, we have, on the other hand, the prospect before us of having its crew reinvigorated by younger recruits, the majority of whom are to be selected for us by another agency. You will be glad to hear that His Honour the Chancellor (the Hon'ble Sir James Meston) decided to throw open all the four elective vacancies available under section 5 (2) of the Indian Universities Act of 1904 to election by the registered graduates of the University, as his predecessor in office, Sir John Hewett, had done last year in similarly throwing open the only vacancy of that class available in that year to be filled up by election by the same body. I heartily welcome our old colleague Dr. Satish Chandra Banerji on his coming back by election to his place among the Ordinary Fellows of the University and look forward to the pleasure of welcoming the new members as soon as the elections are over. I believe I voice the sentiments of all registered graduates of the University when I say that they are indebted to His Honour the Chancellor for assigning all the available vacancies of the year to election by them in spite of the heavy losses sustained by the University to which I have already referred.

I have alluded before to the establishment of the Faculty of Commerce which was decided upon and sanctioned by the Government in the year under review. I wish the University every success in its new field of work and the new Faculty good luck and prosperity. While on this subject, permit me to invite your attention to a very great practical difficulty with which we are confronted by reason of the maximum number of Ordinary Fellows of our University being limited to seventy-five. It is imperative that we should have, as soon as possible, a sufficient number of experts in commerce on the Senate to assign them to the new Faculty. But this, under our present constitution, will only be possible as available vacancies will occur in the course of the coming years. The effective organisation of the new Faculty will thus be delayed indefinitely. The same difficulty occurred in connection with the Faculty of Medicine, the establishment of which was decided upon by the Government in March 1906. As the buildings of the Medical College at Lucknow were not ready, the consideration of the matter was not taken in hand till 1908, when definite proposals for the amendment of the University Regulations necessary for the establishment of the Faculty were laid before the Syndicate. The establishment of the Faculty was sanctioned in due course, and the Faculty was constituted, but

it is only in the calendar for 1913 that the Faculty appears for the first time with the full number of medical experts selected from among the Ordinary Fellows. The slow process of putting on the Senate the necessary number of experts as vacancies occur very much retards the growth of the new Faculty. When presiding over the Convocation of November 1908, the Hon'ble Sir John Hewett was pleased to observe in the course of his address as follows:—"The view that I would urge is that the Indian Universities are essentially the Universities of the people, and that, if they are to fulfil their purpose, they must provide for courses of instruction suited to the many-sided activities of the people, the development of which can alone be relied on to ensure continued prosperity to the country. I wish to see the University extend its influence over other forms of education with which it has now no concern. Holding this view I think it a pity that the Faculty of Engineering has been abolished, and that the University does not extend its help to the Thomason College at Roorkee. The result of this indifference was that at the sittings of the Industrial Conference at Naini Tal last year, there was a very pronounced feeling of opposition to the suggestion that it would be desirable to secure the affiliation of the Technological Institute, when established, to the University. I believe that a somewhat similar feeling has led to the determination of the Agricultural College to be a thing apart from the University." Experience has shown that the maximum limit of 75 prescribed by the Act renders it very difficult for us to extend the scope of the University by taking up new spheres of work, and I think it is high time that the limit was raised to 100, as is the case in the Universities of Calcutta, Madras and Bombay. It has been suggested that the difficulty might possibly be solved by a careful revision of the list of Fellows. It must however be remembered that apart from the delays involved in carrying out such a suggestion, this University is the second largest in the Indian Empire in area and population, that it comprises colleges as far distant as Nagpur, Indore and Jodhpur, and that it is no less important to secure on its Senate a due representation of its federal colleges and of the several States and interests with which the University must be in close touch to ensure its effective working. It will of course be not necessary to fill up all the vacancies at once. But power should be given to do so, it being left to the discretion of the Chancellor to fill them up as

occasion may require. If this is done it will also be possible to make up for the diminution, by reason of the assignment of five of them to election by graduates of the number of Fellowships to which the Government may nominate. It will be possible also to even increase the number of Fellowships so assigned.

I fear I have detained you too long over urging the claim of our University to be placed in a better position as to the maximum number of Ordinary Fellows it may have on the Senate. I will now invite your attention to another important point under the regulations relating to the degree of Bachelor of Arts. The grouping of the subjects out of which candidates for that degree were permitted to select three subjects, was so arranged that besides English, which every candidate must take, he was required to select either a classical language or Mathematics, as his second subject, and he had the unfettered option of selecting the third subject out of several others which were enumerated in the regulations. He could, of course, also take both the classical language and Mathematics together, as his second and third subjects. Under the regulations as they have been now amended, English is the only subject which it is compulsory for every candidate to take up, the other two may be any, out of the many enumerated, at the candidate's choice. The grouping of the subjects for the examination for the degree of Bachelor of Science has also been so altered as to permit a student to take up Mathematics, Physics and Chemistry (group A), or Chemistry, Botany and Zoology (group B). It has thus become possible for a student to take the degree of Bachelor of Arts or Bachelor of Science without studying any more of Mathematics than what is prescribed for the Matriculation Examination, or to take the degree of Bachelor of Arts without knowing any classical language. Thus has been settled an oft-mooted subject of animated debate in which the motion for the change now adopted was oft repelled by a small majority of votes. Whether the present decision will be generally regarded as satisfactory or not, further experience only can show; but there is one aspect of the question which, I think, deserves consideration. Under the system in force before the introduction of Science courses in our Universities, every candidate for the degree of Bachelor of Arts was required to take up one of the classical languages as a compulsory subject of study. Indian students generally took up Sanskrit, Persian or Arabic. The study of Sanskrit enabled them to obtain a competent knowledge of Hindi, and of the other two, of

Urdu. The graduates of those days had a fairly good command over either the one or the other form of the vernacular. With the introduction of the Science or B course as it was called, the classical language was at first dropped after the Intermediate Examination. A few years later, the bifurcation of studies was carried down to the lowest stage of University examinations. It has now become possible for an Indian student to take his degree without knowing much more about his vernacular than what he might have picked up on his mother's lap, and except for the third paper in English in the Matriculation and the Intermediate examinations, in which he is required as a part of that paper to translate from the vernacular into English (as a test of his knowledge of English), he need not know the vernacular at all. With the constantly increasing number of students who go in for Science, and the increase in the number of those who will not take up a classical language even for the degree of Bachelor of Arts, there is a class of our educated youths growing up, who are far happier in the use of English language than in the use of their own vernacular. One is very often pained to notice in the local Gazette, the names of persons published by the Pleadership Examination Board of the High Court, who are declared to have passed an examination in Law which is held in the English language but who have failed to satisfy the Examiner that they possess the very elementary knowledge of the vernacular which the Examination Board insists upon their possessing before declaring them to be qualified to practise in the Courts of these provinces. It would be a reproach to the educational system of any country if it was possible for any considerable body of its educated youths to be brought up under it without a decent knowledge of their own vernacular. I recognize that in our present condition a good knowledge of the English language, which is necessary to give us access to Western learning, its sciences and discoveries, is indispensable, and that all higher education must be imparted in our colleges through the medium of English, at any rate, for a long time to come. I am also aware that there are considerable difficulties in finding a place for the vernaculars in our already-crowded University curricula and that room can only be made for them by taking out some other part of the course. But there seems to me, as at present advised, no serious difficulty in the way of arranging for a thorough grounding in the vernacular in our schools. It may be that we are putting off the commencement of the study of the literary language too long in the earlier stages

of our school curriculum. Some time ago a member of our Senate brought forward before us a motion to make the vernacular a compulsory subject of examination for the Matriculation Examination. The Government had however in the meanwhile appointed a Committee for the consideration of the whole subject of the study of the vernaculars in all classes above the primary stage; so the motion was withdrawn pending the submission and publication of the report of that Committee. It is of course evident that little can be done in a matter like this without the co-operation of the Government, as a thorough grounding in the current vernaculars is more appropriately part of the school course, while a critical study of them, their growth and development from a historical and philological point of view, might more fittingly be left in the hands of the University. I do not know whether any orders have yet been passed upon the report of that Committee by the Government or whether the matter is sufficiently advanced for a further consideration by the Government and the University. But I hope that the matter will receive the attention that it deserves at an early date.

In view of the admirable note of the retrospect of the operations of the year 1912-1913 which has been printed by the Registrar, and is now before you, it is unnecessary for me to refer to any of the matters which have so fully been dealt with by him. It would be sufficient to point out that the efforts of the University and its affiliated Colleges, have, during the year, been mainly directed towards strengthening and improving their staff and general equipment, and providing for instruction in higher and additional courses. As pointed out in that note, the Agra College and the Mahomedan Anglo-Oriental College at Aligarh have been affiliated up to the M.Sc. degree for two years in Zoology and Physics respectively, and the Victoria College of Science at Nagpur up to the D.Sc. degree in Physics and Chemistry.

This, of course, only represents a small part of the improvements and additions made by our colleges. Owing to the great demand for admission which has sprung up everywhere almost every one of the colleges had to open additional sections in its classes or to arrange for the instruction of a larger number of students and to add to their equipment and staff, and to construct additional buildings and hostels. An idea of the growth of the University may be formed at once by a glance of a few figures. In 1889, in the first calendar published by the University, the number of Colleges affiliated up to the M.A.

standard is shown as five, and those affiliated up to the B.A. standard only, as four. In 1904, just before the reorganization of the University under the Indian Universities Act of 1904, the number of colleges affiliated up to the M.A. standard is shown as eight and of those affiliated up to the B.A. or B.Sc. standard only is shown as ten. In 1913 the number of colleges affiliated up to the M.A., M.Sc., or the D.Sc. degree (and in the case of many of them in two, in the case of three of them in all the three degrees) is fourteen and those up to the B.A., B.Sc., (or both) and the L.T. degrees twelve in addition to King George's Medical College at Lucknow and the University School of Law at Allahabad. The number of students examined in 1889 was 1839. In 1904, it was 3409 and in 1913, it is 7727. In 1904, the number of recognized schools which sent up its candidates to the Matriculation examination was 140. It is now 209. And it has been my pleasing privilege to have signed 817 diplomas for presentation to-day.

The only part of the University calendar which has shown but little signs of expansion is that which contains the list of University endowments. The only new endowment this year is the generous gift of Lala Gaurishanker, the principal contractor of the University Senate Hall building, who has founded a gold medal to be awarded annually to the student who stands first in the Final LL.B. Examination of the University to be called Sir Henry Richard Gold Medal, to mark the services of my distinguished predecessor in office to whose efforts and to the assistance and support given to us by Sir John Hewett we are indebted for our Senate Hall and the Law College building which is nearing completion and to which the University School of Law, which is our first effort in the direction of beginning work as a Teaching University, will soon be transferred. It is not because the people of the provinces are apathetic towards education, or slow to appreciate its advantages, but it is due to the fact that the channel of public charity has in recent times been for many reasons diverted to other directions that our list of endowments has remained almost stationary. In our comparatively poor provinces which have been the subject of too severe and widespread famines within the last decade or so, we have had a Raja Uday Pratap Singh who generously gave away a sum of eleven lakhs for the establishment of a school at Benares, and a Raja Balwant Singh, who gave away a similar sum for another school at Agra. The large sums subscribed for the Hindu and the Muslim Univer-

sities and the handsome donations towards the construction of our own University buildings to which we are in no small degree indebted for our present spacious home demonstrate beyond doubt the keen interest that public education has aroused in these provinces. But the abstract and incorporeal person who only collects examination-fees, holds examinations and grants its diplomas and certificates once a year does not however appeal to the same extent to public sentiment as the living institutions which open their portals to all who enter them in search of knowledge and which also teach and train them. It is only since the time that the Calcutta University also assumed the role of a teaching and research University, that the larger gifts from the public have commenced to flow in. Our best thanks are however due to the Government of India by whose generous help we shall soon be in a position to make a further advance in this direction. The Government has already given its approval to the establishment of University chairs in Economics and Modern Indian History out of the grant of Rs. 45,000 a year made last year, and has been further pleased to express its readiness to establish a third chair for three years the arrangements for which are now under consideration. With the help of the non-recurring grant of three lakhs announced last year and the further grant of two lakhs already made we hope to be able to build the University library, the plans and designs for which have already been prepared by Sir Swinton Jacob, and the law-hotel which is a very necessary adjunct to our University School of Law, which has already become almost self-supporting. Thanks to the energy of Dr. Weir and the members of the staff, the very marked and high standard in the percentage of successful candidates (especially the number of those placed in the first class) has already demonstrated the advantage of the concentration of legal studies on the lines laid down by the University Law School Committee.

The Registrar has struck a warning note as to the future of the financial condition of the University, and fears have been sometimes expressed that with the establishment of the two proposed sister Universities at Aligarh and Benares our financial position may be seriously affected. My own conviction is that with the keen interest that is now being evinced by the public in the development of education, there will be ample room for the prosperous existence of all these three Universities. A time there was when the officers of the Department of Public Instruction in these provinces had to go about to coax the people to send

their children to schools, and had to rely for all progress on their unaided efforts alone. Times have now happily changed. Everywhere the people are clamouring for more schools and colleges and are freely helping the establishment of new institutions and the improvement of existing ones. Speaking personally for myself, I do not share the apprehensions that have been expressed, and though I personally shared the opinion that it would have been a great advantage if the supporters of both these movements had united in supporting one great common institution, I recognize that a University such as ours cannot meet the special needs of either of the two great communities of India in the matter of religious education, nor can it evoke the enthusiasm which each of them excites in the minds of those for whom they are primarily intended. I am convinced that on the whole the creation of these Universities will deepen the interest of the public in the cause of higher education and will divert the channel of public charity towards it, from which all Universities including our own will, I hope, benefit. The great thing for us to recognize and remember is that though in our present state of education the State Universities of India must continue for a long time to be in a great measure federal Universities exercising their influence over large areas, they must like the London University, on the lines of which they were established, steadily continue to assume more and more the functions of a teaching University, the ideals of which, high educational authorities combine in urging, foster in a high degree the progress of knowledge and research in all its higher branches. The advantages of a well-equipped residential University where its regular students are "able to work in intimate and constant association with their fellow-students, not only of the same, but of different Faculties, and also in close contact with their teachers," where the students and teachers are "brought together in living intercourse in the daily work of the University," and where "from the time the under-graduate enters the University he should find himself a member of a community in which he has his part to play," are generally well recognized. It is in this direction that we must progress in the years to come. For the present however we can only hope and endeavour to realise many of the advantages of a teaching University in the colleges which are affiliated to us, and in most of which the residential system has been steadily growing. Indeed it is a matter of satisfaction, to reflect that the colleges affiliated to our University

are becoming more and more of the residential type. It is through them that we can at present largely promote more efficient and higher teaching, and build up the character of the youths who come under the influence of our University.

The expansion of our colleges means of course the providing of a stronger staff of able and experienced professors to help and guide the students of all classes (senior and junior alike) both in study and research. The advantage of placing even the junior classes under the charge of distinguished teachers has been recognized, and I cannot in this connection do better than quote the views of the Royal Commissioners who have recently submitted their final report on University Education in London. They observe as follows:—

"Teaching will of course predominate in the earlier work, and research will predominate in the advanced work; but it is in the best interests of the University that the most distinguished of its professors should take part in the teaching of the under-graduates from the beginning of their University career. It is only by coming into contact with the junior students that a teacher can direct their minds to his own conception of his subject and train them in his methods, and hence obtain the double advantage of selecting the best men for research, and getting the best work out of them. Again it is the personal influence of the man doing original work in his subject which inspires belief in it, awakens enthusiasm, gains disciples. His personality is the selective power by which those who are fitted for his special work are voluntarily enlisted in its service, and his individual influence is reproduced and extended by the spirit which actuates his staff."

While admitting the desirability of making better provision for higher studies and research in our Universities, friends have sometimes asked,—"Will the Indian students go in for them?" I feel no hesitation in answering the question in the affirmative. Other provinces, where Universities and colleges came into existence much earlier, have brought out distinguished scholars and scientists like the late Raja Rajendra Lal Mitra or in the present times such eminent persons as Prof. J. C. Bose, Dr. Bhandarkar and others. There is no reason why in the territories comprised within our jurisdiction with the kindly influence, encouragement and example of eminent teachers we should lag behind. I firmly believe that we only want the necessary facilities and opportunities to do

our proper share of work in all departments. How far our hopes in this matter are correct and well-founded, it is for you, graduates of the University, to demonstrate and justify; it will be for you alone to prove that the ancient land of Bharatavarsh which gave birth to so many profound scholars and thinkers in ages gone by, still retains its vigorous intellectual fertility and that her sons, fostered and nourished under the parental care of a great and benign Government under whom Providence has placed us, can still maintain the good name and fame of the land of their birth.

UNIVERSITY OF MADRAS: WELCOME ADDRESS TO H. E. THE VICEROY.

May it please Your Excellency:

We, the Vice-Chancellor and Fellows of the University of Madras, desire, in the first place, cordially to welcome Your Excellency on behalf of the Senate, Boards of Studies, graduates and under-graduates of the University, and to take this opportunity of expressing our abhorrence of the dastardly outrage against Your Excellency last December and our thankfulness for Your Excellency's providential escape and restoration to health.

We have next to thank Your Excellency for kindly consenting to honour us by laying the foundation-stone of the New University Library and Buildings. We are well aware of the interest Your Excellency has always shown in the cause of University education in India, and we acknowledge with gratitude that it is owing to the enlightened liberality of Your Excellency's Government, giving effect to the gracious wishes of His Imperial Majesty the King-Emperor, that we are in a position to take this important step forward in the development of University work.

The new library building is intended to house the University Library which has been acquired since the passing of the Indian Universities Act of 1904, and also the Library of Oriental Manuscripts which has recently been entrusted to the care of the University. The nucleus of this valuable library consisted of three collections which eventually came into the possession of the Government of Madras—one made by Colonel Mackenzie, the Surveyor and Archaeologist, in the troubled years at the end of the eighteenth and the beginning of the nineteenth centuries, another

formed some years later by Mr. C. P. Brown, the well-known Telugu Scholar of the Company's Service, and a collection received from the East India House after the dissolution of the Company. The Library has been enlarged by extensive purchases in recent years and will greatly facilitate the higher studies in Sanskrit and the Dravidian languages, which the University is seeking to promote.

The other University buildings are intended to provide accommodation for the direct teaching in these and other subjects which the University is undertaking with the resources placed at its disposal for that purpose by Your Excellency's Government.

On an occasion such as this we may, perhaps, be permitted to refer to the general progress which has been made by the University since the passing of the Universities Act of 1904, the revision of courses and raising of standards, the institution of Honours Courses for under-graduates, the Matriculation of students whose School-Leaving Certificates have been approved by Heads of Colleges, and the increased interest in the Vernaculars which has followed on the introduction of Vernacular Composition into the Intermediate Examination. Of even greater consequence are the closer relations which have been established between the University and its Affiliated Colleges, the encouragement which has been given to the hostel system and the development of a fuller college life, and the great improvements in staff, equipment and general efficiency, which, under the inspection and guidance of the University, have been effected in the colleges—improvements which, in the case of colleges not under Government management, have severely taxed the resources of the missionary and other managing bodies, in spite of the generous manner in which Government has come to their assistance.

In one respect, however, we have been less fortunate. Anxious as we are to promote the development of higher studies at the University centre, we cannot but regret that so far private donors have not come to our assistance in this matter with munificent donations such as have fallen to some of the sister Universities. Encouraged by Your Excellency's presence and approval of our efforts, we venture to hope that the wealthy noblemen and gentlemen of Southern India may yet realise the field of usefulness and distinction which is open to them in this direction. In any case we feel sure we can count on the support and encouragement of Your Excellency's Government and our own Government in the further pro-

secution of the work we have been invited to undertake.

A DONATION.

The presentation ceremony having concluded, His Excellency the Chancellor handed a note to the Vice-Chancellor, and shortly afterwards all present were gratified to hear an announcement, to the effect that he was commanded by H. E. the Chancellor to announce that the Hon'ble Mr. P. Ramarayaningar, Member of the Imperial Legislative Council, had made a donation of Rs. 10,000 towards the encouragement of the scientific study of literature in the Telugu language.

H. E. THE VICEROY'S REPLY.

His Excellency the Viceroy before laying the stone said:—

Gentlemen:—One of the most honourable prerogatives of a Viceroy is the dignity of the position he holds as Chancellor of the Calcutta University, but it is a dignity which carries with it no small sense of responsibility, for I always feel that the Universities of India represent the quintessence of India's cultivated intellect, and that their rarefied atmosphere conduces to the development of a critical faculty before which all but the most learned and accomplished scholars may well quail.

You will understand then that I appreciate very highly the great honour you have done me in asking me to take part in this ceremony, and I can assure you that, whatever may be my shortcomings as a man of learning, I take the greatest possible interest in University progress, and should like nothing better than to be able to think, when I leave these shores, that I had left University education strongly established on sound and durable foundations.

THE IMPERIAL GRANTS.

It was a source of great satisfaction to my Government to be able last year to make liberal grants with the object of enabling you to make a definite step forward, and I congratulate you upon the decision you have taken for the provision of a suitable library, together with rooms for the delivery of lectures by University Professors; and I have no doubt that, by adding to your own library the Government collection of Oriental manuscripts, you will enormously increase the scope of your Professorships in Oriental and Dravidian languages. You have realised the imperative necessity of a well-selected library if your post-graduate teaching is to prove a success,

and I gather that you are also alive to the importance of securing, for the arrangement and conduct of such teaching, men who can claim to be specialists in their own various subjects. I have listened with great interest to the account you have given of the progress you have made in various directions.

ACTIVITIES OF THE UNIVERSITY.

The Act of 1904 widened the scope of activity of the Universities by imposing upon them teaching functions, in addition to the examining functions which they had possessed before, and the objects on which the University of Madras have proposed to spend the liberal grants made by the Government of India appear to be well-devised for the purpose of carrying out this intention. The care you are bestowing upon the cultivation of the vernaculars is a noteworthy feature from which much may be hoped, and I trust that the new organization of Oriental study will meet with success. The acceptance by the University of the Secondary School Leaving Certificate is calculated to foster the best interests of higher school education by permitting elasticity in the courses and involving a less rigid system of examinations.

PRIVATE LIBERALITY.

Speaking generally, what you have told me of the work you have been doing fills me with hope for the future and affords a guarantee to any gentleman who is moved by your appeal—an appeal which I heartily endorse—and of a response to which I am very glad to see the commencement and comes forward with benefactions to your University, such as those which have recently been so liberally bestowed in other Presidencies, that his generosity will not be abused or wasted, but will, on the contrary, be utilised in the wisest way for the development of higher education in Madras.

In proceeding now to lay this foundation stone, let me thank you for the extremely kind welcome you have given to Lady Hardinge and myself, as well as for the honour you have done me in inviting me to undertake so pleasurable a task.

THE STONE LAYING CEREMONY.

H. E. the Viceroy, H. E. the Chancellor, the Vice-Chancellor and two other gentlemen present on the dais then proceeded to the pavilion where the stone-laying ceremony was to take place. Here were waiting Mr. Montagu Thomas, the architect, who is responsible for the design of the new buildings, and Mr. J. J. O. Reilly, Executive Engineer in charge of the work.

THE INSCRIPTION.

The stone bears the following inscription:—
“This Foundation Stone was laid by His Excellency, the Right Honourable Charles Baron Hardinge of Penshurst, P. C., G. C. B., G. M. S. I., G. C. M. G., G. G. I. E., G. M. V. O., I. S. C., Viceroy and Governor-General of India on the 25th November, 1913.

The following is a full text of the Address presented to H. E. the Governor of Ceylon and the Dependencies thereof in November last.

May it please Your Excellency:—The North Ceylon Educational Association desires to take this opportunity on the occasion of its annual general meeting, to bid Your Excellency and Lady Chalmers a hearty welcome to Ceylon, and to congratulate you upon the assumption of your high office.

2. We have heard with great pleasure and with sincere approval of the purpose of your Government to establish in Colombo a University College which will set a worthy standard for higher education and which will maintain a high degree of efficiency. We trust that in the near future this University College may develop into a University; for we believe that the problem of higher education for Ceylon will never be solved till the Colony has its own well-equipped University.

3. We desire to express the hope that this University College will be conducted on Eastern lines, thoroughly adapted to the needs of the Ceylonese. We would earnestly ask that those in charge of the institution be instructed to maintain this feature, and especially that adequate facility be given for the study of the vernaculars—Tamil and Sinhalese—and Oriental classics on equal terms with European modern languages and Western classics.

4. But we view with misgivings the proposal of Government to give this University College a virtual monopoly of higher education in the island. We believe that the creation of such a monopoly will be highly detrimental to the best interests of the youth of the country; and in support of our position we submit the following for your consideration:—

(a) A monopoly, in itself, is always open to serious question. Here, in the field of higher education, we regard it as specially undesirable. We believe that in open competition, with the prestige of the Government behind it, such an

institution has nothing to fear, and that it will be more effective under the stimulus of healthy rivalry with other institutions. There are departments of administration in which restrictive measures may be adopted. Here, however, we believe that restrictive regulations will be hurtful. We plead, therefore, for open competition, sincerely believing that by enlarging the facilities for higher education throughout the country the best interests of the Colony will be served.

(b) It has been suggested to us that it is the purpose of your Government to organise this University College under a Board of Directors, or Senate, so that nominally at least it will not be a Government institution. We understand, however, that a majority on the Board or Senate will be official members. We are strongly of opinion that, however much Government may wish to avoid it, this College will be, in the mind of the public, a strictly Government institution. We therefore believe that the experience of the Royal College will be repeated, and that few private gifts will be made to the College, and particularly that no donations will be made to it from abroad. With this monopoly in higher education all private benevolence will be excluded from the field; from the University College, because it will be non-existent. This we would regard as a great calamity. We believe that higher education should be put on such a basis as will attract generous private donors both at home and abroad; and we believe that this can be done best by giving other institutions a chance to do higher educational work on equal terms with the University College.

(c) We believe that the cost of supporting a student in the University College in Colombo will be so high that the majority of boys from the country districts will be practically excluded from participation in its benefits. We are particularly interested in students from the North, and we have no hesitation in saying that under the proposed arrangements an exceedingly small number of our boys will be able to pursue the full course of study, and very many of our brightest lads, who are well fitted for a University career, will never be able to go beyond our own secondary schools.

Your Excellency will be interested to know that the value of a rupee varies greatly between Colombo and Jaffna. Board in Colombo at Rs. 30 a month may seem moderate to Colombo parents, but it is prohibitive for the average Jaffna student. For Rs. 10 or Rs. 12.50 equal service can be had

in Jaffna. We have no reason to believe that the cost of tuition and board at the University College will be within the reach of the average student from the North.

(d) Without losing sight of the fact that all country districts will be placed at a disadvantage if a monopoly is granted to the University College, we would urge upon your consideration the special claims of Jaffna. The Northern and Eastern provinces are peopled almost wholly by Tamils, whose aptitude for higher education no one will question. Jaffna is the premier district of the Tamil provinces, and it was here that the pioneer institution for higher education was established as early as 1823. Ever since that time the people of the North have been keenly alive to the benefits of higher education. Until recently a full University career within the district was open to Jaffna students. If we abandoned the Indian Universities, it was in the hope that, by falling in line with the Ceylon Education Department, we should have similar privileges extended to us. To centralise higher education in Colombo will be, for Jaffna, a retrograde step.

(e) Further, the whole island will be taxed for the support of this College. It does not seem to us fair that one part of the population should be benefited to the almost complete exclusion of the poorer sections of the people. We are glad that the College is to be established, and we are glad to bear our share of the cost through taxation. But since we may not participate in its benefits on equal terms with the South, we would like to be at liberty to provide within our borders for the higher education of the children of the North.

5. We, therefore, respectfully ask your Government that its scheme for higher education be so modified as to provide for higher education in other centres than Colombo; that adequate support be given to other Colleges, particularly to those outside Colombo, which strive to minister to the needs of students in very moderate circumstances; and that the students of such Colleges be admitted on equal terms with University College students to all examinations and be entitled to all certificates, diplomas, and scholarships to be awarded on the results of such examinations.

6. In presenting this subject to your Excellency for consideration we would call attention to the fact that we are maintaining the position which the North has consistently held throughout the whole of the recent discussion of the educational problem, as reference to the printed testimony of the men from the North before the

Education Committee will show. We believe that, in presenting this memorial, we present not only the views of those who are engaged in educational work in the district, but also the sincere desire of all educated men of the north.

TANJORE DISTRICT SECONDARY TEACHERS' ASSOCIATION.

VIII MEETING—THIRUKKATUPPALLE,
8TH NOVEMBER 1913.

It was 6 p. m. when the meeting assembled. There were about 40 present, notwithstanding the incessantly pouring rains and stormy weather.

Mr. V. Vaidyaratha Aiyar of the Lutheran Mission Central High School, Shiyali, was voted to the chair.

Mr. N. Venkatachariar (of Thirukkattuppalle) was requested to give a brief summary of his paper read last time. In doing so he stated that English had too many hours, that other important subjects coming under B group starved in consequence, that some or all of the last hours of the school day might be given over to play or Drill and Gymnasium, that Library classes should be instituted, in which boys might be reading what books they chose of the Library or Magazines or Newspapers.

Mr. V. Mahadevan supporting in the main his predecessor's remarks stated that the 9 or 10 hours devoted to English was really too much and was partly the reason why English teachers were tempted to teach even 'Non-detailed' textbooks with great minuteness, thus defeating the object of the discrimination between 'detailed' and 'non-detailed' reading. The result of such work was not at all commensurate with the labour spent on it, the 'law of diminishing returns' coming to operate in a very disheartening manner. Boys must be given their own time which they might spend according to the bent of their humour. Schools unfortunately ignored—if they did not positively discountenance—the value of such odd hours spent in school amidst books, magazines, pictures and other educative environments. Any knowledge thus unofficially picked up stuck to them and became their own in a far better sense than what formal instruction was poured upon them from the official chair. He would strongly recommend the retrenchment of time given to English: 6 hours

was enough, 1 hour more should be given to Geography and Drawing each.

Mr. S. K. Krishnamurti Aiyar (of the Town High School, Kumbakonam) emphatically denounced the practice of Drill and Gymnastics as at present taught: it was a veritable nuisance, an infliction, a thing which boys despised and dreaded. Coming as it did at the close of the school day after nearly five hours of school study within the closed school-room, it must be a curse to the boys who would otherwise like to run about and jump and play and give scope to their pent-up spirits how they pleased. He felt so strongly that he would go the length of advising its abolition. Next touching the division of school hours into periods, he was of opinion that 40' was too short, the teacher having to stop his teaching just as he was warming to good ardent work. He would therefore fix a period at nothing less than 50'. So thought Mr. Keshavachariar (of Papanasam) and Mr. Sarangapani Aiyangar (of the Town High School, Kumbakonam), who suggested that drill had better be taught in the morning between 6 and 7; it had at least the merit of shaking off the drowsiness and lethargy of the boys and might promote the habit of early rising.

Mr. K. Sesbu Aiyar (of Mayavaram), would endorse the curtailing of English hours on one condition, viz., that teachers in charge of other subjects took care to insist in their hours on good and correct English from the boys. That not granted, even 10 hours was nothing too much. He vehemently inveighed against the teaching of Elementary Science as at present done. 'Elementary Science' was a bastard term that had found favour only amongst us. It was a most unseemly hotch-potch of several sciences very unscientifically taught—a dash of Physics, of Chemistry, of Botany, of Zoology, Physiology and what not, all mixed up together. He would advocate instead the teaching of any one of these sciences according to the convenience of each school. It was a B group subject and might be taught in any proper manner. The selection of the particular subject might be conditioned by the individual facilities of the school. If specialised and properly taught, any one of these sciences might require three or even four hours a week. He next protested strongly against the exaction of home-preparation from the boys, whose life and energies were being already overtaxed by hardwork in school. Assuredly the curricula were too heavy and even advanced and they pressed over much upon boys and teachers alike. Why should not the schools think of

making a humble protest? Next touching Drill, he was of opinion that, bad as drill might be, it served one good purpose, viz., that of teaching boys co-ordinate and harmonious co-operation; and incidentally remarked in a humorous vein that our association would have been more largely attended and worked more effectively, if its members had been severely drilled in their days of school-life.

Mr. Guruswami Sastriar (of Thirukkattappalle) objected to any kind of specialisation in B group science and opined that it was highly necessary and desirable that boys should know the rudiments of as many sciences as possible, such elements of knowledge that no man of any pretensions to learning should be without.

The Chairman winding up the discussion on this question observed that 25 hours a week being prescribed by the 'Educational Rules' it was out of the question to curtail the school time. In regard to the breaking up of the school day into periods he believed 40' was quite time enough for a teacher well prepared for his work. The S.S.L.C. scheme of studies had given rise to certain odd excrescences in the school time-table and if it was properly and reasonably worked might leave ample time at the disposal of the boys. For instance, the Mathematics boys (taking up Geometry and Algebra of the C group) might be spared a few of the hours of Elementary Mathematics, so Physics boys might not be pressed into Elementary Science Classes; so again Tamil boys might be excused from some of the Tamil Translation and Composition Classes. Indian History, he believed, was most wearisomely drawn out from the III Class upwards to the VI Form. Except the History boys, all the rest might be exempted from the Indian History hours when nothing but the stale old story is repeated. He thought that even 8 hours was too short a time for English and did not believe that teachers could, however much they would, insist on correct English in other subjects than English. In regard to Drill he believed it was bad indeed, but he would propose reform and not extinction: it might be made optional with games, those not taking to games might well be made to undergo the discipline of drill. Drawing for the matter of that was no better and might be taken in hand for reform.

Next came the question of "Vernaculars in the S. S. L. C. Scheme." Mr. R. Subramania Aiyar (Tamil Pandit of the St. Peter's High School, Tanjore), made a very interesting speech characterised by good sense and moderation

throughout. Vernaculars admittedly had not kept pace with the onward march of things in India; they were indeed at least a century older than the men who spoke them; good and useful books were sadly wanting. There were indeed a good many Pundits who could write excellent Tamil, but they lacked the knowledge of modern sciences and conditions; while those who were conversant with the latter could not put two words together without perpetrating a blunder in spelling, much less two sentences without violating sacred grammar. Knowledge of modern kind and language facility in the vernacular fought shy of each other. The education of the masses would be, and was bound to be a meaningless but high-sounding cry so long as vernaculars were thought to be not worthy the care of English-knowing Indians. Now the S. S. L. C. Scheme seemed to encourage the scanty regard paid to them. Boys taking up the C group Tamil were really so very few as to be regarded a very negligible number. A vast majority of Indian pupils were thus suffered to pass through the whole High School course without scraping up so much knowledge as to enable them to write a decently worded letter to their parents and sisters or to speak passable Tamil to his fellow-brethren. This was really discreditable. There was indeed Tamil Translation and Composition, but it received very scant attention, was hard to teach within the very narrow time allotted to it. He urged therefore that Tamil should be learnt by every boy in school, at least so much of it as to enable him to speak and write tolerably well. If it could not, without extraordinary trouble and difficulty, be brought under A group, which would be the best of all things, he would recommend that Tamil might be taken up in the B group which the schools had, at all events, freedom to do. Any way it behoved us all to see that Tamil did not deteriorate, but advanced with the advancing times, and if we did not bestir ourselves in this direction, we should be grievously sinning against our own nationality.

Mr. V. Guruswami Sastriar (of Thirukkattappalle), pointed out that, whereas in Bombay, Bengal, etc., the vernaculars did not suffer, in similar conditions here, they fared badly. He was inclined to ascribe this to the apathy and stolidity of the Tamil-speaking people. They in the North spoke to one another in their vernaculars, addressed meetings in their vernaculars and wrote books in their vernaculars. They reserved English only for office and official business. We down here did the reverse, allowing English to invade even our very homes. Most of

us could hardly speak tolerable Tamil for however short a time without every now and then ejaculating English words and even sentences. For his part, he would have Tamil taken over to the A group, and believed that nothing short of it would meet the case. English had too many hours for it, and might very reasonably be made to give over two or three of its hours to Tamil. He was followed by the Tamil Pandit of the Thirukkattappalle School, who, in his turn, deplored the present fate of the vernaculars.

Next spoke Mr. N. Kalyanarama Aiyar (of the Thirukkattappalle School), who in the course of his speech observed that the absence of proper Tamil text-books could not be advanced as an objection to the proper study of Tamil, because here it was the demand that created the supply; the study of it would bring into the world good literature. It looked frightfully anomalous—if not unpatriotic—that we should commonly plead inability to address an audience in Tamil born 'Tamilians' as we were. There was no use of tinkering at the question by assigning to Tamil an hour or two a week and giving the vernacular work in charge of men, who, by their teaching of it, make it grow from bad to worse. Graduates or other men of English culture should be made to teach Tamil, and text-books should be prescribed, and the number of hours devoted to it increased to four or five hours a week.

Mr. K. Seshu Aiyar (of Mayavaram) would admit that things were going bad indeed with Tamil, but could not believe it was due to any changes brought about by the S. S. L. C. Scheme. He would rather ascribe the decadence of Tamil literature to some defective quality in the Tamil-speaking race that could complaisantly allow their mother-tongue to languish and drift into the back-ground. If the contention was in the main to revert to the state of things before the S. S. L. C., he would ask how things had been better then, what proficiency had we to show now as the result of training in the old blessed scheme, what good Tamil books we had now produced. The S. S. L. C. Scheme, if properly worked, might conduce excellently to the growth of the vernaculars. He believed that the High School course afforded enough time for the cultivation of the vernaculars from the lowest class up to the highest, and however much they might think to be fettered by the S. S. L. C. curriculum in the V and VI Forms, they had a perfectly free hand in Forms and classes down below. If there was really any sincere and genuine enthusiasm of the vernacular in us, we had better order things properly where we might and could,

and we should then have hardly cause to supplicate higher powers for help. He suggested the introduction of latter-day books in Tamil, and thought we had had enough of 'Kural' and other classic works of old Tamil, which might however, by all means be studied by specialists and enthusiasts.

The Chairman in his lucid speech expressed his disapproval of making the vernacular study obligatory on all. He inclined to think the S. S. L. C. Scheme had done very wisely in making the detailed and thorough study of the vernaculars optional, while it demanded of all a tolerable acquaintance of them. Tastes, aptitude and enthusiasm could hardly be forced or strained; freedom was essential to healthy growth, and constraint might only quench what fire there might be. He, for his part, would exonerate the S. S. L. C. Scheme from all blame in this question of the vernaculars; the destiny of Tamil was largely in our hands. He would question the wisdom of the proposed scheme of making Tamil study compulsory on all, while only few enthusiasts might develop into Tamil scholars capable of writing good books on modern knowledge. He feared it would prove undue waste of youthful energy which might else bear good fruit.

Mr. Seshu Aiyar next moved the following proposition which was duly seconded and passed unanimously:—

"That in the opinion of the Tanjore District Secondary Teachers' Association, one of the best ways of improving the vernaculars is to pay greater attention to vernacular composition in all the classes of a secondary school from the III class upwards (i) by prescribing text-books in the vernaculars for non-detailed study and (ii) by correlating the other subjects of the secondary school curriculum with vernacular composition both oral and written."

After a vote of thanks to the Chairman, the meeting broke up. It was now 10-30 p.m. The Thirukkattappalle School staff invited the other members of the Association to supper, which was sumptuous as it was excellent. These were comfortably boarded in the school for the night. After breakfast and coffee the next morning, the guests left for their several stations. Mr. Sundaralingam Aiyar and the staff were exceedingly kind and obliging and could not enough be thanked for their hospitality.

EDUCATION IN THE MAGAZINES.

(INDIAN)

Mass Education,

by Mr. K. S. Appaswami Iyer.

Under the auspices of the Teachers' Association, Madura, Mr. K. S. Appaswami Iyer, Sub-Assistant Inspector of Schools, delivered an interesting address on Mass Education.

Mr. Appaswami Iyer devoted a major portion of his address in criticising the Hon'ble Mr. Gokhale's Bill. He said that Mr. Gokhale's Bill would prove ineffective in urban as well as rural areas. Their immediate duty in the case of towns was to bring about those conditions which were necessary for the introduction of compulsion and that in the case of villages the people would have to co-operate with the Educational Department in order that their efforts for spreading education might not fail. He warned the audience against attributing to the Grant-in-Aid Code those difficulties in the position of the schoolmasters which were really caused by the growingly illiberal attitude of the educated people towards them. The lecturer also condemned the proposal of the Hon'ble Mr. Krishna Rao to place the educational inspecting officers under the control of the Local Boards. What was needed was that funds should be made available for providing accommodation to pupils in the schools now in existence and for increasing the emoluments of teachers. They had enough of work to do in organizing their schools, in understanding their conditions, their needs, as also seeking reasonable help from the Government and in exerting themselves to replace the low ideals of ignorant people by better ideals. In all these matters active help from the people was necessary. In the rural areas the problem of attendance in schools should be brought home to the villagers in addition to the pecuniary support that should be given to schoolmasters. The question was whether any kind of compulsion could be introduced in schools at the present stage. The Government proposed to double the schools by adding 91,000 to 100,000 schools already in existence. The Government alone should not be expected to undertake to contribute the whole cost of education for they had too many projects requiring additional expenditure on hand. There was no use in making a vague appeal to the Government and the people should all feel certain in what particular ways and to what extent the Government should help them.

More active and organized work by the various educational committees was needed, not for check-mating the work of educational officers but for co-operating with them.

The Indian at Cambridge,

by Mr. R. L. Turner.

Mr. R. L. Turner, of Christ's College, Cambridge, who is shortly going out to India to take up an appointment as Professor of Literature and Sanskrit at one of the Colleges in Benares, has been discussing "The Indian at Cambridge," in a paper read by him on November 10, before the Holford Society in Cambridge. He pointed out that the position of the Indian student in Cambridge to-day was not a happy one. He did not stand on an equality with others. People asked: "What do these niggers want here? They have their own Universities in India. Why don't they stay there?" But in India education was an entirely utilitarian affair. If Indians asked for something better than that, were we to refuse them? To great numbers of men their time in Cambridge was a very real moral stimulus, strengthening their faith and giving them new ideals. The question which all who came into contact with Indians must ask themselves was: "Are we willing to allow Indians to share in this privilege?" Unless they were willing to take him as a social equal and admit him to their social intercourse that privilege was denied him. One type of objection with which he had no sympathy was that of the man who said: "If you try and make friends with Indians they will always be hanging on to you and your friends will fight shy of you." But there were other difficulties. The Indian was very shy; he was indeed a stranger in a strange land. Then he was very watchful against anything like patronage. If Englishmen would not have him on his own account he preferred to be left alone. In this way the efforts of well-meaning people had brought harm during the last few years. The Government of India had made efforts in recent years to improve the position of Indian students coming to England, but these efforts were often looked upon with suspicion by Indians. The Indian had not yet come to realise that the motives of the Government might be disinterested; and it was his (Mr. Turner's) firm conviction that it was almost hopeless to expect that any official action would be calculated to bring about a better understanding between Englishmen and Indians. It lay with fellow-students mostly to remove the

ignorance and credulity which existed in India by giving them a true idea of what our attitude in England was towards the people of India. The semi-official compact with the colleges that they would not admit more than two Indian freshmen every year, although a step primarily for the benefit of India, was the cause of great resentment, and matters had not been improved by a speech of a high official in the University, who in an address to a body of Indians whom he had invited to meet him, used words to this effect: "We don't want you here at all, but since we must have you, try and behave yourselves." There was very little doubt that the feeling of bitterness and resentment to-day was considerably worse than some five years ago. Owing to the atmosphere of suspicion the Indian student was by no means so ready to-day as he used to be to meet the advances of Englishmen. But some had homes to which they could invite Indians. If the Indian was to carry away a correct idea of English people he must see something of English home life. Others might meet Indians in business. Others who never came personally into contact with them could speak up in any circle where they heard the "black man" spoken of in slighting terms. To the young members of this generation was entrusted the great task of forming the moral and intellectual atmosphere of the next generation. It was for them to see that Indians went back to their country with a better idea of English people than that in which they came — India.

Education in Alwar,

by His Excellency the Viceroy.

In the course of his reply to the Address presented by His Highness the Maharajah of Alwar, His Excellency the Viceroy spoke as follows:—

As regards education Your Highness is to be congratulated on being represented at the Mayo College by more boys than any other State in Rajputana. You were there yourself and your father was the first pupil entered there, and I look upon the support you give it not only as a testimony to the affection and respect the Mayo College inspired in you, but also as an indication that Your Highness has realised the importance as well for your nobles as for the prosperity and stability of the State of building up for your assistance and support an educated and an enlightened aristocracy. When Lord Minto visited Alwar in 1909, Your Highness emphasised the importance of religious and moral education, and His Excellency spoke of the special opportunities possessed by an Indian ruler.

It cannot be disputed that in the training of the young, moral instruction is almost powerless without the sanction of religion. In this respect Your Highness is free from many of the difficulties which hamper us in British India, and Your Highness has made wise use of these favourable conditions by making religious and moral education compulsory in the State schools. I earnestly hope that the seed now being sown will bear fruit in the shape of sturdy, loyal, and God-fearing men.

(FOREIGN.)

The Practical University,

by David Starr Jordan.

An audience composed of those who are connected with the work of education in London listened to an entertaining lecture at the Birkbeck College, London, on Saturday, November 15, by Dr. David Starr Jordan, President of the Leland Stanford Junior University, California. Mr. J. W. Gilbert, Chairman of the London County Council Education Committee, presided.

Dr. Jordan, whose subject was "The American University," said that the words of Emerson, "America means opportunity," supplied the *basal* idea of the American University. Their University institutions were not intended to maintain any kind of tradition or system: they were intended to meet the people's needs. What was best for one might not be best for another, and it was not for any educational board to say that this study was more valuable than that. It was for the student to find out which things were worth most to him. Some time ago a professor spoke of New Zealand as a Greekless country. He also spoke of it as a province of Australia; and that raised the question whether it was worse to be ignorant of Greek or ignorant of the condition of New Zealand. Some would be ignorant of one and some of the other, and some that were ignorant of both would be the finer scholars because they knew something better, for scholarship depended on the thoroughness of their knowledge in its relation to the affairs of human life.

In tracing the development of the Universities in the United States, the lecturer said that about 1868 the Act was passed which allowed for the gift to every State of a large amount of land on condition that a University was established, which was to teach, among other subjects, agriculture and the mechanic arts, and that brought engineering and agriculture into the very centre of their University system. The work of the University

was to bring scholars together, and if he was to offer a word to London upon the University question he would say: "Above everything bring together all the fragments that are scattered over the city." There were only two great capitals in the world that had no great University—London and Washington. The University was not the place for men who neglected work, and in the United States they were moving more and more towards testing a man's work as he went on and sending him home to think about it if it was unsatisfactory. He himself once sent away 131 men in one day. They had generally agreed that prizes did not help scholarship, and most of their institutions had discarded honours for the same reason. Fellowships and scholarships they felt very doubtful about. He thought that the abuse of them had been greater on the whole than the good results. In most of their Universities, if they excepted those under the old influences, men and women were admitted on the same terms, and nothing would induce the Western institutions to change that system. One result of reaching out for all kinds of talent was an enormous increase of students. In California, where the population numbered 2,000,000, there were 8,000 University students.

Self-Education, by Arthur Mee.

It has been said that at school the boy is not educated, but taught how to educate himself in later life. This point of view was emphasised in a leading article in the "Morning Post," the writer stating that the strongest criticism made of a student teacher is "the teacher was giving to children information which he ought to have led them to discover for themselves." It is this position that persons interested in education are taking up. The general failure of English education in the primary schools is due to the force-pump system. Facts and figures are pumped in but not retained, and every effort is now being put forward to make children's brains acquisitive and not receptive. Teach yourself, and you will be taught thoroughly. Open the receptive cells to the tutorial pump, and the pressure of everyday life and business will drive out the factual stuff pumped in.

It may be argued that it is all very well to dogmatise on the matter, but where and how is the man or woman, youth or girl, to teach him or herself? This is easily answered. Observation is the greatest educator, aided by deduction. To this must be added a synthetic comprehension of your subject. A work that will help you to do this is the "New Harmsworth Self-Educator,"

published fortnightly at 7d. each issue, and edited by Mr. Arthur Mee. The Editor's opening article on success is sound in every word. The making of much money does not mean success, and Mr. Gradgrind is put in his proper place. Mr. Mee writes:—

Success is the working with a dauntless will and a fearless heart, and a stainless soul, of the thing we are in the world to do. It is not for us all to see the end of our labours, but the successful life is the life that is nobly spent, building up, it may be, to some far-distant end, but building upward always, adding an enduring part to the immortal achievements of mankind upon the earth. The man with this unselfish purpose succeeds, whatever the world may say. "They never fail who die in a great cause." In that noble line—from a poet whose life was perhaps a failure—we may fix our measure of success. The self-educator sets no narrower aim before us than this. It would have a man live for great ends and pursue them by worthy means; it would have him seek a prize that is worth the winning, and have him win it. We must fit ourselves for our work; we must hold our heads high in the world.

Higher Education, by Lord Haldane.

Lord Haldane opened the new buildings of the Applied Science Department of the Sheffield University and in his speech indicated that a close connexion would be maintained in future between pure and applied science in Universities, pointing out that this was necessary if we were to hold our own in the face of the rapid developments in higher education in America and Germany.

The whole question of higher education, he said, had been under consideration by the Cabinet. They had their own line quite clear now, and it was in the hands of his colleagues of the Board of Education. To begin with, there was a Committee, which although nominally connected with the Treasury, had great freedom, and spent a much larger sum of money upon the Universities and University colleges than used to be spent in the old days.

"For the last twelve months," the Lord Chancellor continued, "There has been a great deal of activity about this business of national education. My colleague, Mr. Pease, with whom I am in very frequent communication upon these subjects, is carrying out what I believe to be an enlightened policy. He is trusting to the very highly expert officials whom he has now got at the Board of Education, and he is consulting the education authorities throughout the country.

The local educational authorities have done splendidly, but the burden upon them has been very heavy. The nation will have to make up its mind to give considerably more out of central funds.

I am glad to say the plans for these advances are now fashioned. They have been under consideration practically the whole of this year, and we know exactly what to do in order to make advances if we only have the nation at our back. That is the question. And why I came here so gladly is that it gives me an opportunity of bringing that great national cause before you. I hate any idea of increasing expenditure, whether out of local or national sources, if it can be avoided. It is salvage money, and unless you spend it you will go back as a nation, and your revenues by which you keep up your fleets and your armies will begin to shrink, because you will not be holding your own in that great industrial position from which your power and your wealth have come."

Advice on Lecturing, by Mr. A. C. Benson.

Mr. A. C. Benson, in an introduction contributed to the fourth volume of "The Book of Public Speaking," has something to say on the art of lecturing. He holds that "the ordinary lecturer must choose between two methods; he must either deliver, solemnly and emphatically, his written discourse; or else, if he dares, he may speak as informally and conversationally as he can; and the second method is incomparably the best." Carlyle used to "speak his lectures," although overwhelmed by agonies of nervousness. For "days before" he said, "drink as I would, my throat continued dry as charcoal," and he used to stumble to the platform drugged and hysterical before the lecture, and go away at the end feeling like a man who had been robbing henroosts; and yet, with a sort of triumph at the thought of the Annandale accent "gollying at his well-dressed audience for over an hour."

Ruskin, Mr. Benson recalls, used a mixed method. He used to begin by reading an elaborately written paragraph or two, and then, as he gained confidence, he would desert his manuscript altogether, talk in the most frankly conversational way, and even, as happened in his lectures on birds, imitate the gait and flight of crows and swallows, as far as wingless biped could. On the other hand, Mr. Gladstone has been heard to deliver a long lecture on a Homeric subject, full of "curious learning without a single note and employing all the time 'a sustained felicity of

phrase and a magnificent accompaniment of oratorical gesture." Mr. Benson's own method is to write the whole discourse, and then "golly" it out with what emphasis and vehemence he can muster. The one point he has learned by practice is the absolute necessity of clear enunciation.

Another important point is to get into human touch with the audience: "An address delivered solemnly and pontifically may possibly be impressive; but it can hardly inspire. The best plan is to sweep the faces of the nearer listeners, find a sympathetic person, and deliver one's lecture at him or her. I have known the whole tone and current of an address changed by a lecturer breaking into a responsive smile at some smiling hearer." The real object of lecturing, Mr. Benson asserts, is "not to communicate information, but to try to plant germinal ideas in the mind, and to arouse curiosity, not to satisfy it."

Reviews and Notices.

'PRELIMINARY CHEMISTRY,' BY H. W. BAUSON, M.A. PUBLISHERS: W. B. CLIVE, LONDON: (UNIVERSITY TUTORIAL PRESS.) 1s. 6d.

In this handy treatise, the author has eminently succeeded in the task he has set before himself, of providing a course in Chemistry for beginners. There are many features to recommend it as a valuable guide to young learners in understanding the elementary principles of Inorganic Chemistry. The arrangement of subject-matter, the nature of experiments and the clear instructions for doing them, are all such as can be desired. It is noteworthy that too much reliance is not placed on *heuristic* methods and that, therefore, it is free from a defect, which, unfortunately, is noticeable in some modern publications on the subject, and which, unless carefully guarded against, rather lands the beginner into vagueness and inaccuracy, than aids him in acquiring a definite and coherent knowledge of the subject. To each chapter are appended a summary thereof, practical exercises that may be set on the portion, and a number of questions calculated to impress clearly on the learner's mind the principles taught in each; thus the usefulness of the book is greatly enhanced. The diagrams are, no doubt, neatly drawn; but we should like to say that it would have been far more useful, if, instead of the sketches being represented, some in *perspective*, some in *section*, a uniform method, (desirably *sectional diagram*) had been followed.

Characteristically enough of the Publishers, the printing and the general get-up of the book are excellent, and the price is moderate enough for such a good treatise. We venture to think that, with a few additions to its scope, such as the study of Nitric acid, and the most important and useful metals and their compounds, it will form a suitable text-book of Elementary Chemistry for use in the lower forms of schools in this Presidency, if not in other provinces also as well.

'ORGANIC CHEMISTRY,' BY JULIUS B. COHEN, PH.D., B.Sc., F.R.A.S., PUBLISHERS: T. C. AND E. C. JACK, 67, LONG ACRE, W.C., LONDON. 6d. net.

We owe an apology to the Publishers for the delay in reviewing the book. The Science of *Organic Chemistry* is of no less importance and practical utility than other ones in the economy and well-being of the world; in fact, it is intimately connected with the growth of medical science and the development of industry in various branches. Nevertheless, except a few that have to specialise in it, the general public are not attracted to a study of the subject. This may be due partly to the nature of the subject and partly to the manner in which it is handled in some treatises.

The author has sought to present the elements of this science in a clear and interesting form to the reader of average intelligence and has, it must be said, well succeeded in the task. The introduction deals with the original meaning of 'organic' and the gradual widening of the scope of the subject due to the application of science to the several departments of industry, such as dyeing, tanning, manufacture of candles, soaps, inks, papers, glue, artificial silk, perfumes, explosives and photography. Then follows an account of the trend of scientific thoughts that led to the conclusion that 'Organic Chemistry' is governed by the same laws of combination and affinity, etc., as 'Inorganic Chemistry.' A few pages are devoted to the study of the preliminary processes, terms and expressions requisite for a clear study of the subject, e.g., purification of a substance, fractional distillation, molecular weight, molecular and empirical formulae.

Amongst the subject-matter which the book treats of in greater or less detail, mention may be made of the petroleum and paraffin industry, properties of halogen compounds; alcohols and their structure; the manufacture of beers, wines and spirits; the fatty acids, stearine candles, olefines, glycerine;

carbohydrates; oxalic, tartaric and citric acids, rotatory polarisation; the proteins; coal tar and its products, viz. phenols, benzoic acid, camphor, and indigo, and artificial dyes.

The printing and the get-up of the book are very fair and the presentment of matter is as simple and attractive as the nature of the subject will allow. We should like to recommend that it will be a useful guide to persons desirous of acquiring an elementary knowledge of *Organic Chemistry*.

PROBLEM PAPERS IN ARITHMETIC FOR PREPARATORY SCHOOLS, BY T. COOPER SMITH, M.A. GENERAL EDITOR: WILLIAM P. MILNE, M.A., D.Sc. (G. BELL AND SONS.) 1s. 6d.

This small volume has been written with a view to aid mathematical masters of preparatory classes. The book contains 5 sets of papers divided into 20 parts of 5 questions each, and is specially useful for teachers who prepare boys for the Junior Examinations of the English Universities. It is not however quite adapted for use in all the preparatory classes of the Indian schools, as intended by the author; but an intelligent Indian teacher will find abundant examples in Arithmetic for the 4th class of the preparatory schools, and for all the three forms of the Lower Secondary Department. There are also some portions suited for the 4th Form of the Upper School such as the advanced questions on square and cubic measure requiring a knowledge of Pythagoras' Theorem (e.g. Paper E—18, i) and of Involution and Evolution. But the merit of the book chiefly lies in many suitable examples that may be intelligently solved graphically such as those on time and distance, &c. (e.g. Paper C—3, (i), 5(i), 7 (i), 9 (i), D 1 (i) &c. Some of the papers especially in the latter part contain a good number of problems that may be easily solved by equations. There are also to be found many typical examples on the four simple rules that may serve for graphical illustration in the Lower School.

We may also suggest that some easy problems requiring a knowledge of metric system and decimal fraction, and of Indian coins, may be introduced then and there. On the whole we are inclined to think that the book will be useful for the middle forms. It will also be a valuable addition to the Teachers' library of the school.

'THE ATMOSPHERE,' BY A. J. BERRY, M.A. (UNIVERSITY PRESS, CAMBRIDGE). 1s. net.

This handy book contains a brief and clear account of the discovery of the constituents of the atmosphere and of their properties.

The first chapter deals with the conception of the composition and properties of air in early times and the several stages that led to the formation of correct notions thereon. The principle of *horror vacui* (i.e., Nature's abhorrence of a vacuum), by which the ancient philosophers including Galileo explained the phenomenon of *suction* in syringes and pumps, and which remained current till Torricelli discovered *atmospheric pressure*; the valuable services rendered by Torricelli, Pascal, Guericke, Robert Boyle, Mariotte and Charles, in the development of the study of 'air pressure' and the construction of appliances for its measurement, all these are described clearly enough to be easily grasped by the eager learner. Chapters II and III give an account of the 'Phlogistic Theory' of combustion, and the decline and fall thereof, and of the contributions of eminent scientists like Priestley, Cavendish, Dalton, Lavoisier and Avogadro, which led to a new era that might be termed the beginning of *Modern Chemistry*, based on *atomic theory*. Modern views on *Combustion* are treated of in chapter V.

The principal constituents of the atmosphere, their important properties and the part they play in the economy of Nature are mentioned in chapter IV, while chapter VI is devoted to the constancy of 'atmospheric composition.' A brief explanation of the 'kinetic theory' of gases and J. Stoney's views regarding the escape of gases from planetary atmospheres are found in chapter VII and the next one deals with the formation of *liquid air* and its properties. In chapter IX is traced a brief account of the endeavours of great scientists such as Raleigh, Ramsay, and Dr. Travers in discovering the existence in small quantities of the gases, Helium, Neon, Argon, Krypton and Xenon. Chapter X treats of the 'Radio-activity of the atmosphere,' a subject which is connected with many startling modern discoveries in Science and which offers an almost unlimited scope to future scientific exploration, while chapter XI closes the book with a study of 'primitive atmosphere.'

This is an excellent hand-book and will be of immense use to an ardent learner in providing himself with a clear and simple account of the growth of the subject from the earliest times down to the present day. Dry as the details must be

to any but the most earnest students of science, they have been presented in an interesting and inviting manner and the author is to be congratulated on his eminent success in the task set before himself. Diagrams, though few, are *neatly* drawn and the portraits of some of the greatest workers in the scientific field covered by the book, (Robert Boyle, Joseph Priestley and Joseph Black) add to the usefulness of the book. The printing and get-up of the book are excellent, as is characteristic of the publications of the University Tutorial Press. We can recommend the treatise as a valuable guide for the study of the *Atmosphere*.

BELL'S ENGLISH TEXTS: ENGLISH ELEGIACS; SELECTIONS FROM CHAUCER; POEMS BY JOHN MILTON; POEMS BY LORD BYRON; MACAULAY'S HISTORY OF ENGLAND, CHAPTER III; PLUTARCH'S LIVES OF CESAR AND CICERO. (GEORGE BELL AND SONS.) 6d. each.

The general study of literature is facilitated by handy editions of masterpieces, like those which Messrs. George Bell and Sons have now issued. They are just what editions of plain-texts ought to be—cheap, neatly printed and neatly got-up, and the selection of pieces made with taste and discrimination. A collection of English Elegiacs has been a long-felt want and it is supplied by one of the volumes in the Series, which has *Lucidas*, *Adonais* and *In Memoriam*. The addition of Gray's *Elegy in a Country Churchyard* and Matthew Arnold's *Thyrsis* could have completed the list of the chief elegiac masterpieces in the language, without increasing the size of the book materially and we rather regret their omission. We may also observe there might have been some general remarks on Elegiac Poetry in the Introduction. The Selections from Chaucer are eminently satisfactory, comprising as they do the *Prologue*, the *Knight's Tale* and the Prologue to the *Legend of Good Women*. One may however venture to ask whether the humour of Chaucer is adequately represented in this selection and whether it might not have been better to include a piece like the *Nonne Priestes Tale*. We are also sorry to notice the omission of a glossary at the end of the book, which would have been necessary even for those who have made some progress in the study of Chaucer, much more so to the general reader. Nobody can ask for a better representation of the poetry of Milton, than the pieces included in this volume, the first two books of *Paradise Lost*, *L'Allegro*, *Il Penseroso*, *Lucidas*, *Comus*, *The Morning of Christ's Nativity* and some of the best

Sonnets. We have nothing to say against the choice of pieces from Byron, except that *Childs Harold* need not have taken up 91 pages, out of the 120 in the book.

Turning to the two volumes devoted to prose, we are glad to see the publishers have begun with Plutarch and Macaulay. There can be no intellectual food more wholesome and ennobling to the young student, than the pages of Plutarch, and the lives of Cæsar and Cicero are the best that could have been selected in the circumstances. If they do not illustrate Plutarch's desire to see some parallelism in the lives of certain heroes of Greece and Rome, they represent two careers, widely different in aim and action, which also seem to supplement each other. The third chapter of Macaulay's *History of England* is particularly useful as a corrective to a characteristic weakness of the Indian mind, the indiscriminate idealisation of the past and an unwillingness to recognise the advancement of recent centuries. To the student of History it is of course invaluable as giving the most comprehensive and picturesque account of England in the times of James II. We have great pleasure in recommending the books for general study in our schools and colleges.

BELL'S POETRY BOOKS, PARTS I—VII. (GEORGE BELL & SONS). 3d. each.

Messrs. Bell & Sons deserve to be congratulated on this excellent Series of Poetry Books. The selections have been made with a fine appreciation of the essentials of poetry and are arranged in the books graded according to their difficulty. It is a good thing to have the contents of all the parts in each part, so that a comprehensive idea of the entire range of selections is afforded by merely glancing at these pages. It is probably not possible to get selections from standard authors, for the elementary books in the Series, but the later volumes need not have included extracts from writers who are not even third-rate poets. The choice need not have extended to E. M. Holden, A. A. Proctor, Norman Gale, H. C. Beaching, Mrs. Norton, Samuel Lover, Rev. Neale, Edward Thring, Charles Dibdin, Lee-Hamilton, Gilbert Thomas—all of whom figure in Bks. V, VI, VII. Literary taste cannot be too aristocratic in such matters.

HOPE OF THE VERNACULARS, BY A. R. RAJARAJA VARMA, M.A., M.R.A.S. (KAMALALAYA PRINTING WORKS, TRIVANDRUM).

This is a speech by Professor Rajaraja Varma of Trivandrum in defence of the Vernaculars. The

Professor regrets the non-inclusion of the vernaculars among the compulsory subjects of the University curriculum. We are not sure if the introduction of reciprocal translation in the place of vernacular composition, which is now compulsory in the Intermediate classes, will result in any great improvement of the vernaculars. The suggestion is however worthy of serious consideration as it emanates from a scholar of eminence.

THE DOSNIAN UNIVERSITY OF THE WORLD, BY D. D. VACHHA, B.A. (FORT PRINTING PRESS, BOMBAY). 8 As.

This is a humorous skit on attempts to make University education as comprehensive as possible. Here is a group of suggested subjects: "Industrial Efficiency, English Lit. Texts, Human Economics, Religion of God," and so on. We fail to see any necessity for this kind of grotesque caricature, for we have not heard of any misdirected efforts at over-stocking University curricula in such objectionable ways. The humour is monotonous and wearisome and consists in the mere enumeration of the most varied subjects in groups.

OLD TIME STORIES & OLD WORLD CUSTOMS, I—III, BY GERTRUDE CATON. (MACMILLAN & CO.) 6d. each.

Old Time Stories and Old World Customs are a series of very entertaining and instructive books. The tales are narrated in the most charming manner possible, and throw considerable light not only on the History and Geography, but also on the religion and people of ancient Assyria, Egypt, Palestine, Greece and Rome. Even advanced readers will find it interesting to spend an hour or two with them. The authoress has taken great pains to make herself understood by children and her gift for story-telling is of every high order.

ST. ALOYSIUS' COLLEGE, MANGALORE.—We have received the annual report and prize list for 1912-13, of the St. Aloysius' College, Mangalore. The year constitutes a record in point of strength as the students number 1,213 as against 1,128 of the previous year. Some additions have been made to the Science Laboratories, the most important of which is the accomplishment of the Electric installation. The staff of the school as seen in the report is maintained in an excellent condition. The College possesses two scholarships given by Mr. Piedate and Mr. Jos. Junghenu. The College Library is maintained very efficiently and it contains 4,158 books.

THE UNIVERSITIES.

MADRAS UNIVERSITY.

Special Mathematical Lectures.

A course of University lectures, about twenty in number, will be delivered by Mr. E. H. Neville, Fellow of Trinity College, Cambridge, beginning about January 5, 1914, and lasting about five weeks. For the benefit of those who can attend the lectures for only one week, the lecturer will deliver in the first week, two lectures on "The Nature of Real and Complex Numbers" and two lectures complete in themselves on "Differential Geometry." The remainder of the course will be taken up by a more detailed treatment of this latter subject. The subject of the main course is "Moving Axes and Differential Geometry," and only such persons are likely to benefit by it as have read up to University M. A. Standard in Mathematics. While the lecturer will employ an original method, those who wish to attend are recommended to consult (after one of the usual text-books) either Darboux's *Theorie generale des Surfaces* or Eisenhart's *Differential Geometry*. Those who wish to attend these lectures should apply at once to the Registrar, University of Madras, for tickets of admission, stating whether they wish to attend during first week only or during the whole course. Those who are not Masters of Arts of this University are requested to inform the undersigned of their standard of Mathematical attainments.

Elections.

Elections for the two vacancies created by the resignation and retirement of Messrs. C. A. Smith and A. B. Strange among the ordinary Fellows elected by the Faculties, and for two vacancies created by the retirement of the Hon'ble Mr. V. S. Srinivasan and Mr. P. Lakshminarasu, among the ordinary Fellows elected by Registered Graduates, will be held on Saturday, the 10th January 1914, between 1 and 3 p. m.

Change of Examination Dates.

It is notified by Mr. Francis Dewsbury, Registrar of the University, that the follow-

ing examinations which should be held commencing on Monday, the 6th April 1914, according to the Regulations will be held instead commencing on Monday, the 30th March 1914:—(1) The B. A. (Honours) degree Examination.—Part II; (2) The M. A. degree Examination; (3) 1st L. M. and S., 1st M. B. and B. S., and 2nd M. B. and B. S. Examinations; (4) F. E. and B. E. degree Examinations.

The following examinations which should be held commencing on Wednesday, the 15th April 1914, will be held instead commencing on Monday, the 6th April 1914.—2nd L. M. and S., Final L. M. and S., 3rd M. B. and B. S. and Final M. B. and B. S. degree Examinations.

It is notified that another practical examination for the L. T. Degree under the old Regulations will be held on Wednesday, the 15th April 1914. Applications for admission to the Examination from candidates who have passed the theoretical test but have yet to complete the degree should reach the Registrar in the form prescribed not later than the 1st February preceding. No candidate shall be admitted to the examination unless he has previously paid a fee of Rs. 20.

CALCUTTA UNIVERSITY.

Address to His Excellency the Viceroy.

At a special Convocation of Senate of the Calcutta University in the Throne Room of Government House on the 26th inst., the Vice-Chancellor read out an address to the Viceroy as Chancellor of the University and presented it with a silver casket. In the course of his address the Vice-Chancellor said the University would have to appeal for financial assistance to the Government for the development of the work of the University especially in regard to the higher post-graduate study. He then presented the following to His Excellency for the preferment of honorary degrees.

Professor Vinogradoff for LL.D., Professor Jacobi for D. Litt., Professor Young for D.Sc., Doctor Rashbehary Ghose for Ph. D., Mr. Rabindranath Tagore for D. Litt., Mr. Haynes for D.Sc.

His Excellency the Viceroy in the course of his reply spoke as follows: My Government has already received proposals from the University of a very extensive character and we are anxiously considering what in the light of experience here and elsewhere are the lines on which it will be most profitable to advance when the general policy has been laid down in broad principles in the Government of India Resolutions of the 21st February last. The application of broad principles to practical conditions is a matter calling for much knowledge, experience and patient investigation. Especially in a country so circumstanced as India, I have no doubt, however, that in the fulness of time our University, thanks to the gifts of generous donors like Sir T. Palit and Dr. Rashbehary Ghose and the assistance of Government will become a centre of far radiating influence for the higher education of the territories within its academic jurisdiction. I wish you, Senate of the Calcutta University, every good wish and I can assure you that I and my Government are not less interested than yourselves, in all that pertains to the progress of education in the highest sense of that term, which includes the formation of character, the cultivation of mind and the dissemination of an ever-widening influence of engagement.

THE PUNJAB UNIVERSITY.

Convocation.

The annual Convocation of the Punjab University was held on the 23rd instant, His Honour the Lieutenant-Governor as Chancellor, presiding. An address was delivered by Dr. Ewing, Vice-Chancellor and it took the shape of a moral discourse laying emphasis on the kind of character that University education was expected to develop. In view of the social, intellectual and moral requirements of the country, Dr. Ewing said: "Personal character, clear, strong, definite and true is a quality the absence of which in an individual to whom is assigned the position of leadership or who arrogates, to himself such a position, no community can afford to excuse." Referring to the growth of commercial activity in the country Dr. Ewing said: "It is the prominent feature of the

times," he continued "I take it that most of us do not set a high value upon honesty only because it is the best policy. Yet we are not thereby precluded from recognising the expediency, utility and necessity of high moral principles throughout the entire domain of trade and commerce." Concluding Dr. Ewing said "Unselfish patriotic service performed for the welfare of those whose opportunities and privileges have been fewer than yours, works persistently done free from light of self-advertisement and rendered effective by tact and skill of which your training has made you masters, it is upon these that your equipment and environment summon you to enter."

ALLAHABAD UNIVERSITY.

Proposed New Chairs.

The Convocation of the Allahabad University took place on the 15th ultimo. The Hon'ble Dr. Sunderlal, C. I. E., Vice-Chancellor, presided and delivered the Convocation Address which has been published in this number. The Vice-Chancellor referred to the establishment of the Faculty of Engineering and the non-extension of help to the Thomason College, Roorkee. He announces that the Government had given their approval to the establishment of University Chairs in Economics and Modern History and expressed their willingness to establish a third Chair for three years. The Address concluded with an earnest appeal for higher studies and research at the Universities.

Elections.

At the University election held on the 22nd ultimo, Pandit Gokaran Nath Misra, Pandit Iqbal Narain Gurtu, Pandit Manoharlal Zatschi and Professor Chandi Prasad have been elected Fellows of the Allahabad University by the Registered Graduates. We congratulate them on their well-merited election.

Indian Educational Notes.

MADRAS.

H. E. THE GOVERNOR'S VISIT TO SCHOOLS.

The Raja's College, Parlakimedi.—At this College His Excellency was received by the Zemindar and Mr. A. E. Cotton and was conducted round the buildings by Mr. E. Winckler, Principal.

Before leaving the College, His Excellency made the following remarks in the Visitors' Book:—"This College may I trust long continue to be a source of ever-widening usefulness and good influence and of pride to Parlakimedi. It is well managed and directed, well equipped with buildings and with play and recreation grounds, and every care will no doubt be taken to keep it abreast of the advancing requirements of education."

His Excellency then performed the interesting ceremony of laying the foundation-stone of the Morrison Extension of the Raja's College and declared the foundation-stone well and truly laid. The Zemindar then garlanded His Excellency and cheers were called for him which were heartily responded to. Cheers were then called for and answered lustily for the Zemindar.

Uriya Girls' School, Parlakimedi.—Leaving the College, His Excellency and party motored to the Uriya Girls' School where they were received by Rao Bahadur B. S. V. Sarma, Estate Manager. The girls sang Uriya songs composed for the occasion, and entertained His Excellency and party with Kolattam. Before leaving this school the Governor entered the following remarks in the Visitors' Book:—"It has been a pleasure to visit this school and to know that the necessary extensions of buildings and play-grounds are approved. The school seems well managed and shows every sign of vigour, a very attractive and promising school."

Telugu Girls' School, Parlakimedi.—His Excellency and party visited the Telugu Girls' School where, also, His Excellency the Governor was received by Rao Bahadur B. S. V. Sarma.

His Excellency entered the following remarks in the Visitors' Book:—"This is an excellent school doing good work which is evidently much appreciated and I wish it success."

Mrs. A. V. N. College, Vizagapatam.—At this institution His Excellency was received by the trustees Sri A. V. Jagga Rao and Mr. P. T. Sreenivasa Iyengar and the other members of the Committee, viz., Messrs L. T. Harris, A. L. Hannay, and C. Ransford. His Excellency saw the various classes at work. The present strength of the College department is 192 and of School department 587. The estimated fee income of the year is Rs. 22,800. His Excellency visited the Science laboratory where students were engaged in conducting various sorts of experiments. His Excellency then went upstairs

and saw the library as well as the drawing class at work. More than an hour was spent in inspecting this interesting institution.

Maharaja's College, Vizianagaram.—At this College, His Excellency was received by the Raja and Rao Bahadur K. Ramanuja Chariar, Principal. The College has an ancient origin and has been patronised liberally by a long succession of Maharajahs and Rajahs of Vizianagaram.

At the conclusion of the inspection His Excellency was conducted to the Durell Library where had assembled the Principal and students of the Sanskrit College. Some students recited a few verses from the Vedas, a translation of which was furnished to His Excellency. An elderly student then recited a Sanskrit verse composed for the occasion in praise of His Excellency. Principal Ramanuja Chariar then garlanded Lord Pentland, and other members composing His Excellency's party.

Government Girls' School, Vizianagaram.—At this School, His Excellency was received by Mr. S. Kameswara Rao, Sub-Assistant Inspector of Schools, Ganjam and Vizagapatam Girls' Range.

The following remarks were made by His Excellency in the Visitors' Book of the School:—"It has given me much pleasure to pay a visit to this school and to find such good attendance and singing."

Onslow Institution, Ganjam Dt.—At this institution, His Excellency was received by the Rev. C. E. Sell, Chaplain of Waltair and Mr. C. Ransford, Inspector of Schools. This is a very old institution established as long ago as 1854, Mr. A. Onslow, then Collector of Ganjam, having bequeathed by deed of trust, a house which was then the Collector's residence and some landed property for the establishment of a school. The Lord Bishop of Madras and the Archdeacon of Madras were appointed trustees. This was the first Anglo-Vernacular School in this district.

Government Orders.—The Government approve generally the proposal of the Municipal Council of Tellichery (1) to extend and improve the Brennen College buildings and (2) to construct a hostel with warden's quarters at an approximate aggregate cost of Rs. 40,000 and will be prepared to make a grant not exceeding this amount from the Imperial non-recurring grant of 49 lakhs for education.

Further orders regarding the preparation of detailed plans and estimates and the execution of the work will issue in the Public Works Department. The requirements of the Municipal Council in regard to the buildings should be communicated to that department through the Director of Public Instruction.

On completion the buildings will remain the property of Government, but will be lent to the Municipal Council for use in connection with the college.

The Government are pleased to sanction a grant not exceeding one half of the actual expenditure nor Rs. 7,925 towards the cost of certain additions to St. Joseph's European Convent Girls High School, Calicut.

The Government sanction the proposals of the Director of Public Instruction to distribute a subsidy of Rs. 94,325 to the local boards and municipalities shown in the list submitted by him, for improving the scale of salaries of the general staff employed in the secondary schools and colleges under their maintenance. The amount will be met from the special Imperial grant of 23 lakhs provided in the civil budget estimate for 1913-14. The Accountant-General will be requested to disburse the subsidies to the local bodies concerned.

The district boards and municipal councils will submit to Government in the Local and Municipal Department at an early date proposals for the revision of the scale of salaries of the staff.

The Director's proposal to distribute Rs. 9,100 for improving the scale of salaries of the pandits and other language teachers employed in the secondary schools and colleges under local boards and municipal councils will be separately considered.

The Government are pleased to sanction a grant not exceeding one half of the actual expenditure nor Rs. 3,200 towards the cost of construction of a drill hall in the London Mission girls' high school, Vepery, Madras.

The Government approve the proposal of the Municipal Council of Kurnool to acquire the site with the building thereon adjoining the Municipal High School, Kurnool, for the purposes of the school. The cost of the acquisition will be met from the non-recurring portion of the Imperial grant of 23 lakhs, provided in the Civil Budget Estimate for 1913-14 and when acquired the site and building will remain the property of Government but will be lent to the Municipal Council for use in connection with the school.

Further orders regarding the acquisition of the property will issue in the Public Works Department.

The Government are pleased to sanction a grant not exceeding one half of the actual expenditure nor Rs. 3,150 towards the cost of certain extensions to the building recently purchased for the Brecks' Memorial School, Ostacammund, subject to the condition that the provisions of articles 56, 59, 60 and 62 of the Code of Regulations for European Schools are complied with.

Under section 21, subsection (4) of the Indian Universities Act, 1904, the Governor in Council is pleased to sanction the further affiliation to the

University of Madras of the American College, Madura, in Group (ii-A)—Physical Science—of the B.A. Degree courses.

The Secondary School Leaving certificate issued by the Mysore State will be considered equivalent to the Secondary School Leaving certificate granted by this Government.

The Government sanction a grant of Rs. 17,000 to the Municipal Council of Palghat towards the cost of the installation of a gas and electricity plant in the Victoria College. This amount will be met from the Imperial non-recurring grant of 49 lakhs and will be paid in 1914-15. The work can be put in hand at once but need not be paid for till that year.

The Government are pleased, as a special case, to sanction a grant of Rs. 10,039 being one-third of the estimated value (Rs. 30,118) of the ground floor of the Islamiah Secondary School at Vaniyambadi and another grant not exceeding one-half of the actual expenditure nor Rs. 18,500 towards the cost of the first and second storeys proposed to be added thereto.

The Government are pleased to sanction a grant not exceeding one-half of the actual expenditure nor Rs. 7,350 towards the cost of additions and improvements to the building occupied by the Town High School, Guntur.

The Government are pleased to sanction a grant not exceeding two-thirds of the actual expenditure nor Rs. 28,266 towards the cost of construction of a building for the primary school of the Presentation Convent Middle School, Vepery, Madras.

The Government sanction the proposal of the Director of Public Instruction to hold the examination for teachers' certificates under the Code of Regulations for European Schools in the month of December with effect from this year.

The Madras Teachers' Guild—A general meeting of the Madras Teachers' Guild was held in the Hindu High School, Triplicane, with the Hon'ble Mr. V. Srinivasa Sastriar in the chair. Mr. K. B. Ramanadhan delivered an interesting lecture on "What Ails the Teacher." Mr. C. K. Krishna Iyengar next opened a discussion on the History of Education in the L. T. curriculum. He said that after a hot discussion in the recent Senate meeting it was considered to remove the subject "History of Education" from the L. T. course, and the Government approved the recommendation of the Senate. They had removed the subject very hastily. The scheme as now suggested was certainly defective, and could not in any way improve the method of education.

Mr. Gnanamuthu said that no person could be a licentiated teacher without some knowledge of the history of education and as such it must be included in the curriculum. He also suggested that the opener might bring out a resolution on the subject. Several other members took part in the debate and they all agreed with the opener.

Mr. C. K. Krishna Iyengar then moved the following resolution:—"That this meeting of the Madras Teachers' Guild regrets the omission of the history of education from the L. T. course of the Madras University and requests that early steps be taken by the Senate to reintroduce the same."

The resolution was carried unanimously after being duly seconded. With a vote of thanks to the Chairman the meeting terminated.

Nadar Secondary School, Poraiyar.—Owing to the sincere endeavours of M.R. Ry. S. K. Srinivasachariar Avl., B.A., L.T., the Headmaster of the N. S. S. Poraiyar, the School anniversary came, for the first time, to be grandly performed this year.

On Saturday, the 15th ultimo, 'sports' was held in the Maidhan at Tranquebar. All the citizens took an active part and there was a large number of spectators. Mr. Manning and a few other local officials acted as judges.

On Monday, the 17th ultimo, M.R. Ry. Rao Sahib, S. N. V. Rajachar Avl., B.A., Deputy Collector, Mayavaram, presided over the interesting ceremony of the distribution of prizes. He first unveiled the paintings of the late Mr. Thavasumuthu Nadar, the founder of the institution and of Mr. Neiler, the first manager of the school, and then gave away the prizes.

M. P. Doraisamy Aiyer, Esq., Journalist and Secretary of the Tanjore District Conference, gave a very thrilling speech which aimed at impressing the grand maxim, "Honour the king." The President in the course of his impressive speech pointed out the importance of punctuality, advised the prize-winners to keep up their reputation and exhorted the other students to strive to win such prizes. He further sincerely wished that, with the benevolent help of M.R. Ry. T. Gurusamy Nadar Avl., the proprietor of the institution, the school may soon rise to a college.

With the vote of thanks to the chair by the Manager, Mr. K. Samy Iyer, the proceedings came to a close.

Then select scenes from Shakespeare's *King John* and from the Tamil *Bhoja Charitram* came to be successfully acted on the stage.

"Sree Gnanodaya Samajam," Nellore.—The first anniversary of the "Sree Gnanodaya Samajam," Nellore, was celebrated on the 2nd instant with Rao Bahadur T. Raghavayya, Esq., B.A., District Collector, Nellore, in the chair.

The meeting began with the introductory remarks of the Chairman and the prayer in Telugu verses specially composed for the occasion. The Secretary of the Samajam then read the Annual Report for the year ending August 1913.

Mr. S. Bhuvaram Rao Pantulu Garu, B.A., L.T., Sub-Assistant Inspector of Schools, Kavali, addressed the audience on 'self-help.' The speech was characterised with eloquence and impressiveness.

The Chairman in his concluding speech encouraged the members of the Association in an able speech. Then the Chairman, the Lecturer and the President of the Samajam were garlanded in the midst of loud applause. Nose-gays of flowers were then distributed among the gentlemen present.

The President Mr. K. Venkatramaiya Garu, B.A., L.T. gave a hearty vote of thanks to the Chairman. Thanks were also proposed to Mr. S. Bhuvaram Rao Pantulu, B.A., L.T., the lecturer, and Messrs. M. Narasimachariar Avl., B.A., B.L. and A. Santana Rama Iyengar Avl., B.A., L.T.

The meeting came to a close with the singing of the 'National Anthem.'

The Kumbakonam College.—Under an invitation issued by Mr. Yates, the Principal, the elite of the town assembled to witness the opening of the additional buildings just completed within the college premises, the new extension being intended to accommodate partly the science classes and laboratory and partly the English lecture rooms. Mr. R. B. Wood, I.C.S., the Collector, who was to perform the opening ceremony arrived with Mrs. Wood accompanying him. Mr. Yates spoke of the Government grants for the works, appealed to the public to endow scholarships such as the late Mr. K. Ranganadha Row and asked Mr. Wood to formally open the new rooms filled up with scientific apparatus and other equipment to begin the lessons with. Mr. Yates then handed over the key to Mr. Wood. Mr. Wood rose amidst cheers and delivered a rather long speech beginning with his thanking Mr. Yates for his kind invitation and offering in the course of his address advice to the students of science for whom the new buildings had been intended. Mr. Wood congratulated Mr. Yates on his having succeeded in getting grants from the Government which was no easy task at all. He impressed on the students the need of clear thinking so essential for scientific studies and no less for success in life. He also complimented the College for the exceedingly good physical environments it possessed in its beautiful meadows and thus making the whole premises look like the Cambridge College, and it had rightly earned that name in South India. He added that the College would continue to be the best in the Presidency except the Presidency College at Madras. He then left for the rooms and opened them with the key amidst loud cheers. With the usual distribution of flowers and *pan supari* the gathering broke up.

B. G. M. School, Palghat.—The opening ceremony of the new Basel Mission High School building, Palghat, took place on Saturday, the 29th ultimo, at 4-30 p.m. Among those present were Rev. W. Muller, Principal of the B. G. M. College, Calicut, Rev. P. Sengle of the Theological Training School, Cannanore, A. H. Davey, Esq., of the Victoria College, and Mr. R. S. Sekhara Menon, A.M., Municipal Chairman. The President began the proceedings with a prayer. Some Malayalam slokas which were composed by the Pandits of the school were recited by a student of the same school. Then the Manager gave a brief history of the school. After lectures by Mr. A. H. Davey, Mr. R. Sekhara Menon, and Rev. P. Sengle, the proceedings came to a close.

St. Joseph's College, Trichinopoly.—The distribution of prizes to the successful students of the St. Joseph's College, Trichinopoly, came off at the College Hall, recently. Mr. L. E. Buckley, I.C.S., Collector, presiding and Mrs. Buckley distributing the prizes. The Rev. Mr. Bertram, S. J., Principal of the College, read the Annual Report for the year 1912-13. After the reading of the Report Mrs. Buckley distributed the prizes and Mr. Buckley then made a short speech congratulating the Principal on the good work done, as evinced by the Report and the successful students who had won prizes. The usual vote of thanks to the chair and the singing of the National Anthem by the College Band brought the meeting to a close.

S. P. G. High School, Vepery.—The seventy-fifth anniversary and distribution of prizes to the pupils of St. Paul's High School, S. P. G., Vepery, Madras, took place in the Madras Museum Theatre, with H. E. Lord Pentland in the chair. The function was witnessed by a very large gathering of ladies and gentlemen, both European and Indian, the bulk of those present being the parents and relations of the pupils. There were interesting items in the programme to enliven the meeting, and the proceedings began with the singing of the hymn "St. George," and then prayer. A young pupil recited "The Torch of Life." The Rev. H. J. Edmonds, Principal, then read the report of the school for the year 1912-13. His Excellency then distributed prizes consisting of books to the successful pupils and there were special prizes also distributed for carpentry work in the various forms of the school. There was another special prize called "Mr. Pott's Prize" awarded to the pupil who had done most for the honour of the school during the past year with special reference to work, games, and general conduct. The Rev. Canon Smith proposed a vote of thanks to H. E. the Governor for presiding at the meeting and for distributing the prizes. The proceedings terminated with the singing of the National Anthem and three cheers for His Excellency.

The Harris High School.—A very interesting gathering took place in the grounds of the school at Peter's Road, Royapettah. The object was to celebrate the fifty-seventh anniversary of the foundation of this school by Lord Harris, a former Governor of the Presidency, and to distribute the prizes awarded after the annual examinations. The chair was taken by Khan Bahadur M. Sufder Husain Khan Sahib Bahadur, now a retired Deputy Collector, but formerly a student in the Harris School. The proceedings commenced with drill exercises about 30 boys, averaging possibly 12 years of age, taking part in it. The Report was next read by the Rev. M. G. Goldsmith, the manager of the school. The Chairman then distributed the prizes and gave the students sound words of advice. Rev. M. G. Goldsmith proposed a vote of thanks to the Chairman for attending, and for the kind words he had expressed, as well as for the noble example he had displayed, to the honour of his old school. The vote of thanks was passed with acclamation. Three cheers were called for in his honour. He was garlanded, and conducted to his carriage, and the proceedings terminated.

Education in Ongole.—The third anniversary of the Teachers' Associations in the Ongole Range was held in the Jaganmitra Hall recently under the presidency of Mr. M. Kameswara Rao Pantulu, B.A., Inspector of Schools, 2nd Circle. There were present at the meeting about 300 teachers and the élite of the town. At 7-30 A.M. articles prepared by the teachers and pupils of the several schools in the Range were exhibited. The best of the exhibits were selected by Mr. C. M. Sreenivasachary, Assistant Inspector of Schools, Guntur District, Mr. K. Ramakrishna Rao Pantulu Garu, B.A., and Mr. N. Venkatramangam Sastry, Pleaders. At 8-30 A.M. Mr. S. Krishnamachariar, B.A., President of the Association, instructed the members of the Association on the preparation of oxygen and carbonic acid gases.

The public meeting commenced at 4-30 p.m. After the usual prayer, the Secretary of the Ongole Teachers' Association, read the Annual Report of the work of all Associations in the Ongole Range. Mr. K. Ramakrishna Rao Pantulu Garu, B.A., lectured to the audience on "Character and Information." The meeting closed with the distribution of prizes and a vote of thanks to the President lecturer and the gentry assembled.

South India Teachers' Union, Madras.—The General Secretary of the South India Teachers' Union writes that he addressed a letter on the 29th ultimo to the Private Secretary to His Excellency the Viceroy, requesting him to submit to His Excellency the prayer of the Union for the start of a Provident Fund and for old age pension for teachers in non-pensionable service. The following is the reply received from the Department of Education:—"With reference to your letter, dated 29th

CALCUTTA.

26th November 1913, addressed to the Private Secretary to His Excellency the Viceroy, I am desired to say that a scheme for some provision for the old age of teachers not in pensionable service is under consideration by the Government of India."

Zenana High School, Hyderabad.—The annual prize distribution of this institution took place recently. Mrs. Pinhey presided and gave away the prizes. A delightful programme was gone through. Miss E. A. Evans, Lady Principal, read the School Report from which we learn that there has been a steady increase in the number of pupils and the strength is 122 against 93 of last year. Two pupils appeared for the High School Leaving Certificate examination last April and one did very well. She secured a good certificate and is continuing her studies privately with a view to taking her degree in the Madras University. Two appeared for the Middle School Examination and both passed. A pupil of the School, Jeffri Begum, one who has been in school since her childhood and who took her H. S. L. certificate in 1911 has this year been appointed Secretary to the School, a post which she fills very well. H. H. the Nizam's Government have sanctioned Rs. 39,000 for enlarging the school building near Hussain Sakhar garden.

Darbar Day Celebration.—All the schools in the Presidency were closed on the 12th instant in honour of the Anniversary of the Darbar Day and decorated with Union Jacks and other flags and some of them gave treats to their children. Inter-school sports were held in many places. They were all well attended by teachers and pupils who keenly competed for the prizes offered to them towards the end of the sports. Prizes were given to the winners in the sports, which was followed by an address, on loyalty and the importance of the celebration of the day. After the address the National Anthem was sung and cheers were called for Their Imperial Majesties.

Pupil-Teachers' Association, Calicut.—We have received the annual report of the Association which is attached to the Government Training School, Calicut. All the pupil-teachers in the various grades of the Government Training School, Calicut, without any exception are members of the Association. All the meetings have been very well attended. Twenty-two meetings were conducted during the year 1913 of which 18 were ordinary meetings and 4 were for the transaction of business connected with the Association. The following papers and magazines are submitted for by the Association:—"The Madras Mail" (Daily); "The West Coast Reformer"; "The Indian Review"; "The Educational Review"; "The Malayala Manorama"; "Kerala Patrika"; "Bhashaposhini." The needs of the Association are met by subscriptions collected at a graduated rate from the members of the Association.

Bowbazar High School.—The annual prize-distribution of the Bow Bazar High School came off recently at the school premises under the presidency of the Hon'ble Mr. Justice E. P. Chapman, M.A., I.C.S. The school building was tastefully decorated with green foliages and flags. There was a large attendance of guardians, educationists and élites of Calcutta. The Headmaster Babu Rajendra Nath Ghosh, B.A., read the annual report of the school. Then followed the recitations which were highly appreciated by the audience. Then the President distributed the "Chandra Medal" to Master S. Mukerjee who stood first among the successful students of this school in the aggregate and in Sanskrit, the K. L. Ghosh Medal to Master N. Mukerji who stood first in English among the successful students of this School, at the Matriculation examination of 1912; and 46 prizes consisting of valuable and useful books to 46 meritorious boys of the school. Then the President congratulated the school committee on their successful management and the teaching staff on the uniformly good University results.

Chakdaha R. L. Academy.—The prize-distribution ceremony of the Chakdaha Ram Lal Academy recently took place in the compound of the school. The school building wore a gay appearance. Mr. S. C. Mukherjee, I.C.S., the District Magistrate of Nadia, occupied the chair. There was a large attendance of ladies and gentlemen. The Assistant Secretary read the annual report which showed how the school from a small beginning has developed into a first class English School and referred to the splendid gift of Rs. 4,000 of Babu Ram Lal Singh, a wealthy resident of the locality. Babu Janaki Nath Bhattacharjee, M.A., Professor, Ripon College, addressed the meeting. He congratulated the Managing Committee on the success that has attended their labours and dwelt on the dignity of the schoolmaster. Miss B. M. Bose then addressed the meeting. Her speech was very highly appreciated and she was warmly received while she spoke. Babu Satish Kumar Banerjee, M.A., Headmaster, Mitra Institution, Calcutta and Babu Brojendra Nath Banerjee then addressed the students, the latter referring to the splendid gift of Babu Ram Lal Singh. The Chairman in a nice little speech congratulated the Managing Committee on their solid work and wished continued good luck to the school.

The Indian Science Congress.—A provisional programme has now been drawn up for the Indian Science Congress which is to be held on January, 15, 16, and 17, 1914, in the rooms of the Asiatic Society of Bengal, 1, Park Street.

H. E. Lord Carmichael is the patron, and the local Committee is as follows:—Dr. N. Anandale, Mr. J. Coggin Brown, Dr. P. Bruhl, Lt.-Col. S. G. Burrard, F. R. S., Mr. C. C. Calder, Dr. W. A. K.

Christie, Dr. E. P. Harrison, Mr. H. H. Hayden, Prof. P. S. MacMahon, Hon. Justice Sir Ashutosh Mukherji, Sir R. N. Mukherjee, Captain C. L. Peart, Prof. J. L. Simonsen, Hon. Secretary and Treasurer, Mr. D. Hooper, Indian Museum.

The provisional programme is as follows:—
Thursday, January 15, 10-30 a. m. to 1 p. m. Opening address followed by reading of papers on Chemistry, Physics and Geology. 2-30 p. m. Reading of papers. 4-30 p. m. Reception of delegates. 6 p. m. Illustrated Lecture on the Syrian Christians of Cochin.

Friday, January 16, 10-30 a. m. to 1 p. m. Reading of papers on Zoology and Botany. 2-30 p. m. Reading of papers. 4-30 p. m. Garden Party in Museum Compound.

Saturday, January 17, 10-30 a. m. to 1 p. m. Reading of papers on Ethnography. 9-30 p. m. Conversation in Indian Museum.

Papers and Lectures have been promised by the following:—

Chemistry: Dr. C. Schulten, Prof. Simonsen, Prof. M. N. Banerji, Mr. P. Neogi, Mr. J. H. Barnes, Mr. B. C. Dutt, and Prof. MacMahon.

Physics: Prof. V. H. Jackson, Mr. C. V. Raman, Dr. J. C. Bose. Geology: Dr. P. Brühl, Mr. E. Vredenburg; Botany: Dr. P. Brühl, Mr. P. Mukherji. Zoology: Dr. N. Anandale, Mr. T. Southwell, Capt. W. S. Patton, Lt.-Col. J. Manners Smith, Mr. F. H. Gravely and Dr. T. H. Bishop.

Ethnography: Mr. J. Coggin Brovin and Mr. L. K. Anantha Krishna Aiyar (Cochin). Subscription (five rupees) should be sent to the Hon. Secretary.

Patna University Site.—His Excellency the Viceroy recently visited the site of the proposed Patna University. The Viceroy was accompanied by H. H. the Lieutenant-Governor and Mr. Nathan. On arrival at the site the Viceroy was met by Mr. Monings, Government Architect, who had drawn up the plans for the new buildings. They were shown to His Excellency and the details explained by Mr. Nathan. The site chosen is an admirable one and will allow plenty of room for the expansion of the College buildings in future years. The plans for the University itself and the various Colleges round are simple but dignified. The estimates are not yet completed.

Patna College.—The next place he visited was the Patna College. His Excellency was met by the Principal Dr. Russell and Dr. Caldwell, who conducted the Viceroy round the school. The building was formerly a private house belonging to the East India Company and is thoroughly unsuited as a school, which however it would soon cease to be as soon as the new Patna University is built.

Engineering School, Bihar.—The next place he visited was the Bihar Engineering School which is under the charge of Mr. Wallford. The Viceroy who seemed to be untiring, visited the class rooms and laboratories and was much interested in all he saw. Both here and at the Patna College the students were drawn up and gave the Viceroy three cheers.

ALLAHABAD.

Christ Church College.—The Social Gathering of the College Institute took place recently. The Right Reverend the Lord Bishop of Lucknow, the first Principal of the College, was present throughout. Several old students were present and awarded prizes. The Bishop, the Principal and some members of the staff contributed very liberally to the Prize Fund. The Rev. E. W. Ormerod, M.A., Professor of English and Philosophy, was responsible for the English drama, and to his credit it may be said that the students rendered it as well as any amateur company may be expected to do. The Rev. M. S. Douglas, M.A., Principal, by his indefatigable labour, thoughtfulness, thoroughness and wise organisation made the whole show an unqualified success.

Kayastha Pathshala.—The annual prize-distribution of the Kayastha Pathshala took place recently under the presidentship of Mr. Justice Todball. The Pathshala premises were tastefully decorated and presented a gay appearance. The gathering consisted mainly of the trustees, staff and students of the college. Among those present were Mr. Justice Todball, Messrs. Mackenzie and Dun, Pandit Baldeo Ram Dave; Munshi Ishwar Saran, Govind Prasad, Gulzari Lal, Harnandan Prasad, Munshi Harbans Sabai, Professor Kishan Chand, B. Benode Bihari Lal, Mr. Chandu Lal, Mr. Pearelal Banerji, Mr. Simeon, Pandit Uma Shanker Bajpai, Lala Sita Ram, Lala Lachmi Narayan and Mr. Ram Din Vaish.

The proceedings commenced with the reading of the progress report of the Pathshala by the President of the institution. The report dealt with the history, progress and present position of the institution. The report having been read, Mr. Justice Todball distributed prizes which consisted mainly of books. After the distribution of the prizes, the President, the Hon. Mr. Justice Todball, in a few well-chosen words enlorged the gift of the founder saying that gift for the spread of education was the highest form of charity and the founder, although a talker by profession, was a man of real action. The brief speech concluded with congratulations to prize-winners and appreciation of the progress of the Pathshala.

C. A. V. High School—New Building opened.—The opening ceremony of the new building of the local City Anglo-Vernacular High School on Canning Road was performed by his Honour the Lieutenant-Governor.

His Honour said: it was a pleasure to him to join that ceremony, and the pleasure was enhanced by the fact that he received the address at the hands of his old friend Rai Sanwal Das Bahadur. His Honour congratulated the President and members of the Allahabad Education Society on the success of their labours. They had rather a hard struggle in carrying the torch of learning in this city amid circumstances of great difficulty. His Honour fully appreciated the patriotism and generosity of the donors whose names were mentioned in the address and which greatly contributed to the success. His Honour also referred to the necessity of locating schools in healthy quarters and warmly appreciated private enterprise in the matter of the extension of secondary education.

MYSORE.

Prize-giving at Baldwin School.—The prize-distribution to the boys of the Baldwin High School took place in the Richards' Hall of that institution, which was quite filled with parents and friends. Mr. A. R. Cox, I.C.S., presided, and the prizes were handed over by Mrs. Robinson, wife of Bishop Robinson. The ceremony end of the Hall was decorated in a particularly brave way with great Union Jacks, while the table holding the awards was draped with the Stars of Stripes of the United States.

Proceedings were initiated by the Rev. J. B. Buttrick with prayer, after which an oratorical contest took place between two of the senior students, the prize being adjudged to Alfred Bean. Mr. Buttrick read the Principal's Report, and this was followed by a speech from Mr. Cox. It was rather out of the beaten track of such usually conventional utterances. He spoke at considerable length on the practical side of student life. Thereafter Mrs. Robinson gave away the books and medals, assisted by the Rev. A. B. Coates, the Principal, who made interesting comments now and again on the prowess of the recipients.

St. John's Church Schools.—There was a record attendance in the St. John's Church School Room, when the annual distribution of

prizes to the pupils attending the Day and Sunday Schools took place. Lady Flora Poore then presented a large number of prizes to the happy winners and when this item of the programme came to an end Mr. Hacking called upon all to show their appreciation of Lady Poore's goodness in coming there and giving away the prizes, by according her three hearty cheers. Lady Flora was cheered to the echo and the singing of the National Anthem brought to close one of the brightest functions in St. John's School.

Maharani's College.—H. E. Lady Hardinge accompanied by the Yuvaraja, Mr. Wood, Miss Osborne, Captain Tod and Captain Benson visited the Maharani's College, Mysore. Her Excellency was met by the Dewan, the officiating Lady Superintendent and others, and was conducted to the lecture room where a short programme had been arranged for Her Excellency's benefit. Amongst the items were a violin solo, a Sanskrit and Karnada recitation, some science experiments, and a scene from Shakespeare's "As You Like It" acted by three of the students.

Lady Hardinge then presented the prizes, after which a farewell song was sung followed by God Save the King.

TRAVANCORE.

Government Orders.—A sum of Rs. 3,000 has been granted by Government to supply H. H. the Maharajah's College with the requisite furniture, and Rs. 86,000 for the Elementary Schools for the same purpose.

The Educational Director has recommended to Government the payment of an allowance of Rs. 100 to Miss D. H. Watts, Principal of the Girls' College, Trivandram.

The Government have sanctioned Rs. 12,000 for getting down books for H. H. the Maharajah's College Library.

A meeting of the Travancore Government Text-Book Committee was held on Saturday, the 18th instant, to consider and select Text-Books for use in the Elementary and Secondary Schools of the State for the ensuing year 1914.

COCHIN.

A Prize-distribution.—The distribution of prizes to the successful students of the Convent School at Elthuruth as well as the laying of the

corner-stone of a new block of buildings to be called "His Highness Sri Rama Varmah Shashtipoorthi Memorial Hall," took place recently. To perform both these functions, His Highness the Rajah had very kindly condescended. His Highness was received by the Rev. Father Celestine, Manager of the School. A short report on the working of the school for the past year was read which showed that the attendance, finance and instruction were satisfactory. His Highness was then requested to distribute the prizes after which an address, enclosed in a most beautiful silver casket, was read, and presented by the Manager.

His Highness accompanied by a few of the prominent guests then went to the place where the foundation-stone was hung, and after spreading mortar with a gold trowel His Highness said, lowering down the stone: "I desire this foundation-stone well and truly laid." The plan of the new building was then inspected after which, at the special request of the manager, the Rajah and party visited the adjoining convent premises. His Highness and the 10th Prince were then garlanded, after which cheers were called for to Their Majesties King George and Queen Mary, H. H. the Rajah of Cochin and the 10th Prince. The royal party then motored back amidst Nagaswaram and firing of petards. The function was a complete success.

CEYLON.

The North Ceylon Educational Association.—The Annual General Meeting of this Association was held at the Jaffna Central College. The meeting was well attended in spite of the inclement weather. The Rev. G. J. Trimmer, the President, occupied the chair.

The Secretary (Mr. J. K. Chanmukam, B.A., L.T.) reported that after a year of strenuous work (1911) the Association had passed through a period of inactivity. But the Association had contributed not a little towards the adoption of the present educational policy by the Government, as most of the suggestions of the Association had been accepted by the Education Department. The Committee had met once in 1913, and the Sub-Committee (appointed on 23rd October 1913) had met twice and drafted a memorial about the proposed University College and prepared a syllabus in School Management for Third Class Teacher's Certificate Examination.

tion to be submitted to the Director of Education for approval by the Ceylon Board of Education.

The Office-bearers and Committee members for the year 1913-14 were then elected as follows:—*President*: The Rev. G. J. Trimmer. *Vice-Presidents*: Mr. V. Casipillai and the Rev. G. G. Browne, B.A.; *Secretary*: Mr. G. Shiv. Rau, B.A., L.T.; *Treasurer*: Mr. S. A. Edward, B.A., L.T.; *Committee Members*: The Rev. J. Thompson M.A., the Rev. Fr. C. Beaud, O.M.I., the Rev. W.M.P. Wilkes, B.A., L.C.P., the Rev. J.H. Dickson, Mr. J. M. Hensman, B.A., Mr. R. H. Leembrugger, Mr. T. H. Crossette, M.A., Mr. J. V. Chelliah, M.A., Mr. C. K. Swaminathan, B.A., Mr. W. Duraiswamy, B.A., Mr. V. M. Mathukumar, Mr. T. K. Chanmukam, B.A., L.T., Mr. W. D. Niles, B.A., Mr. B. Sanjiva Rao, B.A., and Mr. A. Sapapathy.

Mr. G. Shiva Rau, B.A., L.T., presented the syllabus in School Management prepared by the Sub-Committee appointed on 23rd October, and also an outline scheme for a course of lectures and practical instruction to candidates for the Third Class Teacher's Certificate Examination. The Sub-Committee consisted of the Rev. G. G. Browne, B.A., and Messrs. G. Shiva Rau, B.A., L.T., J. V. Chelliah, M.A., J. K. Chanmukam, B.A., L.T., and B. Sanjiva Rao, B.A. The name of the Rev. W. M. P. Wilkes, B.A., L.C.P., was now added, and this Sub-Committee was requested to submit to the Association before 15th January next a complete and detailed working scheme for conducting a class for candidates for the said examination.

Mr. C. K. Swaminathan, B.A., then moved a resolution on the place of the Vernaculars in Secondary Schools. The meeting was unanimously and emphatically of opinion that the vernaculars of the country should find a place as alternatives in the group of languages other than English prescribed for the Cambridge Junior and Senior School Certificate Examinations, and a resolution was passed that the Director of Education be requested to use his good offices with the Government to secure this concession from the University of Cambridge.

The Rev. J. H. Dickson introduced the memorial presented by the Vernacular Teachers' Association to His Excellency the Governor and urged that this Association do lend its support to the memorial. It was resolved that the Government be requested to consider the memorial sympathetically. A Sub-Committee, consisting of the Rev. J. H. Dickson (convenor), the Rev. G. J. Trimmer, and Messrs. J. M. Hensman, B.A., and V. Casipillai, was appointed to consider the matter in detail and report to the Committee.

of the Association what further action, if any, should be taken.

The Rev. G. G. Browne, B.A., presented the draft of the memorial on the subject of the University College and higher education, prepared by the Sub-Committee appointed on 23rd October. This evoked great enthusiasm in its discussion and was finally accepted with slight modifications. The Association welcomes the Government's proposal to establish a Model College in Colombo but hopes that the institution will be modelled on Eastern lines to suit the special needs of the Ceylonese and that adequate facilities will be provided for the study of the Vernaculars and Oriental Classics. It deprecates any monopoly in higher education by the Government and concludes by asking the Government to allow students of other institutions satisfying conditions laid down by the Education Department to present themselves on equal terms with University College students to all examinations and to be entitled to all certificates, diplomas, and scholarships to be awarded on the results of such examinations.

The meeting closed with a vote of thanks to the chair.

INDIA (GENERAL).

Indian Students in England.—Mr. C. E. Mallet's annual report gives details of the increasing activities of the Indian students' department in manifold ways. He estimates the number of students now in the United Kingdom at between 1,600 and 1,700. Of these 144 are under the guardianship of his department. One of the chief difficulties is to provide for the increased number of Engineering students facilities for practical work. He points out that many English students have to seek such facilities abroad, and says it is unfortunate that students desiring ultimately to make railways, bridges and roads, leave India where opportunities exist, for England, where opportunities are more rarely found. It would be a great assistance, adds Mr. Mallet, if Railways and the Public Works Department in India would afford Indian students such facilities which are so difficult to obtain here. The expenses of the year, chargeable to Indian Revenues, amount to £5,973, which, Mr. Mallet says, is not a heavy price to pay if it results in sending back to India, as leaders of the younger generation, a body of well-equipped, well-educated men with many friendships in England and every reason to recall their experiences here with gratitude and pleasure.

SCHOOL AND COLLEGE SPORTING NEWS.

Inter-varsity Cricket.

Though the idea of an inter-varsity match was mooted about 10 years ago, it was not till this year that the proposal was seriously considered. The suggestion emanated from Madras, as in former years, and Principal Covernton set about forming a strong and influential committee and succeeded very well. Justice Heaton, the Vice-Chancellor, was elected President of the General Committee, and Colonel Street, President of the Selection Committee with the representative of the Elphinstone College as Hon. Secretary. The Selection Committee included representatives of the various Colleges who had submitted the names of likely candidates. It had also power to add to its number and Dr. H. D. Kanga, Mr. C. V. Mehta and other well-known cricketers were invited to join their ranks.

MADRAS COLLEGES v. MOFUSSIL COLLEGES.

A match between teams representing the local Madras Colleges and mofussil Colleges took place on the Madras United Club grounds. Play commenced at 11-45, and the local Colleges, winning the toss, put in the visitors to bat. The match ended in an easy win for the local Colleges by four wickets and 11 runs on the first innings.

MADRAS UNIVERSITY v. BOMBAY UNIVERSITY.

The University cricket team to play against the M. C. C. on the 6th and the Bombay University on the 11th and 12th instants were selected from the following players:—M. Venkataramanjulu, T. Vasu, N. W. Swarna, H. Trembeere, Mr. Determes, P. Madappa, H. Timmaiya, Anantaraman, T. Raghavan, Williams, V. Desikan, L. Ramasawmy, H. Strickland, G. Paul and G. D'Cruz.

In the former, the University was left winners by 20 runs.

The latter which had been awaited with considerable interest came off on the M. C. C. ground. Long before the commencement of the match, a large crowd was present at Chepauk and great excitement prevailed. As the score stood at lunch, Madras was certainly not in a promising position, the total of 84 for a start, being rather poor.

With only 84 runs in the first innings and 15 for 1 wicket in the second, as against a total of 13 runs made by the visitors in their first innings, the teams resumed their second innings shortly after 11 o'clock.

The dismissal of Venkataramanjulu who was given out L. B. W. to Morenas followed shortly after with the score unaltered. The dismissal of Swarna who for the second time was given out L. B. W. to Desai, with the total at 19 was a great shock for the Madrassis. These two rather unfortunate disasters

evidently demoralised the team. Just now, when all hopes of the homesters saving themselves from defeat were being abandoned, Vasu and Strickland came to their rescue and hit out lustily. Runs came fast and the visitors holding for the first time began to fall off. The innings defeat was saved amidst boisterous cheers, but when 70 was telegraphed, Vasu was adjudged to be caught at the wicket.

Besides Mr. Green, there were present Mr. Mark Hunter, Professor Anderson and Professor Kale of Bombay, Mr. James Short and Prof. Stratham.

M. U. C. v. THE BOMBAY UNIVERSITY.

A two days' match between the above teams was held on the M. U. C. ground. The homesters turned out a very strong team. The visitors had made some alteration in the team which played for them in the recent Inter-University match, Kaikini Metba and Godbole, who were brought down as reserves coming into the team in place of Morenas, Dadachanji and Masani who were kept out. It was thought that the visitors who had beaten the local University team in the recent match, would find the M. U. C. more difficult to tackle. But when the play closed, the M. U. C. were still in with the total at 62 runs for the loss of 3 wickets, so that the match ended in a tame draw.

INTER-SCHOOL SPORTS.

Bangalore.

The annual Inter-School Sports of the European Schools of Bangalore were brought to a conclusion on the Bishop Cotton School play-ground. There was a fairly large attendance to watch the contests, which were all keenly competed for, though the records for the races, jumps, etc., were not quite so good as they were last year. Messrs. A. R. Cox, I. C. S., P. A. Barton, T. Poke, C. F. H. Tachella and Captain Chambers, I.M.S., rendered valuable assistance in judging the various events.

At the conclusion of the sports, Mrs. A. R. Cox presented the prizes. Just before the presentation, Mr. Cox made a few remarks, congratulating the winners of the Trophies and the individual champions on the brilliancy of their performances, and the keen interest that all classes of competitors had displayed in the sports. The prizes having been presented, cheers were accorded to Mr. and Mrs. Cox and the Rev. J. Drury, Warden of Bishop Cotton School, who undertook the arduous work of the arrangements in connection with these annual sports.

Madura.

The annual Gymnastics competition among the High Schools of the District, for the trophies awarded to the senior and junior students by the Madura Inter-School Athletic Association, was held in the grounds of the Sethupathi High School. Only five High Schools of the district had entered, but every event in the programme was keenly con-

tested. The programme consisted of five events for the juniors and five for the seniors. Messrs. Ross Clarke, A. D. Hickey and R. S. Robinson were the judges.

The Inter-School Sports competition was held in the People's Park grounds at 3.30 p.m. Pasumalai, Sethupathi, American Mission, Madura College and Sourashtra High Schools were represented. A large gathering of students and others was present to witness the competition. Mr. E. O. King was the starter, Mr. J. G. Burn, the referee, and Messrs. V. Manikkam Pillai, Captain Harley, T. Amritalingam Iyer and A. M. Doraswami Iyer the judges. Much enthusiasm was displayed throughout the evening.

Mrs. Harley, wife of Captain T. W. Harley, I.M.S., District Medical and Sanitary Officer of Madura, gave away the prizes to the winners of the several events that day, as also to the winners of the several events of the gymnastics contest. Mrs. Harley then presented the Grigg Memorial Medal to R. Venkatsawmy, of the Pasumalai High School, the Football Trophy to the American Mission High School, the Gymnastics Trophy for the senior, to the Sethupathi High School, and that for the juniors to the S. P. G. High School at Ramnad, and the Trophy for Athletic Sports to the Pasumalai High School.

Malabar.

The Malabar District Inter-School Sports were held on the West Hill maidan in the presence of a large number of spectators.

The institutions which took part in the different competitions were the Zamorin's College, B. G. M. College, Native High School and St. Joseph's European Boy's High School, Calicut, Victoria College, Palghat, Rajah's High School, Kollengode, Brennan College and B.G.M. Parsi High School, Tellicherry, and Municipal High School, Cananore.

The events went off very successfully.

M. U. A. Association, Football League.

PACHAIYAPPA'S v. WESLEY.

A very one-sided game was witnessed in the return match between the above teams played on the S.I.A.A. ground, the Pachaiyappa's completely out-playing their weak opponents and scoring the easiest of victories, by 6 goals to nil.

LAW COLLEGE v. MEDICAL SCHOOL

The return match between the above teams was played on the S. I. A. A. ground. The Medical School appeared in their full strength, while their opponents were handicapped by the absence of three good players. The Medical School won the match by 6 goals to nil.

PRESIDENCY v. WESLEY COLLEGE

The Presidency College played their return match with the Wesley College on the Presidency ground.

The score-sheet was blank during the interval. On the teams crossing over, the Presidency College improved, and the play ended in a win to the home team by 3 goals to nil.

ENGINEERING v. TEACHERS' COLLEGE.

The return match between the above Colleges, which was played on the Teachers' ground, was rather one-sided, and the visitors had most of the play, winning the match by 4 goals to 1.

TEACHERS' COLLEGE, SAIDAPET v. THE ROYAPURAM MEDICAL SCHOOL

The return match between the above teams was played at Saidapet. Play, though not particularly fast, was none the less very interesting to watch, the teams being very evenly matched. The Teachers scored a surprising but none the less thoroughly deserved win by one goal to nil.

MEDICAL COLLEGE v. THE ROYAPURAM MEDICAL SCHOOL.

The above teams met in their return fixture on the Medical College ground. Very great interest was centred in this match and consequently an unusually large crowd turned out to witness it. The match ended in a win for the Medical College by 2 goals to nil.

PACHAIYAPPA'S v. ENGINEERING COLLEGE.

The return match between Pachaiyappa's College and the Engineering College was played on the

Engineering ground. The Engineers won the match by two goals to nil.

MEDICAL v. TEACHERS' COLLEGE

The match, which was posted on the Medical ground was not played, as the Teachers' College did not turn out and the Medical College were declared winners.

PACHAIYAPPA'S COLLEGE v. THE ROYAPURAM MEDICAL SCHOOL.

The above teams, met in their return fixture on the S. I. A. A. ground. With both sides at full strength, a fast and exciting game ensued. Play took a very interesting turn almost from the commencement, both goals being in danger alternately. The match ended in a draw, one all.

PRESIDENCY v. ENGINEERING.

One of the most interesting matches in connection with this tournament was played on the Presidency College ground between the above teams. The play throughout was fast and even so that when time intervened the match was left drawn, one goal all.

TEACHERS' COLLEGE, SAIDAPET v. THE WESLEY COLLEGE.

The return match between the above teams took place in the usual course at Saidapet. The Teachers who won the first match by the narrow margin of one goal won this match by double that margin, but as a matter of fact, the Wesleyans put up a decidedly better fight in this game, having had a very fair share of attack without unfortunately scoring.

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The Educational Review.

The annual Convocation of the Allahabad University was held on the 15th of November. The Convocation Address.* Hon'ble Dr. Sundar Lal, Vice-Chancellor, delivered, as usual, the Convocation Address. In the Madras University the Convocation Address is delivered by some Fellow selected by the Chancellor, as a compliment, and of late years the Madras Convocation Addresses have been distinguished by the commonplaceness of the sentiments expressed. The "well-established custom" at Allahabad requires the Vice-Chancellor every year "to present a short *résumé* of the work done during the year, and to deal with some of the more important educational topics which interest the Fellows." This procedure may very well be copied by the Madras University and then the Madras Convocation will become a living function and not be, as now, an empty ceremonial, in which hundreds of people are packed up in an atmosphere reeking hot and made to listen (i.e. if the voice of the gentleman who delivers the address can be borne to their ears, which is very seldom) to sapient advice that young men should learn good manners, according to the European convention, though they have little chance of meeting Europeans in society, that they should learn to speak and write faultlessly, though this is a feat impossible to most of them, etc. The Allahabad Address is very interesting because it tells us what the University has done during the year, what it wants to achieve in the future and what are the problems that exercise the ingenuity of the Fellows.

Far and away, the most interesting ques-

* This is reprinted elsewhere in full in this issue.

tion discussed by Dr. Sundar Lal is the position of the "Vernaculars" in University studies. In using the term "Vernaculars" we imitate certain members of the Madras Senate and mean by it *not* the languages spoken by the people, but the classical dialects used in books and the Sanskrit language. It would seem that the Allahabad University has in this followed the lead of the Madras University and has arranged that "English is the only subject which is compulsory for every candidate to take up... It has thus become possible for a student to take the degree of Bachelor of Arts without studying any more of Mathematics than what is prescribed for the Matriculation Examination or to take the degree of Bachelor of Arts without knowing any classical language. Thus has been settled an oft-mooted subject of animated debate in which the motion for the change now adopted was oft repelled by a small majority of votes."

Dr. Sundar Lal discusses this result not in the hysterical spirit adopted by half-a-dozen Fellows of our University who are always trying to upset our University arrangements and stay the natural progress of our University studies and take it back to antiquated conditions, but impartially and like a responsible officer of the University. He recognizes that it is an evil that "it has become possible for an Indian student to take his degree without knowing much more about his vernacular than what he might have picked up on his mother's lap, and except for the third paper in English in the Matriculation and the Intermediate Examinations..... he need not know the vernacular at all." But he does not want to remedy this evil as the Hon'ble Mr. T. V. Seshagiri Iyer and his followers in the Madras Senate would do by

lowering the efficacy of the Science degree and making the Madras degrees much inferior to those of any other University; for he says, "I am also aware there are considerable difficulties in finding a place for the vernaculars in our already crowded University Curricula and that room can only be made for them by taking out some other part of the course. But there seems to me, as at present advised, no serious difficulty in the way of arranging for a thorough grounding in the vernacular in our schools.....A thorough grounding in the *current vernaculars* (the italics are ours) is more apparently part of the school course, while a critical study of them, their growth and development from a historical and philological point of view, might more fittingly be left in the hands of the University."

We welcome the pronouncement of the Hon'ble Nawab Syed Mohammed Saheb Bahadur, this year's President of the Indian National Congress held at Karachi—so much in a line with what we have *ad nauseam* urged in these columns—that primary education "is the remedy of remedies that will help the masses at present steeped in ignorance, superstition and lethargy, to get out of the slough of despond, and will teach them self-help by placing within their reach, through the medium of the ever-growing literature, the benefits that would accrue from adopting modern methods and principles in their hereditary and time-hallowed occupation of agriculture and other small industries; and will surely mould in them a frame of mind that would co-operate with the Government in any measure that may be taken for public

good, by removing the inclination to attribute wrong motives to the intentions of Government as regards their particular acts and measures." He advocated that the Government should adopt urgent measures to introduce compulsory education among the people and urged that the political fears entertained by Government as regards the adoption of the principle of compulsion were imaginary and that the people would welcome the imposition of a Primary education cess. We congratulate the President, National Congress, on his enthusiasm. He noted with pride what steps the Baroda and Mysore Governments and latterly Travancore had taken to push on compulsory Primary education and urged the Paramount Power to follow in their foot-steps. He also exhorted the Government to pay more attention than hitherto to technical education. The time would soon come, perhaps sooner than most people imagined, when the financial resources of the country would be soon strained to the utmost to cope with the problem of the poor and the submerged. The Government should therefore make a serious attempt to push on industrial and technical education by opening new schools and by subsidising at least some of the industries. We are very glad that such a clear exposition of our educational needs has been pronounced from the presidential dais of this year's Congress and they will be urged and urged till all the demands are granted by the Government of India. The needs of higher education were not referred to in the speech, possibly from a feeling that the special grants recently given to the various provinces were enough guarantee that the Government was alive to them.

In a recent number we referred to the tendency to crowd the Curricula of Secondary Schools. The Board of Education in England has issued a circular on this subject (Circular 826). One interesting remark in that circular runs as follows:—"The relation between the secondary school and the technical school is materially affected by the increasing widespread conviction that even the general education of boys and girls will gain in effectiveness if their work at school is to some extent brought to direct connection with their probable occupations in after-life." Another remark that applies equally well to educational work here is this: "In the middle and higher forms time is often wasted ...by the inclusion in the syllabuses of much that is really unessential to the neglect of what is of capital importance." Science teachers of our High Schools have, whenever they had a chance, strongly urged that the Physics and Chemistry syllabuses provided for the Secondary School Leaving Certificate scheme are "impossible" ones. Criticisms have been passed on the syllabus of English History and of its position in the scheme. The Director of Public Instruction is to us what the Board of Education in England: hence we ask how is it that when the Board of Education in England realizes that its chief work is to issue every now and then circulars intended to guide school teachers in their teaching and in their organization, the Director of Public Instruction, with us, is so out of touch with educational opinion that he cannot realize the difficulties which school teachers feel and does nothing remotely resembling what the Board of Education does to develop education

in England. Since the Director of Public Instruction has become the mouthpiece of the Government in the Legislative Council, his principal function has become to mollify the honourable members of that Council and as the masters of our Secondary Schools can never hope to enter that Council and wield a vote, this breach between the D. P. I. and what we conceive to be his main work—being in touch with the work of Secondary Schools—is bound to widen more and more. We regret that it should be so. When the Secondary School Leaving Certificate Board was first organized, it was believed that the Board would supervise Secondary School education, would do what the Board of Education does in England, issue circulars expounding methods of teaching, principles of organization, and pointing out defects of school work as it actually obtains in schools and remedies therefor. But very soon after the Board was created, it became apparent that it was merely another Board of Examiners, that it was but a Matriculation Examination Board write large. The University Matriculation Board was bad enough in its day, but though that Board could not conceive secondary education but as a stepping-stone to University education, it at least secured the best interests of the few that went on to the University. But now that the partially wholesome influence of the University on secondary education has been cut off, secondary education is not controlled and guided by any responsible person or persons who feel it their primary duty to foster it. So our curricula, our time-tables, and methods of teaching, our principles of discipline, in fact, all the work of our Secondary Schools has to muddle along without expert help or guidance.

Returning to Circular 826, we notice that "modified specialization is the key-note;" specialization in Science and Mathematics particularly, as also specialization in art, economics and domestic courses is contemplated as suitable work for schools, of course with provision for the continuance of general education. Latterly we have had some carp-ing criticism of specialization in schools; we wish to point out to such critics that, according to the Board of Education's circular, the main portion of the school work, viz., the study of science, theoretical and practical, should extend continuously over four years. "This will be required in all schools unless special reasons to the contrary can be given." "Boys who are working in preparation for an advanced course in classics may have a science course for three years (instead of four) between the ages of twelve and sixteen, if this course be supplemented by the inclusion of science among the subsidiary subjects taken at the specialising stage." In the case of schools where pupils normally enter not later than the age of ten and stay till the age of eighteen or later, bifurcation may begin in the fourteenth, i.e. four years before the school course ends, i.e. our III Form. Where practically pupils enter all at the age of twelve, alternative courses should be established at the end of the first or second year, one leading to the University and the other modified by a vocational bias. All this proves that specialization in our High Schools does not begin one moment too soon.

It is now recognized on all hands that Handwork in the Secondary School. Handwork is an invaluable means of developing the brain. Working in cardboard, wood and metal is besides intimately connected with art work, especially modelling

in clay and design. The dexterity, moreover, developed in manual work will also be serviceable in science classes which now are organized on the sound basis of experimental work done by pupils. Moreover in the manual work classes, the pupils are from the beginning, trained to make some finished object. This stimulates their inventiveness. Another not very remote but very beneficial effect of the handwork in school is that it may develop in some the desire to become craftsmen and thus to reduce "the over-valuation of brain-work in general throughout the whole community, so that we have the spectacle of a nation, in which two hundred and fifty men will apply for a vacant post as a clerk at a poor salary while large tracts of land are uncultivated for lack of capable workers." This being so, it will be worth while asking what the Madras Educational Department has done to encourage the introduction of handwork in our schools. We can answer this question by quoting an incident. There was once an Inspector of Schools who happened to see in one of the schools he was inspecting manual work enthusiastically taught. He immediately bought a working bench and a set of tools so that he might learn the work himself and thus qualify himself not only to inspect schools where handwork was taught but to be able to guide intelligently other schools where he could get such teaching provided. And the reward of such enthusiasm was that he was instantly transferred to a College to lecture on Chaucer and Shakespeare!

To commemorate the celebration of his eightieth birth-day, a committee of the former students of the Right Hon'ble Sir Henry Roscoe, headed by Sir Edward Thorpe,

Presentation of a bust of Sir Henry Roscoe to the Chemical Society.

presented his bust to the Chemical Society. In a felicitous address presented to him the great chemist was reminded that his "chemical grand-children" now carried on the great work conducted by him in the discovery of chemical truth. Though it is now twenty-seven years since he resigned the chair of chemistry at Owen's College, which has now become the University of Manchester, his influence as a teacher and a friend is still so strong as to induce his former pupils to exhibit their devotion to the master in this pleasant form. The address was signed by about 140 of Sir Henry's former students, many of whom now occupy responsible positions both in academic work and in chemical industries and are to-day distributed in all parts of the United Kingdom, in Germany, Russia, Canada, the United States of America, Australia, and Japan. But not in India, where men of the calibre of Roscoe's students are not likely to stray, but where Roscoe is known only as the author of a primer in chemistry, which was prescribed as a textbook for the Matriculation examination, but the examiners always broke their bounds and massacred the Innocents.

Witness after witness, before the Royal Commission, has deposed to the necessity of a certain proportion of officers in every department of public service for men who have undergone training in the English public schools and Universities. We have never had the opportunity to see for ourselves any school conducted exactly under the conditions of an English public school, but, judging them from the kind of men they send forth to serve the Empire and from what we have read of them we have nothing but admiration for the English pub-

lic school system; so much so, that in our last number we spoke in approbation of Principal Griffiths' proposal to extend the system to elementary schools and advocated that educational salvation lay in going further and further from the system of judging by examinations and approximating to that of judging pupils by the work done by them in schools. How is it, then, we ask, does not the Educational Department out here open one solitary school for Indian boys and work it as a model public school? We quite recognize the fact that the average Indian parent likes to have his sons at his house and to get him educated as a day-scholar. But the success of the Madras College Hostels in partially denuding mofussil colleges clearly indicates that there are parents enough in India who sufficiently recognize the value of boarding schools to support half-a-dozen such in each Presidency. It is the urgent duty of Government to lead the way by opening model public schools—one at least for each great language-division of the Presidency. Kumbakonam, Waltair, Bangalore and Palghat would be excellent places where the experiment can be tried. We personally know of many parents, especially those who occupy the higher places in the public services and who are transferred from place to place once in three years who would welcome such schools.

It has been held, especially after Nansen's well-known drift on the *Fram* in his expedition to the North Polar region, that there was no possibility of unknown land being discovered in the ocean north of Siberia. This has been falsified by the discovery by the Russian ice-breakers, *Taimyr* and *Vaigatz* which has been, now for sometime, doing

hydrographical work in the sea north of East Siberia. The newly discovered land lies between 90° and 100° E. and on both sides of 80° N. This new land is an island like Novaya Zemlya or it forms an archipelago like Franz Joseph's Land. It is curious that so many Polar adventurers, Nordenskiöld, Nansen, Baron Toll, have rounded Cape Chelyuskin 30 to 40 miles due south of the newly discovered land but never suspected its existence or that they were then going along a narrow strait and not the Arctic Ocean.

We have great pleasure in drawing the attention of our readers to the gift of ten thousand rupees made by the Hon.

A Magnificent Donation.

Mr. P. Ramarayaningar, M.A., Member of the Imperial Legislative Council, to the University of Madras, for the encouragement of the scientific study of Telugu language and literature. The announcement was made on the occasion of H. E. the Viceroy's laying the foundation of the new University Library during his recent visit to this city. The scion of an ancient aristocratic house in Southern India, and himself a distinguished Telugu scholar, it was fitting that the first important donation for the encouragement of vernaculars, under the auspices of the Madras University should have been made by him. The era of expansion and improvement on which the Madras University has now embarked, has till now met with very little of practical sympathy from the public. The recent history of the University of Madras is not distinguished by any instances of princely generosity on the part of the rich land-owners and moneyed aristocracy of the Presidency, from whom help might naturally be expected for an institution striving to spread learning and

culture in the land. The Universities of Bombay and Calcutta have been enriched within the last two or three years by endowments amounting to several lakhs, and it is some consolation that a beginning has been made here with the gift of the Hon'ble Mr. Ramarayaningar. There has been quite an outcry in the Presidency that the vernaculars have been neglected; that they must be made subjects of compulsory study in all the College classes and so on. But the public which seems so insistent on these demands has not demonstrated its earnestness, by any such instance of sacrifice as that which is now furnished by this donor.

The purpose which the Hon'ble Mr. Ramarayaningar has in view, in entrusting the University with the amount, is one which must be commended very highly, by all real lovers of culture. Nothing of great importance is gained by ensuring a superficial study of vernacular classics by all the under-graduates of our University. The mere interpretation of linguistic obscurities, and the ceaseless repetition of the fanciful and over-wrought passages found in the old commentators, cannot advance the cause of vernacular studies in any effective manner. The application of the principles of Western criticism to Oriental literature, and the study of Oriental languages in the light of the recent investigations of linguistic phenomena, have not yet been done in any appreciable degree for the vernaculars of Southern India. The benefaction of the Hon'ble Mr. Ramarayaningar will serve to start such work under the guidance of the University, at least in connection with one of the important languages. The donor is eminently fit by his scholarship in Telugu, to advise the University on the details of any scheme which it may think of originating in

connection with his gift and we have no doubt full advantage will be taken of his knowledge in the subject. We have only to hope in conclusion that the example set by this generous and public-spirited Zemindar will be followed by the landed aristocracy of this part of India, so as to enable our University to enter upon the new era of increased usefulness which it has set before itself, with the inspiration of strength and wide-spread support.

The welcome news has been announced that the Government of H. E. the Viceroy has generously given up its claim on the Corporation of Madras for the annual contribution of Rs. 50,000 paid by the body to Government. If the decision relieves the Corporation of some of its financial pressure, it has also brought with it a new responsibility, that of spending an annual sum of Rs. 50,000 on schemes fraught with the largest good to the rate-payers of the city. We appreciate the zeal with which a Commissioner has precipitately suggested that it must be utilised to reduce the taxation in the Municipality. But he must see that a responsible body like the Corporation cannot proceed to reduce taxation immediately on the receipt of such a benefit. It cannot lay the flattering unction to its soul that it is fulfilling all the duties imposed upon the Corporation of a civilised country, to such a degree that it can only think of reducing the taxes, when there is such a windfall. To those who have watched the working of the Madras Corporation, nothing is so apparent as the neglect of its duties to education. It is a subject that seems to trouble the busy heads of the Commissioners at very rare intervals, and the amount that is spent by the Corporation on the item is so little that it does not certainly deserve to congratulate itself on it. The

building of a few, new elementary schools has been spread over several years, and the work is being done with even more than the contemplated slowness. The percentage of illiteracy is so appalling that a considerably larger number of elementary schools in various parts of the city are urgently needed to effect any educational progress. Again, the time has also come to think seriously of a scheme of free elementary education for the city. A few Municipalities in India have already made a beginning in the direction and there is no reason why the Corporation of Madras should not also think of it, unless it be that some of the Commissioners have yet to feel and be convinced of the benefits of education. The best way of utilising the 50,000 Rs. that the Corporation will find in its hands year after year is to spend it on the diffusion of elementary education in the city. The Commissioners may bear in mind, the windfall is due to the generosity of a Viceroy, who has the interests of Indian education deep at his heart, and who will be handed down in the history of this country for his invaluable services in its cause. Such a decision will enable the Madras Corporation to fulfil in a more adequate manner one of the primary duties of a civilised local body, and also earn the gratitude of thousands of its future citizens led from darkness into light. We hope the Commissioners will realise the imperative nature of the demand and start a new era of educational expansion in the annals of a Corporation which has not done anything appreciable for it in the past.

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GOVERNMENT OF INDIA
DEPARTMENT OF EDUCATION.

Delhi, the 21st February 1913.

RESOLUTION.

EDUCATIONAL POLICY OF THE GOVERNMENT OF INDIA.

COMPREHENSIVE SYSTEMS OF EDUCATION.

His Most Gracious Imperial Majesty the King-Emperor, in replying to the address of the Calcutta University on the 6th January, 1912, said:—

"It is my wish that there may be spread over the land a network of schools and colleges, from which will go forth loyal and manly and useful citizens, able to hold their own in industries and agriculture and all the vocations in life. And it is my wish, too, that the homes of my Indian subjects may be brightened and their labour sweetened by the spread of knowledge with all that follows in its train, a higher level of thought, of comfort and of health. It is through education that my wish will be fulfilled, and the cause of education in India will ever be very close to my heart."

2. The Government of India have decided, with the approval of the Secretary of State, to assist Local Governments, by means of large grants from Imperial revenues as funds become available, to extend comprehensive systems of education in the several provinces. Each province has its own educational system, which has grown up under local conditions, and become familiar to the people as a part of their general well-being. In view of the diverse social conditions in India there cannot in practice be one set of regulations and one rate of progress for the whole of India. Even within provinces there is scope for greater variety in types of institutions than exists to-day. The Government of India have no desire to centralise provincial systems or to attempt to introduce a superficial uniformity. Still less do they desire to deprive Local Governments of interest and initiative in education. But it is important at intervals to review educational policy in India as a whole. Principles, bearing on education in its wider aspects and under modern conditions and conceptions, on orientalia and on the special needs of the domiciled community, were discussed at three important conferences of experts and representative non-officials held within the last two years. These principles are the basis of accepted policy. How far they can at any time find local

application must be determined with reference to local conditions.

THE NEED OF TRUE PERSPECTIVE.

3. The defects of educational systems in India are well-known and need not be re-stated. They have been largely due to want of funds. Of late years there has been real progress in removing them. In the last decade* the total expenditure from all sources on education has risen from 4 crores to nearly 7½ crores. The progress has been especially great since Lord Curzon's government introduced large measures of educational reform. In the last four years the number of those under instruction has increased from about 5½ to 6½ millions. Again, the formerly crushing weight of examinations has been appreciably lightened; a commencement has been made in the reform of University and college organisation; and the grants from public funds to private institutions have almost doubled in the past nine years. These facts speak for themselves. Nor must the great benefits, which education has conferred on India, be ignored or minimised. Criticism based on imperfect analogies is often unjust. It is not just, for instance, to compare Indian systems still for the most part in their infancy with the matured systems of the modern western world, or to disregard the influences of social organization and mentality. Again the common charge that the higher education of India has been built up on a slender foundation of popular education and that its teaching agency is inefficient, is one that might have been levelled against every country in Europe at some period of its history. India is now passing through stages taken by other countries in their time.

FORMATION OF CHARACTER THE MAIN OBJECTIVE.

4. In the forefront of their policy the Government of India desire to place the formation of the character of the scholars and under-graduates under tuition. In the formation of character the influence of home and the personality of the teacher play the larger part. There is reason to hope—in the light of acquired experience—that increased educational facilities under better educational conditions will accelerate social reform, spread female education and secure better teachers. Already much attention is being given to religious and moral education in the widest sense of the term, comprising, that is, direct religious and moral instruction, and indirect agencies such as monitorial or similar systems, tone, social life, traditions, discipline, the betterment of environment, hygiene,

* i.e., 1901 to 1911.

and that most important side of education, physical culture and organised recreation.

DIRECT RELIGIOUS AND MORAL INSTRUCTION.

5. The question of religious and moral instruction was discussed at a local conference held in Bombay and subsequently at the Imperial Conference held in Allahabad in February 1911. Grave differences of opinion emerged as to the possibility or advantage of introducing direct religious instruction into schools generally, and apprehensions of difficulty in the working of any definite system were put forward. Doubts were also expressed as to the efficacy of direct moral instruction when divorced from religious sanctions. In the matter of moral teaching, however, the difficulties are undoubtedly less than in the case of religious teaching. The papers laid before the conference indicate that not a little moral instruction is already given in the ordinary text books and in other ways. The Government of Bombay are engaged upon the preparation of a book containing moral illustrations, which will be placed in the hands of teachers in order to assist them in imparting moral instruction. Excellent materials for ethical teaching are available in the Mahabharata, the Ramayana, portions of Hafiz, Sadi, Maulana Rumi and other classics in Sanskrit, Arabic, Persian and Pali. The Government of India while bound to maintain a position of complete neutrality in matters of religion observe that the most thoughtful minds in India lament the tendency of existing systems of education to develop the intellectual at the expense of the moral and religious faculties. In September 1911 they invited Local Governments other than the Bombay Government to assemble local committees in order to consider the whole question. Such committees are still at work in some provinces. For the present the Government of India must be content to watch experiments and keep the matter prominently in view. Enlightened opinion and accumulated experience will, it is hoped, provide a practical solution to what is unquestionably the most important educational problem of the time.

INDIRECT AGENCIES, e.g., HOSTELS, SCHOOL-BUILDINGS, TRADITIONS, ETC.

6. There has been real progress of late years in the provision of hostels. In the last decade the numbers both of hostels and of resident male students have nearly doubled, and now stand at over 2,200 and over 78,000 respectively. The Government of India desire to see the hostel system develop until there is adequate residential accommodation attached to every college and secondary school in India. But a hostel of itself will not achieve the desired end unless effective means are adopted for guiding students and assisting them in their work and in their recreation. Already in some first-class institutions in the country admirable arrangements have been made on European lines to secure the full benefits of the residential system. Again it is reassuring that traditions are growing up, that meetings of old

boys are held, that debating and literary societies are becoming more common. All these require help which will in many cases best be organised in connection with the hostel system. Much has also been done of late to improve school buildings; but a large number of thoroughly unsuitable, not to say mean, squalid and insanitary buildings still exist in India. These will be replaced, as funds permit, by modern buildings designed upon sanitary lines and with a view to avoid overcrowding and to facilitate the maintenance of discipline. The Government of India hope that the time is not far distant when educational buildings will be distinguished as the most modern and commodious buildings in the locality, and scholars in India will have the advantages in this respect of scholars in the West. The influence for good of clean well-arranged buildings with the concomitant domestic discipline can scarcely be exaggerated.

HYGIENE.

7. The claims of hygiene are paramount not only in the interests of the children themselves, though these are all-important, but also as an object lesson to the rising generation. Hitherto want of funds and the apathy of the people have been responsible for the comparatively small attention paid to hygiene. In some provinces a simple course of instruction in hygiene is prescribed, at some period of the school course, but the lessons are often of too formal a type, are not connected with the life of the pupil, and fail to form his habits or to enlist his intelligence in after-life in the struggle against disease. In some areas there is a general inspection of school premises by a medical authority; but it is believed that little is done for the individual inspection of school children and that medical advice has not always been enlisted in regard to the length of the school day, the framing of curricula, and such matters. The Government of India commend to Local Governments a thorough enquiry, by a small committee of experts, medical and educational, into school and college hygiene. The scope of the enquiry will no doubt vary in different parts of India but the following seem to be important matters for investigation:—

- (i) The condition of school houses, hostels and other places where pupils reside, from the point of view of sanitation.
- (ii) The professional examination of building plans from the hygienic point of view.
- (iii) The introduction of a simple and more practical course of hygiene; whether it should be a compulsory subject in the various schemes of School-Leaving Certificates, and whether it should be recommended to Universities as part of their Matriculation examination.
- (iv) The inspection, where possible, of male scholars, with special reference to infectious diseases, eyesight and malaria.
- (v) The length of the school-day, home-studies, and the effect upon health of the present system of working for formal examinations.

(vi) The requirements in the way of recreation grounds, gardens, gymnasias, reading rooms, common-rooms, etc.

(vii) The inspecting and administering agency required, the possibility of co-operation with existing organisations and the provision of funds.

OTHER CARDINAL PRINCIPLES OF POLICY.

8. Other cardinal principles of policy may here be stated—

(1) The steady raising of the standard of existing institutions should not be postponed to increasing their number when the new institutions cannot be efficient without a better-trained and better-paid teaching staff.

(2) The scheme of primary and secondary education for the average scholar should steadily, as trained teachers become available, be diverted to more practical ends, e.g., by means of manual training, gardening, out-door observation, practical teaching of geography, school excursions, organised tours of instruction, etc.

(3) Provision should be made for higher studies and research in India, so that Indian students may have every facility for higher work without having to go abroad.

RESEARCH.

9. The provision of facilities for research cannot be postponed. In almost every branch of science and the arts in philosophy, history, geography, language, literature, economics, sociology, medicine, public health, agriculture, biology, geology, botany and in all the sciences applied to industry, not to particularise more closely, there is a wide untrodden field awaiting research. Among the essentials are good libraries, laboratories and collections, ample leisure and freedom in study, systematic collaboration of professors and students, an atmosphere engendered by the simultaneous working of many minds on numerous but interdependent branches of research. Only when they know the methods of research by which the knowledge they are to impart is secured and tested are teachers fully equipped for their work in the more advanced stages of education.

PRIMARY EDUCATION, COMPULSORY AND FREE EDUCATION NOT PRACTICABLE.

10. The propositions that illiteracy must be broken down and that Primary Education has, in the present circumstances of India, a predominant claim upon the public funds, represent accepted policy no longer open to discussion. For financial and administrative reasons of decisive weight the Government of India have refused to recognise the principle of compulsory education; but they desire the widest possible extension of primary education on a voluntary basis. As regards free elementary education the time has not yet arrived when it is practicable to dispense wholly with fees without injustice to the many villages, which are waiting for the provision of schools. The fees derived from those pupils who

can pay them are now devoted to the maintenance and expansion of Primary Education, and a total remission of fees would involve to a certain extent a more prolonged postponement of the provision of schools in villages without them. In some provinces elementary education is already free and in the majority of provinces liberal provision is already made for giving free elementary instruction to those boys whose parents cannot afford to pay fees. Local Governments have been requested to extend the application of the principle of free elementary education amongst the poorer and more backward sections of the population. Further than this it is not possible at present to go.

PRIMARY EDUCATION, GENERAL PRINCIPLES.

11. For guidance in the immediate future, with the necessary modifications due to local conditions, the Government of India desire to lay down the following principles in regard to Primary Education:—

(i) Subject to the principle stated in paragraph 8 (1) *supra*, there should be a large expansion of lower primary schools teaching the three R's with drawing, knowledge of the village map, nature-study and physical exercises.

(ii) Simultaneously upper primary schools should be established at suitable centres and lower primary schools should where necessary be developed into upper primary schools.

(iii) Expansion should be secured by means of board schools, except where this is financially impossible, when aided schools under recognised management should be encouraged. In certain tracts liberal subsidies may advantageously be given to *maktabs*, *patshalas* and the like which are ready to undertake simple vernacular teaching of general knowledge. Reliance should not be placed upon "venture schools," unless by subjecting themselves to suitable management and to inspection they earn recognition.

(iv) It is not practicable at present in most parts of India to draw any great distinction between the curricula of rural and of urban primary schools. But in the latter class of schools there is special scope for practical teaching of geography, school excursions, etc., and the nature study should vary with the environment, and some other form of simple knowledge of the locality might advantageously be substituted for the study of the village map. As competent teachers become available a greater differentiation in the courses will be possible.

(v) Teachers should be drawn from the class of the boys whom they will teach; they should have passed the Middle Vernacular Examination, or been through a corresponding course, and should have undergone a year's training. Where they have passed through only the upper primary course and have not already had sufficient experience in a school, a two years' course of training is generally desirable. This training may in the first instance be given in small local institutions but preferably, as funds

permit, in larger and more efficient central normal schools. In both kinds of institutions adequate practising schools are a necessary adjunct, and the size of the practising school will generally determine the size of the normal school. As teachers left to themselves in villages are liable to deteriorate there are great advantages in periodical repetition and improvement courses for primary school teachers during the school vacations.

(vi) Trained teachers should receive not less than Rs. 12 per month (special rates being given in certain areas); they should be placed in a graded service; and they should either be eligible for a pension or admitted to a provident fund.

(vii) No teacher should be called on to instruct more than 50 pupils; preferably the number should be 30 or 40; and it is desirable to have a separate teacher for each class or standard.

(viii) The continuation schools known as middle or secondary vernacular schools should be improved and multiplied.

(ix) Schools should be housed in sanitary and commodious but inexpensive buildings.

12. While laying down these general principles the Government of India recognise that in regard to Primary Education conditions vary greatly in different provinces. In the old province of Bengal, for instance, where there is already some sort of primary school for a little over every three square miles of the total area of the province, the multiplication of schools may very well not be so urgent a problem as an increase in the attendance and an improvement in the qualifications of the teachers. In some parts of India at the present time no teacher in a primary school gets less than 12 rupees a month. In Burma all conditions are different and monastic schools are an important feature of the organisation. Different problems, again, present themselves where board schools and aided schools respectively are the basis of the system of Primary Education. Nor must it be supposed that the policy laid down in these general terms for the immediate future limits the aspirations of the Government of India or the Local Governments. Indeed the Government of India hope that the day is not far distant when teachers in primary schools will receive considerably higher remuneration, when all teachers will be trained, and when it will be possible to introduce more modern and elastic methods in primary schools.

VERNACULAR CONTINUATION SCHOOLS.

13. Vernacular continuation schools are the only entrance to more advanced study which does not demand acquaintance with a foreign language; and it is in them that competent teachers for primary schools will be prepared. Technical and industrial progress also is likely to create numerous openings for men with a good vernacular education. In certain provinces owing to the popularity and cheapness of English education these institutions have declined. But in the whole of India in the last

decade the number of schools has increased from 2,135 to 2,686 and that of their scholars from over 177,000 to close on 257,000. The Government of India believe that these schools will become much more popular and useful when they are placed on a sound footing; they also think that it would be an advantage if an advanced vernacular course could be provided at selected centres for students desirous of becoming teachers in these continuation schools.

14. In some provinces special classes have been opened in secondary English schools for scholars who have been through the whole course at a vernacular continuation school in order to enable them to make up ground in English. There is much experience to the effect that scholars who have been through a complete vernacular course are exceptionally efficient mentally. The Government of India recommend arrangements on the above lines to all Local Governments and Administrations which have not already introduced them.

PROPOSED EXPANSION.

15. It is the desire and hope of the Government of India to see in the not distant future some 91,000 primary public schools added to the 100,000 which already exist for boys and to double the 4½ millions of pupils who now receive instruction in them. For purposes of present calculation a sum of Rs. 375 per annum may be taken as a rough approximation of the probable average cost of maintenance of a primary board school. This figure provides for two teachers, one on Rs. 15 and one on Rs. 12 per month and Rs. 4 per month for the purchase of books and stationery, petty repairs, prizes and for necessary contingencies. This is, however, only an average figure for the whole of India. In India as a whole the average cost of a board or municipal school is at present Rs. 315 per annum. In Bombay the average cost of a primary school under any kind of management is now about Rs. 437, but this figure includes the cost of the higher classes, which in some other provinces are classed as middle or secondary vernacular classes.

EDUCATION OF GIRLS.

16. The education of girls remains to be organized. In 1904 the Government of India remarked that peculiar difficulties were encountered in this branch of education owing to the social customs of the people, but that as a far greater proportional impulse is imparted to the educational and moral tone of the people by the education of women than by the education of men, liberal treatment had been accorded for girls in respect of scholarships and fees. This policy has been continued. Efforts have been also made, not without success, to bring education, through the agency of governesses, within the reach of purda ladies, to increase the number of ladies on the inspecting staff and to replace male by female teachers in Government and aided schools. The number of girls under instruction has risen from 444,470 in 1901-02 to 864,363 in 1910-11. But the total number still remains insignificant in proportion

to the female population. The Government of India believe, however, that in certain areas there are indications of a swiftly growing demand for a more extensive education of girls.

17. The immediate problem in the education of girls is one of social development. The existing customs and ideas opposed to the education of girls will require different handling in different parts of India. The Governor-General in Council accordingly hesitates to lay down general lines of policy which might hamper Local Governments and Administrations, and has preferred to call for schemes from each province; but he commends the following principles for general consideration:—

(a) The education of girls should be practical with reference to the position which they will fill in social life;

(b) It should not seek to imitate the education suitable for boys nor should it be dominated by examinations;

(c) Special attention should be paid to hygiene and the surroundings of school life;

(d) The services of women should be more freely enlisted for instruction and inspection; and

(e) Continuity in inspection and control should be specially aimed at.

18. The difficulty of obtaining competent schoolmistresses is felt acutely in many parts of the country. In this connection it has been suggested that there is a large opening for women of the domiciled community, who have a knowledge of the vernacular and who might be specially trained for the purpose.

SECONDARY ENGLISH EDUCATION.

19. The importance of secondary English and in particular of High school education is far-reaching. Secondary education of one grade or another is the basis of all professional or industrial training in India. The inferior output of secondary schools invades colleges and technical institutions and hinders the development of higher education. At the Allahabad Conference the Directors of Public Instruction unanimously regarded the reform of secondary English schools as the most urgent of educational problems. The improvement of secondary English education has for some time occupied the attention of the Government of India and the Local Governments and it is hoped in the near future to remedy many defects of the present system.

20. In the last nine years the number of secondary schools has increased from nearly 5,500 to over 6,500 and the number of scholars from 622,000 to 900,000. The policy of Government is to rely so far as possible on private enterprise in secondary education. This policy, laid down in the despatch of 1854, was re-stated and amplified by the Education Commission of 1882, which, while doubtful as to how far the process of withdrawal on the part of Government should be carried, agreed that, what-

ever degree of withdrawal from the direct provision of education might be found advisable, there should be no relaxation of indirect but efficient control by the State. The admixture of private management and State control was again emphasised in the resolution of 1904. To this policy the Government of India adhere. It is dictated not by any belief in the inherent superiority of private over State management but by preference for an established system and, above all, by the necessity of concentrating the direct energies of the State and the bulk of its available resources upon the improvement and expansion of elementary education. The policy may be summarised as the encouragement of privately managed schools under suitable bodies, maintained in efficiency by Government inspection, recognition and control, and by the aid of Government funds.

21. Some idea of the extension of private enterprise may be gained by the reflection that, of 3,852 high and middle English schools, only 286 are Government institutions. These figures, however, cover many types of schools, from the most efficient to the least efficient. Admirable schools have been and are maintained by missionaries and other bodies. But the underlying idea of the grant system, the subvention of local organised effort, has not always been maintained. Schools of a money-making type, ill-housed, ill-equipped, and run on the cheapest lines, have in certain cases gained recognition and eluded the control of inspection. Schools have sprung into existence in destructive competition with neighbouring institutions. Physical health has been neglected and no provision has been made for suitable residential arrangements and playfields. Fee-rates have been lowered; competition and laxity in transfer have destroyed discipline; teachers have been employed on rates of pay insufficient to attract men capable of instructing or controlling their pupils. Above all, the grants-in-aid have from want of funds often been inadequate. No fewer than 360 high schools with 80,247 pupils are in receipt of no grant at all, and are maintained at an average cost of less than half that of a Government school, mainly by fee-collections. Especially do these conditions prevail in the area covered by the old provinces of Bengal and Eastern Bengal and Assam; a result due, no doubt, to the rapid extension of English education beyond the ability of the Local Governments to finance it. In Bengal and Eastern Bengal the number of high schools is greater than in the rest of British India put together, and the cost of their maintenance to public funds is proportionately less than a third of the cost prevailing in other provinces. A special enquiry showed that out of some 4,700 teachers in privately managed high schools in these areas about 4,200 were in receipt of less than Rs. 50 a month, some 3,300 of less than Rs. 30 a month while many teachers of English and classical languages drew salaries that would not attract men to superior domestic service. The great variations in conditions in different parts of India point to the difficulty of making any but the most general statements about

the results of private enterprise and the special measures that are needed to assist it to perform efficiently its work in the educational system.

SECONDARY ENGLISH SCHOOLS. GENERAL PRINCIPLES.

22. Subject to the necessities of variation in deference to local conditions the policy of the Government of India in regard to secondary English schools is—

(3) To improve the few existing Government schools, by—

(a) employing only graduates or trained teachers;

(b) introducing a graded service for teachers of English with a minimum salary of Rs. 40 per month and a maximum salary of Rs. 400 per month;

(c) providing proper hostel accommodation;

(d) introducing a school course complete in itself with a staff sufficient to teach what may be called the modern side with special attention to the development of an historical and a geographical sense;

(e) introducing manual training and improving science teaching;

(2) To increase largely the grants-in-aid in order that aided institutions may keep pace with the improvements in Government schools on the above-mentioned lines, and to encourage the establishment of new aided institutions where necessary.

(3) To multiply and improve training colleges so that trained teachers may be available for public and private institutions.

(4) To found Government schools in such localities as may, on a survey of local conditions and with due regard to economy of educational effort and expense, be proved to require them.

GRANTS-IN-AID.

23. The Government of India also desire that the grant-in-aid rules should be made more elastic so as to enable each school, which is recognised as necessary and conforms to the prescribed standards of management and efficiency, to obtain the special assistance which it requires in order to attain the fullest measure of utility. As larger grants become available and as the pay and the personnel of the teaching staff are improved, it will be possible for the inspecting officer to concentrate his attention more and more upon the general quality of instruction. Full encouragement can then be given to improved and original methods of teaching and courses; and gradually the grant-earning capacity of an institution will come to be judged on grounds of general efficiency and desert rather than by rigid rules of calculation.

MODERN SIDE.

24. The introduction of a school course complete in itself and of a modern and practical character, freed from the domination of the Matriculation examination, was recommended in the first instance by the Education Commission of 1882. In some

provinces and particularly in Madras real progress has been made towards the accomplishment of this reform. The figures for 1901-02 and 1910-11 are:—

	1901-02.	
	School Final (candidates).	Matriculation (candidates).
Madras and Coorg ...	191	7,682
Bombay ...	1,162	3,781
United Provinces ...	52	1,704
Central Provinces ...		473
	1910-1911..	
Madras and Coorg ...	7,317*	782
Bombay ...	1,360	3,766
United Provinces ...	916	2,206
Central Provinces ...	558	702

In other provinces the school final examination has not yet been established except for special purposes. The total number of candidates in 1910-11 for the school final examination or leaving certificate in all British provinces was 10,161; that of candidates for Matriculation was 16,952.

SECONDARY ENGLISH SCHOOL LEAVING CERTIFICATE.

25. The principal objects of the school final examination are adaptability to the courses of study and avoidance of cram. In those provinces in which a school final examination or school leaving certificate has not been introduced the Government of India desire that it should be instituted as soon as practicable. They suggest for the consideration of Local Governments and Administrations further developments of the system in regard to the character of the tests by which certificates are granted at the end of the school course. Before proceeding further, however, they re-state and emphasise the three principles laid down by the Indian Universities' Commission in paragraph 170 of their report.

"(1) The conduct of a school final or other school examination should be regarded as altogether outside the functions of a University.

(2) It would be of great benefit to the Universities if the Government would direct that the Matriculation examination should not be accepted as a preliminary or full test for any post in Government service. In cases where the Matriculation examination qualifies for admission to a professional examination the school final examination should be substituted for it.

(3) It would be advantageous if the school final examination could, in the case of those boys who propose to follow a University career, be made a sufficient test of fitness to enter the University. Failing this, the best arrangement would appear to be that the Matriculation candidate should pass in certain subjects in the school final examination, and be examined by the University with regard to any

* School-leaving certificate.

further requirements that may be deemed necessary."

26. The value of external examination cannot be overlooked. It sets before the teacher a definite aim and it maintains a standard; but the definite aim often unduly overshadows instruction, and the standard is necessarily narrow and in view of the large numbers that have to be examined must confine itself to mere examination achievement, without regard to mental development or general growth of character. On the other hand the drawbacks of external examinations are becoming more generally apparent, and attention was prominently drawn to them in the Report of the Consultative Committee on Examinations in Secondary Schools in England. They fail, especially in India, in that they eliminate the inspecting and teaching staff as factors in the system, that they impose all responsibility upon a body acquainted but little (if at all) with the schools examined, that they rely upon written papers, which afford no searching test of intellect, no test at all of character or general ability, and that they encourage cram.

27. A combination of external and internal examinations is required. The Government of India consider that, in the case of a school recognised as qualified to present candidates for a school leaving certificate, a record should be kept of the progress and conduct of each pupil in the highest classes of the school, and that the Inspector should enter his remarks upon these records at his visits and thus obtain some acquaintance with the career of each candidate during the two or three years before examination. These records, together with the marks obtained by pupils at school tests, would be valuable and would supplement a test conducted partly through written papers on the more important subjects of instruction, but also orally and with regard to the pupil's past career. The oral examination would be conducted by the Inspector in consultation with members of the staff. A large increase in the superior inspecting staff would be required to work a system of this kind and safeguards would be necessary to protect teachers from undue influences; the Government of India are prepared to assist, with such grants as they may be able to afford, the introduction of any such system which may be locally practicable. The school leaving certificate systems of Madras and the United Provinces fulfil many of the requirements of the reform in view, but their precise characteristics may not be found altogether suitable in other areas. Some such system, however, as has been sketched above, adapted to local conditions, would, it is believed, be most beneficial and do more than anything else to foster a system under which scholars would be taught to think for themselves instead of being made to memorize for examination purposes. Next to the improvement of the pay and prospects of teachers, which must accompany and even precede its introduction, this is perhaps the most important reform required in secondary English education.

TECHNICAL AND INDUSTRIAL EDUCATION.

28. No branch of education at present evokes greater public interest than technical and industrial instruction. Considerable progress has been made since 1904. Existing educational institutions have been overhauled and equipped for new courses. Scholarships tenable in Europe and America have been established. Thanks to the generosity of the Tata family, seconded by liberal financial aid from the Government of India and His Highness the Maharaja of Mysore, an Indian Institute of Science, designed upon a large scale, has been established at Bangalore; it was thrown open to pupils in 1911. The establishment of a Technological Institute at Cawnpore for the chemistry of sugar manufacture and leather, for textiles and for acids and alkalies, has been sanctioned. Industrial schools have been opened in several provinces. Altogether the number of technical and industrial schools has risen since 1904 from 88 to 218, and the number of pupils from 5,072 to 10,535.

TECHNICAL SCHOLARSHIPS.

29. The system of technical scholarships tenable abroad is still on trial, and a committee is examining the whole question in England. It is not always easy to arrange suitable courses of study; and study abroad puts the pupils at a disadvantage in removing them from the environment of Indian trade conditions. From the information available it appears that, of 73 scholars sent abroad, 36 have not returned to India while 18 are at present industrially employed in India.

COORDINATION IN TECHNICAL EDUCATION.

30. The policy to be pursued in regard to technical and industrial education was discussed at the Allahabad Conference. The Government of India accept the conclusions of that Conference that progress should continue along the lines generally followed hitherto, viz., that—

(1) the Indian Institute of Science, which provides for research, the application of new processes and the production of thoroughly trained managers, should be developed, as opportunity offers, and become eventually a complete faculty of pure and applied science;

(2) the larger provincial institutions, which attract students from different parts of India, and afford instruction in practical methods of management and supervision, should in the first instance specialise along lines converging on local industries—a plan which will prevent overlapping and make for economy. Subsequently, as industries arise and the demand for managers and foremen increases, other and more varied courses may be found necessary;

(3) the lesser industrial schools, minor weaving institutions, such of the schools of art as have an industrial bent, the artisan classes in Bengal, and trade schools generally, should be permanently

directed toward such industries as exist in the localities where the institutions are situated.

TECHNICAL EDUCATION ON COMMERCIAL LINES.

31. The question has arisen as to how far educational institutions should develop on commercial lines. It has been decided that while educational institutions should in no case trade on commercial lines, in certain cases instruction in industrial schools may be supplemented by practical training in workshops where the application of new processes needs to be demonstrated. In certain cases, also, it will be necessary to purchase and maintain experimental plant for demonstrating the advantages of new machinery or new processes, and for ascertaining the data of production.

INDUSTRIAL OPENINGS FOR INDIANS.

32. Quite recently Lieutenant-Colonel E. H. de V. Atkinson, R.E., Principal of the Thomason College, Boorkee, and Mr. T. S. Dawson, Principal of the Victoria Jubilee Technical Institute, Bombay, were deputed to enquire how technical institutions can be brought into closer touch and more practical relations with the employers of labour in India. Their report contains many suggestions which are under consideration, and emphasises the necessity of studying the demand for technically-trained men, of attracting Indian capital to industrial enterprise and of supplementing tuition at college by a period of apprenticeship. It also indicates that, while the field of employment or occupation in the highest grades is at present limited, the outlook for Indians is generally hopeful, provided the necessity for preliminary practical training is fully realised.

SCHOOLS OF ART.

33. There are four Government schools of arts in India with some 1,300 pupils, of which two are mainly industrial schools or schools of design. Interesting developments are the rise at the Calcutta institution of a new school of Indian painting, which combines Indian treatment of subjects with western technique, and the foundation of an architectural branch in the institution at Bombay. But much remains to be done in connection with the indigenous art industries. This matter requires careful expert consideration. The Government of India will address Local Governments on the subject and for the present content themselves with advocating the importance and urgency of preserving for, and in India scientifically arranged collections of the products of its ancient and modern arts and crafts. The understanding and appreciation of eastern art-work in Europe and America is draining good specimens in increasing volume into the public collections of those continents.

MUSEUMS.

34. The relation of museums to the educational systems of India was discussed at the Conference held at Simla in July 1911. Much valuable work has been done by the zoological and geological

sections of the Indian Museum at Calcutta, which are now equipped on modern lines. The archaeological section of the same museum has recently been re-organised under the direction of Mr. Marshall, Director-General of Archaeology. In provinces outside Bengal also there has been good progress in the right direction, but in the case of most local museums there is need of better equipment and a stronger staff. One of the most urgent needs in India is an ethnographic museum under scientific management designed to illustrate Indian civilisation in its varied phases. Otherwise students in the future will be compelled to visit the museums of Paris, Berlin, Munich and other places in order to study subjects which should clearly be studied best on Indian soil. The Government of India will consult expert opinion on the subject; as at present advised they are inclined to favour the formation of a museum of Indian arts and ethnography at Delhi. Their accepted policy, though some overlapping is inevitable, is to develop local museums with special regard to local interest and to concentrate on matters of general interest in Imperial museums. How to make museums more useful educationally and secure greater co-operation between museum authorities and educational authorities is a matter on which they have addressed Local Governments.

AGRICULTURAL EDUCATION.

35. The present scheme of agricultural education originated under Lord Curzon's government and is, in fact, only seven years old. Previous to the year 1905, there was no central institution for research or teaching and such education as was then imparted in agriculture, was represented by two colleges and three schools, in a more or less decadent condition. Very few Indians then had any knowledge of science in its application to agriculture and still fewer were capable of imparting such knowledge to others. In the year 1905 a comprehensive scheme was evolved under which arrangements were made both for the practical development of agriculture by Government assistance and also for teaching and research in agriculture and subjects connected with it. A central institution for research and higher education was established at Pusa. The existing schools and colleges were reconstituted, improved and added to. Farms for experiments and demonstration were started, and as time went on, a change was effected in regard to agricultural education in its earlier stages. As now constituted the scheme of agricultural education has three main features, viz., (a) the provision of first class opportunities for the higher forms of teaching and research, (b) collegiate education and (c) the improvement of secondary and primary education.

36. The institute at Pusa, maintained at a cost of four lakhs a year, has 37 Europeans and Indians on its staff, engaged partly in research, partly in post-graduate education and the instruction, through short courses, of students or agriculturists in subjects which are not regularly treated in provincial institutions. There are now six provincial institu-

tions, containing over 300 students and costing annually between five and six lakhs of rupees. Practical classes for agriculturists have also been established at various centres in several provinces. In the ordinary elementary schools, formal agriculture is not taught; but in some provinces a markedly agricultural colour is given to the general scheme of education.

VETERINARY EDUCATION.

37. Veterinary research is carried on at the Bacteriological Laboratory at Muktesar. The scheme of veterinary colleges has been thoroughly reorganised since 1904. There are now four such institutions, with 511 students, as well as a school at Rangoon. These institutions meet fairly well the growing demand for trained men.

FORESTRY EDUCATION.

38. The College at Dehra Dun has recently been improved; and a research institution has been established in connection with it. Indians can here obtain an education in forestry which approximates to that ordinarily obtainable in Europe.

MEDICAL EDUCATION.

39. Instruction in the western system of medicine is imparted in five recognised colleges and fifteen recognised schools in British India. These now annually produce between six and seven hundred qualified medical practitioners. A Medical Registration Act has recently been passed for the Presidency of Bombay, under which passed students of such schools are entitled to become registered; and a similar Act is now under consideration in the Presidency of Bengal. In Calcutta there are four self-constituted medical schools, the diplomas of which are not recognised by the Government of India. Among recent developments may be mentioned the establishment of an X-ray institute at Dehra Dun, and the formation of post-graduate classes in connexion with the Central Research Institute at Kasanli. These latter include training in bacteriology and technique and preparation for special research; classes of practical instruction in malarial technique are also held twice a year at Amritsar under the officer in charge of the malarial bureau.

40. Other projects are engaging the attention of the Government of India, including the institution of a post-graduate course of tropical medicine. The practical want of such a course has long been felt; and the Government of India are now in communication with the Secretary of State regarding its establishment in the Medical College at Calcutta. The Calcutta University have expressed their willingness to co-operate by instituting a diploma to be open to graduates who have taken the course in tropical medicine. A scheme for a similar course in Bombay is also under consideration. The Government of Madras have submitted a scheme for the construction of a pathological institute and the appointment of a whole-time professor of patho-

logy with a view to improve the teaching of that subject at the Madras Medical College. Other matters which are likely to come to the front at no distant date are the improvement of the Medical College at Lahore and its separation from the school, the improvement of the Dacca Medical School and the provision of facilities for medical training in the Central Provinces.

41. The subject of medical education is one in which the Government of India are deeply interested. It is also one that may be expected to appeal with special force to private generosity. A problem of particular importance is the inducement of ladies of the better classes to take employment in the medical profession and thus minister to the needs of the women, whom the *purda* system still deters from seeking timely medical assistance. One of the hindrances hitherto has been that Indian ladies are able to obtain instruction only in men's colleges or in mixed classes. With a view to remedying this defect and commemorating the visit of the Queen-Empress to Delhi, certain of the Princes and wealthy landowners in India have now come forward with generous subscriptions in response to an appeal by Her Excellency Lady Hardinge, who has decided to merge in this project her scheme for a school for training Indian nurses and midwives. The Government of India are considering proposals to found a women's medical college and nurses' training school at Delhi with the help of a subvention from Government. Proposals are also under consideration for assisting the National Association for supplying female medical aid to the women of India (the Countess of Dufferin's Fund) to improve the position of their staff.

LEGAL EDUCATION.

42. There has been a marked development of legal education in the last decade. First it has been concentrated. In 1901 there were 35 institutions, colleges, classes and schools, containing 2,800 students. At the present time there are 27 institutions with a slightly larger number of students. The Madras and Bombay presidencies, Burma and the Central Provinces each possess a single institution; and in Bengal the instruction for the degree of bachelor of law has been restricted to certain colleges, although other institutions are still recognised for the pleaders examination. A law college has been established on a liberal scale under the University of Calcutta. This concentration has resulted in greater efficiency and greater expenditure. In 1901, the cost to Government was a little over Rs. 7,000 and the total cost was 1½ lakhs. At present the cost to Government is over Rs. 45,000 and the total cost over Rs. 2,83,000. Secondly the courses have been remodelled and in some cases lengthened. The Government of India will be glad to see an extension of the policy of concentration and improvement. They also desire to see suitable arrangements made for the residence and guidance of law students.

COMMERCIAL EDUCATION.

43. There has recently been a considerable expansion in commercial education. Nine years ago there were ten colleges with less than 600 students, and Government spent less than Rs. 4,000 upon these institutions. At the present time there are 26 institutions, three of which are under the management of Government, the enrolment is now over 1,500 and the expenditure from provincial funds is over Rs. 22,000. The standard attained in the majority of these institutions is not, however, high, and the instruction given in them prepares for clerical duties in Government and business offices rather than for the conduct of business itself. A project for a commercial college of a more advanced type in Bombay has been sanctioned and the Government of India are considering the question of making arrangements for organised study of the economic and allied sociological problems in India.

UNIVERSITY EDUCATION.

44. Good work, which the Government of India desire to acknowledge, has been done under conditions of difficulty by the Indian Universities; and by common consent the Universities' Act of 1904 has had beneficial results; but the condition of University education is still far from satisfactory, in regard to residential arrangements, control, the courses of study and the system of examination. The Government of India have accordingly again reviewed the whole question of University education.

AFFILIATING AND TEACHING UNIVERSITIES.

45. It is important to distinguish clearly on the one hand the federal University, in the strict sense, in which several colleges of approximately equal standing separated by no excessive distance or marked local individuality are grouped together as a University—and on the other hand the affiliating University of the Indian type, which in its inception was merely an examining body, and, although limited as regards the area of its operations by the Act of 1904 has not been able to insist upon an identity of standard in the various institutions conjoined to it. The former of these types has in the past enjoyed some popularity in the United Kingdom, but after experience it has been largely abandoned there; and the constituent colleges which were grouped together have for the most part become separate teaching Universities, without power of combination with other institutions at a distance. At present there are only 5 Indian Universities for 185 arts and professional colleges in British India besides several institutions in Native States. The day is probably far distant when India will be able to dispense altogether with the affiliating University. But it is necessary to restrict the area over which the affiliating Universities have control by securing in the first instance a separate University for each of the leading provinces in India and secondly to create new local

teaching and residential Universities within each of the provinces in harmony with the best modern opinion as to the right road to educational efficiency. The Government of India have decided to found a teaching and residential University at Dacca and they are prepared to sanction under certain conditions the establishment of similar Universities at Aligarh and Benares and elsewhere as occasion may demand. They also contemplate the establishment of Universities at Rangoon, Patna and Nagpur. It may be possible hereafter to sanction the conversion into local teaching Universities, with power to confer degrees upon their own students, of those colleges which have shown the capacity to attract students from a distance and have attained the requisite standard of efficiency. Only by experiment will it be found out what type or types of Universities are best suited to the different parts of India.

HIGHER STUDIES.

46. Simultaneously the Government of India desire to see teaching faculties developed at the seats of the existing Universities and corporate life encouraged, in order to promote higher study and create an atmosphere from which students will imbibe good social, moral and intellectual influences. They have already given grants and hope to give further grants hereafter to these ends. They trust that each University will soon build up a worthy University library, suitably housed, and that higher studies in India will soon enjoy all the external conveniences of such work in the west.

47. In order to free the Universities for higher work and more efficient control of colleges, the Government of India are disposed to think it desirable (in provinces where this is not already the case) to place the preliminary recognition of schools for purposes of presenting candidates for matriculation in the hands of the Local Governments and in case of Native States of the durbars concerned while leaving to the Universities the power of selection from schools so recognised. The University has no machinery for carrying out this work and in most provinces already relies entirely on the departments of public instruction, which alone have the agency competent to inspect schools. As teaching and residential Universities are developed the problem will become even more complex than it is at present. The question of amending the Universities Act will be separately considered.

48. The Government of India hope that by these developments a great impetus will be given to higher studies throughout India and that Indian students of the future will be better equipped for the battle of life than the students of the present generation.

CHIEFS' COLLEGES.

49. The chiefs' colleges advance in popularity. In developing character and imparting ideas of corporate life they are serving well the purpose for which they were founded. They are also attaining steadily increasing intellectual efficiency

but the Committee of the Mayo College, Ajmere, have decided that it is necessary to increase the European staff. The post diploma course has on the whole worked satisfactorily and there is now a movement on foot to found a separate college for the students taking this course. Such a college may in the future become the nucleus of a university for those who now attend the chiefs' colleges.

50. The grave disadvantages of sending their children to England to be educated away from home influences at the most impressionable time of life are being realised by Indian parents. The Government of India have been approached unofficially from more than one quarter in connection with a proposal to establish in India a thoroughly efficient school staffed entirely by Europeans and conducted on the most modern European lines for the sons of those parents who can afford to pay high fees. No project is yet before them but the Government of India take this opportunity to express their sympathy with the proposal and should sufficient funds be forthcoming will be glad to assist in working out a practical scheme.

TRAINING OF TEACHERS.

51. Few reforms are more urgently needed than the extension and improvement of the training of teachers, for both primary and secondary schools in all subjects including, in the case of the latter schools, science and oriental studies. The object must steadily be kept in view that eventually under modern systems of education no teacher should be allowed to teach without a certificate that he is qualified to do so. There are at present 15 colleges and other institutions for the instruction of those who will teach through the medium of English; these contain nearly 1,400 students under training. There are 550 schools or classes for the training of vernacular (mainly primary) teachers; and their students number over 11,000. The courses vary in length from one to two years. The number of teachers turned out from these institutions does not meet the existing demand and is altogether inadequate in view of the prospects of a rapid expansion of education in the near future. The Government of India desire Local Governments to examine their schemes for training teachers of all grades and to enlarge them so as to provide for the great expansion which may be expected, especially in primary education.

52. As regards training colleges for secondary schools some experience has been gained. But the Government of India are conscious that the subject is one in which a free interchange of ideas based on the success or failure of experiment is desirable. The best size for a practising school and the relations between it and the one college; the number of students in the college for which the practising school can afford facilities of demonstration without losing its character as a model institution; the nature of, and the most suitable methods of procedure in, practical work; the relative importance of methodology and of psychological study; the best

treatment of educational history; the extent to which it is desirable and practicable to include courses in subject-matter in the scheme of training, especially courses in new subjects such as manual training and experimental science; the points in which a course of training for graduates should differ from one for non-graduates; the degree to which the body awarding a diploma in teaching should base its award on the college records of the student's work—these and other unsolved questions indicate that the instructors in training colleges in different parts of India should keep in touch with each other and constantly scrutinize the most modern developments in the west. Visits made by selected members of the staff of one college to other institutions and the pursuit of furlough studies would seem especially likely to lead to useful results in this branch of education.

PAY AND PROSPECTS OF THE SERVICES.

53. The Government of India have for some time had under consideration the improvement of the pay and prospects of the educational services, Indian, Provincial and Subordinate. They had drawn up proposals in regard to the first two services and approved some schemes forwarded by Local Governments in regard to the third, when it was decided to appoint a Royal Commission on the Public Services of India. The Government of India recognise that improvement in the position of all the educational services is required, so as to attract first class men in increasing numbers, and while leaving questions of re-organisation for the consideration of the Commission are considering minor proposals for the improvement of the position of these services. They attach the greatest importance to the provision for the old age of teachers, either by pension or provident fund. Teachers in Government institutions and, in some areas, teachers in schools managed by local bodies are eligible for these privileges. But it is necessary to extend the provision in the cases of board and municipal servants and still more in the cases of teachers of privately-managed schools, for the great majority of whom no such system exists. It is not possible to have a healthy moral atmosphere in any schools, primary or secondary, or at any college when the teacher is discontented and anxious about the future. The Governor-General in Council desires that due provision for teachers in their old age should be made with the least possible delay. Local Governments have already been addressed upon this subject.

EDUCATION OF THE DOMICILED COMMUNITY.

54. The defective state of the education of the domiciled community has long been remarked. Many suggestions have from time to time been made for its improvement. An influential committee, presided over by Sir Robert Laidlaw, is now collecting funds for the schools of all denominations except Roman Catholic schools. As in the case of secondary English education and for similar

reasons the policy has been, as is, to rely on private enterprise guided by inspection and aided by grant from public funds. The Government of India have never had any intention of changing their policy. But in order to discuss the whole question and to obtain definite practical suggestions of reform they assembled an influential conference at Simla last July.

55. The recommendations of the conference were numerous and far-reaching. The Government of India are prepared to accept at once the view that the most urgent needs are the education of those children who do not at present attend school and the improvement of the pay and prospects of teachers. They are also disposed to regard favourably the proposal to erect a training college at Bangalore with arts and science classes for graduate courses attached to it. They recognise that grants-in-aid must be given in future on a more liberal scale and under a more elastic system. They will recommend to Local Governments the grant of a greater number of scholarships to study abroad. The proposals to re-classify the schools, to introduce leaving certificates, to include in courses of instruction general hygiene and physiology, special instruction in temperance and the effects of alcohol on the human body, and the several other detailed proposals of the conference will be carefully considered in the light of the opinions of Local Governments when they have been received.

56. The suggestion was put forward and largely supported at the conference that European education should be centralised under the Government of India. This suggestion cannot be accepted. Apart from the fact that decentralisation is the accepted policy of Government, the course of the discussion at the conference showed how different were the conditions of life of members of the domiciled community in different parts of India, and how these differences necessarily reacted on their educational arrangements. The Government of India are convinced that although some difficulties might be removed, more would be created, by centralisation.

EDUCATION OF MUHAMMADANS.

57. The figures and general remarks contained in this Resolution are general and applicable to all races and religions in India, but the special needs of the Muhammadans and the manner in which they have been met demands some mention. The last nine years have witnessed a remarkable awakening on the part of this community to the advantages of modern education. Within this period the number of Muhammadan pupils has increased by approximately 50 per cent. and now stands at nearly a million and a half. The total Muhammadan population of India is now 57,423,866 souls. The number at school accordingly represents over 16.7 per cent. of those of a school-going age. Still more remarkable has been the increase of Muhammadan pupils in higher institutions, the outturn of Muhammadan graduates having in the same period increased by

nearly 80 per cent. But, while in primary institutions the number of Muhammadans has actually raised the proportion at school of all grades among the children of that community to a figure slightly in excess of the average proportion for children of all races and creeds in India, in the matter of higher education their numbers remain well below that proportion notwithstanding the large relative increase. The facilities offered to Muhammadans vary in different provinces but generally take the form of special institutions such as *madrassas*, hostels, scholarships and special inspectors. The introduction of simple vernacular courses into *maktabs* has gone far to spread elementary education amongst Muhammadans in certain parts of India. The whole question of Muhammadan education, which was specially treated by the Commission of 1882, is receiving the attention of the Government of India.

ORIENTAL STUDIES.

58. The Government of India attach great importance to the cultivation and improvement of oriental studies. There is increasing interest throughout India in her ancient civilisation, and it is necessary to investigate that civilisation with the help of the medium of western methods of research and in relation to modern ideas. A conference of distinguished orientalists held at Simla in July 1911 recommended the establishment of a central research institute on lines somewhat similar to those of L'Ecole Francaise d'Extrême Orient at Hanoi. The question was discussed whether research could efficiently be carried on at the existing Universities; and the opinion predominated that it would be difficult to create the appropriate atmosphere of oriental study in those Universities as at present constituted, that it was desirable to have in one institution scholars working on different branches of the kindred subjects which comprise orientalia and that for reasons of economy it was preferable to start with one institute well-equipped and possessing a first class library. The Government of India are inclined to adopt this view and to agree with the conference that the central institute should not be isolated, that it should be open to students from all parts of India and that it should as far as possible combine its activities with those of the Universities of India and different seats of learning. The object of the institute as apart from research is to provide Indians highly trained in original work who will enable schools of Indian history and archaeology to be founded hereafter, prepare *catalogues raisonnés* of manuscripts, develop museums and build up research in Universities and colleges of the different provinces. Another object is to attract in the course of time *Pandits* and *Mouleis* of eminence to the institute and so to promote an interchange of the higher scholarship of both the old and the new school of orientalists throughout India. But before formulating a definite scheme the Governor-General in Council desires to consult Local Governments.

PRESERVATION OF THE ANCIENT LEARNING.

59. While making provision for scholarship on modern lines, the conference drew attention to the necessity of retaining separately the ancient and indigenous systems of instruction. The world of scholarship, they thought, would suffer irreparable loss if the old type of *Pandit* and *Moulti* were to die out before their profound knowledge of their subjects had been made available to the world; and encouragement rather than reform was needed to prevent such an unfortunate result. Certain proposals for encouragement were made at the conference, viz.:—

(a) grants to Sanskrit colleges, *madrassas*, *tolis*, *patshalas*, *maktabs*, *pongyi kyaungs* and other indigenous institutions in order to secure better salaries for teachers and to enable students by fellowships or scholarships to carry their education to the highest point possible;

(b) the appointment of specially qualified Inspectors in orientalia;

(c) the provision of posts for highly trained *Pandits* and *Moultis*;

(d) the grant of money rewards for oriental work. The Government of India hope to see the adoption of measures that are practicable for the maintenance and furtherance of the ancient indigenous systems of learning and have called for proposals from the Local Governments to this end.

EXPERTS REQUIRED.

60. The functions of local bodies in regard to education generally and their relations with the departments of public instruction are under the consideration of the Government of India. But it is clear that if comprehensive systems are to be introduced expert advice and control will be needed at every turn. The Government of India propose to examine in communication with Local Governments the organisation for education in each province and its readiness for expansion. A suggestion has been made that the Director of Public Instruction should be *ex-officio* Secretary to Government. The Government of India agreeing with the great majority of the Local Governments are unable to accept this view, which confuses the position of administrative and Secretariat officers; but they consider it necessary that the Director of Public Instruction should have regular access to the head of the administration or the member in charge of the portfolio of education. The Government of India wish generally to utilise to the full the support and enthusiasm of district officers and local bodies in the expansion and improvement of primary education; but the large schemes, which are now in contemplation, must be prepared with the co-operation and under the advice of experts. A considerable strengthening of the superior inspecting staff, including the appointment of specialists in science, orientalia, etc., may be found necessary in most provinces. In Madras an experienced officer in the education de-

partment has been placed on special duty for two years to assist the Director of Public Instruction to prepare the scheme of expansion and improvement in that province, and the Government of India would be glad to see a similar arrangement in all the major provinces should the Local Governments desire it.

INTERCHANGE OF VIEWS.

61. In the resolution of 1904 it was stated that arrangements would be made for periodical meetings of the Directors of Public Instruction in order that they might compare their experience of the results of different methods of work and discuss matters of special interest. The Government of India have already held general conferences at which the Directors attended and they are convinced that periodical meetings of Directors will be of great value. While each province has its own system it has much to learn from other provinces, and, when they meet, Directors get into touch with new ideas and gain the benefit of experience obtained in other provinces. The Government of India are impressed with the necessity not only of exchange of views amongst experts but also of the advantages of studying experiments all over India on the spot; and in a letter of the 7th July 1911, they invited Local Governments to arrange that professors of arts and technical colleges and Inspectors of schools should visit institutions outside the province where they are posted, with a view to enlarging their experience.

CONCLUSION.

62. Such in broad outline are the present outlook and the general policy for the near future of the Government of India. The main principles of this policy were forwarded to His Majesty's Secretary of State on the 28th September 1911, and parts of it have already been announced. It was, however, deemed convenient to defer the publication of a resolution until the whole field could be surveyed. This has now been done. The Governor-General in Council trusts that the growing section of the Indian public which is interested in education will join in establishing under the guidance and with the help of Government, those quickening systems of education on which the best minds in India are now converging and on which the prospect of the rising generation depend. He appeals with confidence to wealthy citizens throughout India to give of their abundance to the cause of education. In the foundation of scholarships; the building of hostels, schools, colleges, laboratories, gymnasia, swimming baths, the provision of play-grounds and other structural improvements; in furthering the cause of modern scientific studies and especially of technical education; in gifts of prizes and equipment, the endowment of chairs and fellowships, and the provision for research of every kind there is a wide field and a noble opportunity for the exercise on modern lines of that charity and benevolence for which India has been renowned from ancient times.

Government of Madras.
 Ditto Bombay.
 Ditto Bengal.
 Ditto the United Provinces.
 Ditto the Punjab.
 Ditto Burma.
 Ditto Bihar and Orissa.
 The Hon'ble the Chief Commissioner, Central Provinces.
 The Hon'ble the Chief Commissioner, Assam.
 The Chief Commissioner of Coorg.
 The Hon'ble the Chief Commissioner and Agent to the Governor-General, North-West Frontier Province.
 The Home Department.
 The Foreign Department.
 The Department of Revenue and Agriculture.
 Ditto Commerce and Industry.

Order.—Ordered, that a copy of the above Resolution be forwarded for information to the Local Governments and Administrations and the Departments of the Government of India noted on the margin.

Ordered, also that the Resolution be published in the Supplement to the *Gazette of India*.

H. SHARP,
 Joint Secretary to the Government of India.

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UNIVERSITY OF BOMBAY.

CONVOCATION ADDRESS.*

The following address was delivered by H. E. Lord Sydenham, the Chancellor:—

Mr. Vice-Chancellor and Members of the University of Bombay—

It has been well said that the British people "only hold India on the tenure of continuous amelioration." To secure continuous advance in every direction leading to the moral and material well-being of all classes is the manifest duty of all Governments however constituted and the sole justification of their existence; but upon us the responsibility lies with special weight. We found an India distracted and wasted by internal wars, split into fragments and incapable of self-organization. To enforce stable peace was the first necessary condition of the establishment of a system under which law and order could be maintained, justice administered and national consolidation rendered possible. The way to British ascendancy was long, arduous and critical. For all Indians who desire—as many do—to pass judgments upon existing institutions, careful study of their history from the period when the European Powers became involved in Eastern enterprise is essential. Such a study would provide a needed corrective of the misconceptions which find too frequent expression and would exercise a sobering influence upon the trend of political thought.

Portugal, Spain, Holland, England and France have all contended for supremacy in the East, and the destinies of India turned upon vastly complex issues which were gradually determined by the interaction of great European forces. The short period of Portuguese prosperity in the East never recovered from the annexation of Portugal by Spain in 1580. Spain, at the end of the 16th century, claimed the monopoly of all trade with the East Indies and regarded the Indian seas as her territorial waters; but such a claim could not be sustained. Spanish enterprise was diverted to the Western hemisphere, and the recognition of the revolted Dutch Republic by Queen Elizabeth involved Spain in a naval war with England which extended to Asian waters and was fraught with momentous results to India. The Dutch captured from Spain the original Portuguese possessions, founded their East India Company in 1603, two years after the grant of a Charter to the London East India Company, and endeavoured to establish a monopoly of the trade of the East as complete as that which had been claimed by Spain. It was this Alliance between England and the Dutch United Provinces that gave the first impulse to British trade with

India. The Kingdoms of Spain and Portugal disappeared as contestants for commercial supremacy, and the Dutch and English Companies entered upon a long course of rivalry which lasted during the greater part of the 17th century and included three wars. The second of these wars found Holland in alliance with France one year after the establishment of a French East India Company, which was to play an important part in the affairs of India. The death of Aurangzeb in 1707 led to a climax in the period of disorder from which the East had long suffered acutely. Alike in Persia and in India, the great dynasties which had ruled for a century and a half were tottering to their fall. The Moghal Empire, which had maintained its outposts at Kabul and Kandahar, was quickly shattered. Bengal fell into the power of an Afghan adventurer; a new dynasty was founded in Oudh, and anyone who could command a sufficient following might carve out for himself a short-lived kingdom. The Maratha bands, developing into devastating armies, over-ran Central and Western India and contributed powerfully to the general break up of authority. When, in 1738, Nadir Shah, the successful soldier who had destroyed the Persian dynasty, swept from the North Western passes to the sack of Delhi and the wholesale slaughter of its inhabitants, the irrevocable ruin of the great Moghal Government was practically complete, and ten years later Ahmed Shah from Afghanistan conquered the Punjab. The Indian people, in Sir Alfred Lyall's words, "were becoming a masterless multitude prepared to acquiesce in the assumption of authority by anyone who could show himself able to discharge the most elementary functions of Government in the preservation of life and property."

This stupendous catastrophe—the greatest that India has yet experienced because never before had authority been wielded on so great a scale as by the Moghal Empire in its prime—was due wholly to internal causes. That it directly and inevitably paved the way for political intervention by the European Powers is beyond doubt; but the question of supremacy remained to be decided by the operation of great forces in which India played no part. Following Portugal and Spain, Holland also disappeared from the lists. A Danish and an Austrian Netherlands East India Company had died natural deaths. France and England at length stood face to face, and for a time the activity of the first was the greater. From 1744 to 1749 the two rival Companies were at war on the Indian Sea board with results which were distinctly encouraging to the plans of Dupleix, who had initiated the policy of intervening in the quarrels of Native Princes where French interests could be promoted. Thus inevitably arose the political rivalry which changed trade centres into bases for territorial expansion, and since trade needs peace and order as the primary conditions of its prosperity, such expansion continued, as Dupleix clearly foresaw that it must, after the French cause in India had been irretrievably lost. The confused warfare between the French and

* Reprinted from the University Edition of the Address.

English Companies added to the prevailing distraction of India, but had no real effect on the final issue. Financial difficulties assailed the former, which from the first was closely associated with the French Government, while the latter was an association of traders not brought under the control of Parliament till 1773.

Upon the potentialities of British Sea-power, the fate of India absolutely depended, and they were governed by conditions, racial and political, which shaped themselves in seas and lands far away. The Seven Years War, which began in 1756 and ended in 1763, was a triumph for the British Navy which, after ravaging the French coasts, won a brilliant victory in Quiberon Bay crippling the naval strength of France and enabling the British conquest of Canada to be achieved with results infinitely important to the future of the Empire. In the War of American Independence, from 1775 to 1783, Great Britain without an ally was involved with France, Spain, Holland and her revolted Colonists, and was menaced by the Armed Neutrality of Russia, Sweden, Denmark and Prussia. The strain upon the national resources was intense; but the Navy remained undefeated and rose in the Wars of the French Revolution and Empire from 1793 to 1815 to the summit of its power. The failure of the Navy during this series of international wars, in which it fought against the combinations of the great maritime Powers, would have quickly reacted upon India against which the last French naval effort was made in 1781. From the Peace of Versailles to this day, no Naval Power has attempted to contest the command of the Indian seas, and the trade of India, now increased to vast dimensions, passes secure under the ægis of the British flag. I am sure that the growing commercial classes of India and the large number of Indians who depend upon the operation of sea-borne trade realize what this means to their vital interests.

Once again did French designs upon India take practical form. In 1798, Napoleon dreaming of an Eastern Empire, led a great expedition to Egypt, where Nelson at the battle of the Nile destroyed the French fleet leaving the Military forces isolated. After an abortive attempt to conquer Syria, the French army, deserted by its Chief, was signally defeated in 1801 by a British and Turkish force under the walls of Alexandria before a contingent of 8,000 troops from Bombay could arrive upon the scene.

Secured by naval supremacy against the intervention of any European Power, it would have been possible for the British to proceed systematically to the subjugation of India; but this was not attempted or contemplated. By the occupation of Bengal, which soon followed the rout of the Nawab's forces by Clive at Plassey in 1757, the trading centre of Calcutta was expanded into a territorial possession dominating the vast plains and the great waterways that stretch north-westward for 1,200 miles towards the Indus and the Hindu Koosh. Bengal had been ruled by foreigners during long centuries, and the

capitals of the great conquering dynasties had been founded in the broad fertile regions watered by the rivers fed from the Himalayan snows. But never before had the gate of these regions been held by a Power which came by and drew its strength from across the sea. Henceforth, for 150 years, Calcutta was to be the centre of British Government in India, and a new political era began leading to the territorial ascendancy which, after the collapse of French rivalry, became inevitable. The process of expansion went on intermittently during nearly a century before the peace of all India was at length secured, and circumstances over which the British exercised no influence helped to bring about the final result. In the year of Plassey, an Afghan Army descended upon Delhi; but Ahmed Shah's Viceroy soon found that his dominion in the Punjab was challenged by the Marathas who took Delhi and Lahore and reached the summit of their power. In undertaking the conquest of Northern India they had overestimated their capacity and the retribution was swift and summary. In 1760, Ahmed Shah with a large army from Afghanistan, retook Lahore, and moved south-eastward to the Jomra heavily defeating Holkar and Sindia. The Peshwa made a great effort to retrieve his fortunes in Northern India, and at Panipat in 1761, the Marathas were routed in one of the greatest battles ever fought in Indian soil. The Maratha Power never wholly recovered from this blow and, though it remained formidable, symptoms of the same tendencies which had involved the ruin of the Moghul dominion soon began to show themselves, and contributed to the final overthrow at the beginning of the 19th century. Ahmed Shah unlike some previous invaders did not follow up his victory by consolidating his power, and the Punjab quickly lapsed into anarchy until the short-lived Sikh kingdom became established. In 1797, his successor Ziman Shah re-occupied but could not hold Lahore, and the series of Mahomedan invasions which had lasted for 700 years came to an end. All these events favoured the onward movement which was to lead the British from Bengal to the mountain frontiers of Afghanistan.

The hasty and incomplete sketch of a long and tangled chapter of history which I have attempted to draw may seem out of place on an occasion like this. My object is to give some idea of the forces which brought about the conditions under which we now live in India. In the long period of wars frequently recurring during which British control was gradually built up, it may well be that each and every step cannot be directly justified; but at least the dispassionate student of that period cannot fail to realize that conquest for conquest's sake and territorial aggrandizement were not our objects. We were groping—at first perhaps blindly—after political stability. Stable alliances with Native States able to organise and maintain orderly Government would have suited our requirements; but in the chaotic conditions which we found they were not available. Nor, till we reached the great mountain ramparts that separate India from Asia, were

stable frontiers to be attained. That, when the period of expansion ended, one-third of India remained under native Rule, and that innumerable States, large and small, should have been carefully preserved out of the welter of long racial and dynastic wars, enjoying security never previously known, is the best proof that our motives were never inspired by greed of territory.

Scarcely 150 years have elapsed since it became certain that dominion in India lay open to Great Britain and not to France from whom it might have been torn after Trafalgar or after Sedan. During little more than 50 years, since the cataclysm of the Mutiny, have we been able, in the full security of peace, to devote ourselves to the great work of "continuous amelioration" throughout the vast territories which have passed directly under the Crown. During the years of storm and stress through which Great Britain passed between 1756 and 1815, the ever growing responsibilities of the British people toward India may not have been realized. Full consciousness of our sacred obligations would not be reached until peace reigned over the length and breadth of India. It found expression in the Queen's Proclamation of 1858, and it has broadened and deepened ever since. The Britain of Queen Anne was not that of the Great Queen-Empress, which again has changed materially in becoming the Britain of His Majesty King George V and must continue to change. It is as unjust to attach importance to errors and defects which occurred in days that are gone as it would be to dilate upon atrocities perpetrated under contemporary Indian Rule. The one have long been as impossible as the other.

That dominion in India fell to a maritime Power was the certain result of causes operating through many centuries in India itself. That such dominion fell to Britain was not without certain advantages. The author of "The Future of England" analyses the reasons of the position won by the British people in the world, and after dismissing various hypotheses he reaches the conclusion that they—first among the nations—wrested from the State the right of religious freedom and with it civil liberty. To this conquest he traces the rise of our gigantic industrial system. "England had shaken man's authority and founded freedom. Free England had shaken nature's authority and founded industrialism" to which the best workmen of Europe, fleeing from religious persecution, powerfully contributed. To the nation which led the world in securing human liberty and in turning the limitless resources of nature to the service of mankind fell dominion in India. In the century during which that dominion was established, there was no other nation nearly so well fitted for the first task of building up gradually, but surely, an orderly and a just Government. Who will say that any other nation would be better able than are we to carry through the second task—that of uplifting and welding the heterogeneous peoples of India into harmonious nationhood and of leading them to

develop the natural resources of their great country?

This second task, in which we are now engaged and by success in which perhaps the historian of a distant future will mainly base his judgment upon our achievement, is proceeding steadily by various processes. Law, which never before our day was uniformly enforced, is a great, if sometimes a harsh, Schoolmaster. And if a great system of law, devised with the best intentions, has led to a mania for litigation intensified by the gambling instincts of the East, it is nevertheless a unifying force. Railways, telegraphs, the postal service, irrigation on a vast scale, even good roads are all playing their part in blending interests and breaking down social barriers. A nation in the modern sense could not be built up in India without railways which we have spread broadcast throughout the land. The English language, which is rapidly becoming the *lingua franca* of India, is another nationalizing factor of great importance, and without it the "National Congress" would be practically impossible. The self-sacrificing labours of Missionary associations of many kinds are providing examples of philanthropic service, which can be helpful to Eastern peoples with national aspirations. The liberal system of Local Self-Government which now exists supplies full opportunities for the harmonious working of all communities in the discharge of important civic duties. The enlarged Provincial Council provides higher training in the orderly conduct of affairs and brings together twenty-nine Indian Members, widely representative of Indian interests, to decide upon all legislation and to discuss matters affecting the public welfare.

You perhaps think that all these and other means of nation building are of minor significance compared with what is conventionally termed "Education," and undoubtedly the character and the acquirements of the young men and boys who annually leave the colleges and schools of any country are factors of extreme importance in relation to national progress. We have brought Western education into India, and the change was inevitably of the nature of an intellectual revolution not unlike the Great Renaissance movement, which profoundly stirred European thought in the fifteenth century and helped to inspire the spirit of enterprise which was to bring the West into close contact with the East.

In England, the evolution of higher education was slow, and till recent years unorganized and not controlled by Government. Oxford and Cambridge were flourishing in the 13th century; but religious tests were only abolished in my lifetime, and these great Universities were not wholly freed from Sectarian rule till 1871. Throughout the Middle Ages, the Church and the State strove for supremacy, and the latter when at length victorious claimed to assert unlimited authority over the religious thought of its subjects. It was, as I have said, in breaking down this authority that the English people led Europe into the paths of civil

liberty. In later years, education, long conducted entirely by the religious bodies, became one of the most important functions of the State. The first national grant for educational purposes was made by Parliament in 1832, and in 1843 the State gave financial aid to Training Colleges. The gross inefficiency of the teachers revealed by a Commission and the urgent needs for organization led to the Education Act of 1870 which nationalized Primary Education. This and subsequent Acts up to that of 1902 established the free and compulsory system which now prevails. English Secondary Schools existed before the accession of Henry VIII in 1509, and partly as a result of the Renaissance, 800 Grammar Schools were established in the following century, while most Cathedrals had an attached school. These schools developed on lines of their own, some of them attaining distinction, while many were hopelessly inefficient. Great changes have been carried out in recent years, and though Secondary Education of the middle classes remains self-supporting, grants-in-aid are now made to enable schools to provide free Secondary Education for the children of the working classes. Under the Act of 1902, as stated by Lord Haldane at Bristol the other day, the clever boy or girl can generally obtain a scholarship or a free place in a Secondary School, though further progress is still difficult. The completion of the chain connecting the Primary Schools with the Universities will soon be accomplished. In this Presidency, Government now provide for ten per cent. of free scholars in our High Schools and the Aided Schools may extend the free list to 15 per cent. The Secondary Schools of the United Kingdom have about 161,000 pupils compared with about 400,000 in Germany taught by 20,000 highly trained teachers. Since 1907, the teachers in the Elementary Schools of Great Britain have been obliged to spend a whole-time period in a Secondary School before entering a Training College.

When Western learning began in India, education in England, though considerable in quantity, was largely inefficient and wholly unorganized. Only in the latter half of last century was it realized that we were falling behind other countries and especially Germany where a great system devised and controlled by Government was being rapidly built up. The British habit of trusting to private agency and private effort, which has some great advantages, proved to be quite unsuited to modern educational needs, and the nation which led Europe in industrial enterprise was threatened with defeat on the field which it had dominated. Not only in scientific training, but in general education, we found that we were in danger of being outdistanced by rivals and that our national progress was impeded. Our complacency received a rude shock and we attempted in earnest to set our educational house in order. The paramount importance of Government responsibility in regard to education in all its branches is now recognized; careful study is devoted to education as a subject per se, and numerous and drastic

reforms are in full progress. The great question for this country to-day is whether Indians, like the Japanese, will welcome and assist in carrying out corresponding reforms or whether they will rest satisfied with obsolete methods which all advanced peoples have left far behind. Upon the answer to this question the speed of the progress of India towards nationhood largely depends.

It is a curious fact that the date of the first contribution from national funds to education in England only anticipated by three years what was a turning point of education in India. Lord William Bentinck desired that the education of India should be based upon "English literature and science." The first direct impulse, however, came from the Law Member of his Council, who in contemptuous rhetoric gave a false direction to education from which India has not yet recovered. Lord Macaulay's initial work on the Penal Code, which he did not remain to complete, was admirable. His idea that education should aim at producing Government officials showed a narrowness of vision which India has reason to deplore. As M. Chailley points out, "It necessarily followed that pupils were to be sought, not among the mass of the people, but in a special class." Until recent years Primary Education has been too much neglected, while Secondary and Higher Education absorbed a disproportionate share of public funds. The famous despatch of Sir Charles Wood in 1854 aimed at redressing the balance, and with a breadth of view remarkable at this period, enunciated a policy of giving instruction to the masses of the people, discussed methods, and promised financial support. For various reasons, the results were most disappointing; but new administrative machinery was created and Higher and Secondary Education gained to some extent. In 1857, the Universities of Calcutta, Madras and Bombay were formally inaugurated. The Act of that year, in the preamble, laid down that these new Institutions were primarily established "for the purpose of ascertaining by examination the persons who have acquired proficiency in different branches of Literature, Science and Art, and of rewarding them by Academical Degrees." This miserable conception of the objects of a University was apparently due to the selection of the London University as a model for India. The London University has since undergone radical reforms; but the Indian Universities, misdirected from their start, remain unregenerate.

The important Commission of 1902 was compelled to state that "in a rightly governed University, examination is subordinate to teaching; in India, teaching has been made subsidiary to examination." This, the Commissioners most wisely regarded as the "greatest evil from which the system of University education in India suffers." They further stated that "it is generally agreed that the legal powers of the Universities have been so narrowly drawn as to suggest that they are restricted to the functions of holding examinations and conferring degrees;" but they significantly

noted the existence of "a very general desire that all the Universities should be recognized as teaching bodies," and they made proposals for enabling them to provide "advanced courses of study."

The Report of this Commission and the Minutes of evidence should be carefully studied by everyone who desires to form any opinion upon the state of higher education in India. By 1902, Government and the Indians best qualified to judge had become perfectly aware of the grave defects in the system of higher education—defects which the Act of 1857 must have brought about in any country, but which were powerfully intensified by the characteristics, social and intellectual, of the Indian people. Examinations had been allowed to run riot with results demoralizing alike to the Universities and to education generally. To pass the Matriculation and to obtain a degree became an object of ardent desire, attracting large numbers of boys who inevitably failed in both; or, if successful, too often found later that their equipment was of no practical value. Meanwhile the Universities continued mechanically to grind out passes and failures; kindness of intention led to real cruelty; standards were lowered and with increasing numbers came deterioration of teaching power. In the Bombay University, the proportion of teachers of all ranks to students is about 1 to 31. At Oxford it is 1 to 7.2 and at Manchester 1 to 6.4. Such comparisons are necessarily inexact; but they help to emphasize the indisputable fact that classes in some Schools and Colleges are far too large for education worthy of the name. The fierce struggle for objects too often tragically illusory and weakness in teaching power led to dependence upon memory, the faculty which many Indians possess in marked degree, with disastrous results to education. "The text-book," writes M. Chailley, "reigns over the Indian Colleges in all its hideousness and it is not only the students who are possessed of these manuals." I need hardly say that a good text-book may be advantageous or even indispensable for certain subjects, though in the higher branches of study it should have no place. It is the misuse of the text-book by teachers and students that is in fault, and examinations which can be successfully passed by pupils who have committed passages of their manuals to memory react upon the teachers and are *causæ causantes* of the failure of education to do justice to India. The kindness, which may be cruel to individuals and must be injurious to national progress, is responsible for the form taken by too many of the University examinations. "A good examination paper," stated the Commissioners of 1902, "is a work of art," and they went on to make some practical suggestions on the subject which have been ignored.

Higher education in India can make a fair display in tabulated statistics. The number of students in the Universities is very nearly identical with that in the United Kingdom and more than three times as great as that in Japan. Of all pupils under instruction, about one in 1,400 is

receiving University training in the United Kingdom. The corresponding figure for Bombay is one in about 168. In the United Kingdom about one pupil in 34 is in a Secondary School; in France one in 33; in Bombay one in 112. In proportion to population, for reasons which are plain, the percentages are still very low for India, though 25.3 per cent. of boys of school age are now under instruction, and this figure is mounting every year. Some relation between pupils in the different stages of education roughly approximating to that existing in other countries might have been expected; but causes, which I have endeavoured to explain, have produced a startling disproportion of University and Secondary students in India. We have in fact built up an inverted pyramid for which broad and stable foundations must now be provided: If the quality of the output of the Universities of India approached that of the Imperial Universities of Japan which have less than one-third of our number of students, the progress of India would be greatly accelerated. Lecturing some years ago, Dr. Bhandarkar significantly asked: "Why should we not move on, side by side with Europeans, in the great fields of thought? Why should discoveries be made in France, Germany and England and not in India?" Anyone who will make a conscientious study of the state and methods of the Universities in India will find no difficulty in supplying the answer.

Higher education has fallen within the confines of a vicious circle. The Universities were created to examine and confer degrees. Indian students eagerly sought to pass the Matriculation and to win degrees. Mistaken kindness demanded a large pass list, admitting boys quite unprepared for University training. Moreover, to render these passes possible examinations of a special kind were necessary. The admission of unprepared boys wasted and enfeebled the teaching power of the Colleges, and both Colleges and High Schools were forced by the character of the examinations into methods of teaching having no relation to education and harmful to the best students. One Institution, recently criticised, retorted pertinently that, "as long as the present system of examining is adhered to by the University, the system of dictation is almost forced upon the Colleges." These evils inevitably react upon the University itself tending to produce lowering of standards to meet popular demands, and thus completing the chain of error which presses heavily upon the student and impedes the progress of India. I do not mean for a moment to imply that there is not good teaching in some Colleges and Schools; but such teaching does not obtain fair play and cannot stand out as it deserves. The mental strain upon the student, especially before the numerous examination periods, is often excessive and usually quite disproportionate to the amount of sound knowledge acquired. The economic strain may ruin a family without any compensation, when as too often happens they have stinted themselves and borrowed to provide a son with a standard of education for which he is not fitted.

The Commission of 1902 laid down that the scale of fees should not be so low as to tempt a poor student of but ordinary ability to follow a University course which it is not to his real interest to undertake. The principle here enunciated is perfectly sound, though the adjustment of fees which it demands is not easily made. At least it can justly be said that, in India, low fees may cause real cruelty, and that the practice of other countries, where the comparatively well-to-do have to pay full value for secondary and higher education which brilliant boys of the poorer classes can obtain by the aid of scholarships, has advantages.

The Government of India Resolution of March 1904 which followed the consideration of the Report of the Commission of 1902 is a remarkable State paper dealing with the evolution of education in all its branches, according full credit to what had been accomplished, pointing out the need of "substantial reform," clearly indicating the direction which progress should take, and laying special stress on "the abuse of examinations." Anticipating the demand for a large increase of Primary education, which has since become popular, the Governor-General in Council noted that there were "more than eighteen millions of boys who ought now to be at school; but of them, only a little more than one-sixth are actually receiving Primary education." In 1901-02 the gross annual expenditure on all teaching institutions exceeded Rs. 400 lakhs; but Primary Schools received from Provincial and Local Funds only a little over Rs. 63 lakhs. The corresponding expenditure in 1911-12 on Primary education for Bombay Presidency alone was Rs. 35½ lakhs.

The startling revelations of the Commission of 1902 led to the Universities Act of 1904 which gave statutory force to a few of its most urgent recommendations. The result of this mild Act was a loud and widespread clamour which has not yet died away and which caused sorrow and discouragement to every true lover of India. The object of the Act—so its opponents alleged—was to "Officialize the Universities." This parrot cry was taken up by writers and speakers who had never read the Report of the Commission or the remarkable Resolution which followed, were unaware that in Germany and in Japan the Universities are controlled entirely by Government and for that reason are peculiarly efficient, and ignored the pregnant statement of Dr. Bhandarkar, one of India's greatest scholars that "Educational opinion should predominate in the government of the University." Prejudice having been thus aroused, it was inevitable that, as in all such cases, consideration of the real issues should drop out of sight. That Government sincerely desired only to remedy patent evils, tending to become chronic, which were visibly checking progress in India, and could have no other motive, was quite forgotten. The misconceptions thus engendered bear dead sea fruit to this day and have helped to neutralize the good that might have been accomplished. M. Chailley,

whom I quote again because an acute French critic of our administration cannot be credited with official or racial bias, after characterizing the Act of 1904 as "the real charter of present-day education in India, asks "Will it prove really efficacious?" "My own opinion," he adds, "is that the reforms will languish," and after a careful study of education in India during more than five years, I have come to the conclusion that, for reasons which I plainly see, the results have not corresponded with the efforts and the intentions of Government.

Members of the Senate—

I trust that you will forgive me if I have seemed to dwell too much upon the essential weak points in our system of education. When I first had the honour of addressing you five years ago, I confessed to a "sense of disappointment" at the results of higher education. That sense has been deepened by fuller knowledge and it has been my earnest endeavour to get to the root of the causes which are operating to make the output of our Universities inferior to that of other countries and inadequate to meet the ever-growing needs of India. Upon you, individually and as a body, heavy responsibility rests. You control higher education in this Presidency, and when education is sound and thorough at the head the effect permeates the whole system. As Chancellor, I thank you for the progress which you have accomplished. We now have a rational curriculum, which will require revision from time to time to conform to the general advance of education among all progressive nations of the world, but is a marked improvement upon the patch work which formerly existed. You have abolished compulsory English History, which no other Indian University adopted, which was strongly condemned by the Universities Commission, and the teaching of which for the B.A. degree was characterized by your distinguished late Vice-Chancellor, Dr. Selby, as "a farce." You have just abolished the Previous Examination another speciality of Bombay—a step which I urged about 4½ years ago. If you have not agreed to allow Colleges to admit their own undergraduates and thus to assign to the Matriculation Examination its proper place, it may be hoped that this reform, which would lend vigour and individuality to the Colleges and relieve the University of a burden which it is not well fitted to bear while retaining all its proper functions of control, will be reached ultimately. Meanwhile you have distinctly improved the Matriculation course, and you have accepted the Senior Cambridge and Oxford Examinations and the European High School Examinations, on certain conditions, as equivalent to the Matriculation. All this shows progress; but I need hardly tell you that the most perfect curriculum may be rendered absolutely worthless by examinations. Already a fear has been expressed and is justified that the B.A. of the future "will emerge no longer with a general smattering of four subjects, but with an equally superficial knowledge of two only." This disastrous result you and you alone can avert, if you realize what the quality of your output means to India. I congratulate you on the

new opportunities which, if they are turned to good account, will advance the best interests of the Presidency. Five years ago I pointed to the neglect of Science and its necessary consequences. Thanks to five generous citizens, representing all the great communities, the Director of Public Instruction can now write that "the reproach that teaching in Science on up-to-date lines is not available within the Presidency will soon be done away." The fine institutions at Bombay and Ahmedabad, if properly worked, must stimulate industrial enterprise on true Swadeshi lines and help to correct "the incapacity to observe and appreciate facts and the taste for metaphysical and technical distinctions" which too frequently mar the success of the Indian intellect in the great fields of human achievement. The liberal assistance provided by the Government of India will enable you to take an immediate step in advance; but do not believe that only by increase of funds can the University be regenerated. Ample work lies before you into which financial considerations do not enter. Forget, I beg you, the unhappy preamble of the Act of 1857, and keep ever before your minds the highest University ideals. A University, wrote Dr. Newman, "is a place where enquiry is pushed forward, and discoveries verified and perfected, and rashness rendered innocuous, and error exposed by the collision of mind with mind and knowledge with knowledge. It is a place which wins the admiration of the young by its celebrity, kindles the affections of the middle-aged by its beauty, and rivets the fidelity of the old by its associations." "Universities," said Mr. Bryce recently at Adelaide, "exist for the sake of truth." When such ideals are reached, the building up of an Indian nation will make giant strides. Lastly, I implore you to receive and welcome all serious proposals for reform, even if they emanate from the head of the Government, to discuss them from the educational point of view only, scorning suggestions of ulterior motives, and resolutely to keep clear of political methods in the conduct of your responsible deliberations. The University of Bombay now numbers more than twice as many students as are under training in Oxford and Cambridge combined, and more than four times as many as in Liverpool University. The number will soon be further increased, and clearly this great aggregation is beginning to exceed reasonable limits. Before long sub-division will be essential, and when the time comes, I trust that you will all realize that your personal dignity

will not be affected in the slightest degree by a change which will simply mark the advance of India.

Students, past and present—

This is the last occasion on which I shall be able to meet you, and I wish that I were able to say what might remain in your minds and inspire you in your future careers. My active life must shortly end. Yours' is only just beginning. Before each one of you lie opportunities of helping in the building up of Indian nationhood. It has been well said that "the first question a University teacher should ask himself is, 'Am I rousing a spirit of enquiry in my pupils?'" and that if the answer is not in the affirmative, the University fails in its objects. How far the spirit of inquiry has been roused in you is known only to yourselves. What you may have learned or are learning by rote will be absolutely useless. Everything that you have so learned as to cause a reaction upon your minds, opening out new fields of thought which you can exploit for yourselves, may prove invaluable. "The true test of intellectual progress," said Dr. Jowett, the great Master of Balliol, "is not acquisition, but the increase of the powers of the mind." If you can pass that test, then assuredly your time in this University will bear good fruit in your own careers and in the great life of India in which you can play a worthy part. Character, knowledge and work will carry you far in any form of activity which you may select; but the character must be formed on high ideals, the knowledge perfectly assimilated, and the work patient and unflinching. "Talent," wrote Zola, "sees opportunity, genius creates it, but only patience and labour reap its most perfect reward." To all that you may attempt, small things as well as great, give your best, and be sure that, in so doing, you will gain in capacity and add new strength and symmetry to your character. "Nothing," wrote Michael Angelo four hundred years ago, "makes the soul so pure, so religious, as the endeavour to create something perfect; for God is perfection, and whoever strives for perfection strives for something God-like."

With all kindly wishes for your individual happiness and success, and with earnest hopes that you will each in some measure help in the advancement of India which is my fervent desire and for which I have laboured, I bid you farewell.

PROTEST OF THE CALCUTTA
UNIVERSITY AGAINST THE
DACCA UNIVERSITY COMMITTEE'S
REPORT.

FROM
THE REGISTRAR,
CALCUTTA UNIVERSITY
TO
THE SECRETARY TO THE GOVERNMENT OF BENGAL,
General Department, (Education).

Senate House, the 4th March, 1913.

Sir,

In reply to your letter No. 7463, forwarding 18 copies of the Report of the Dacca University Committee, and requesting that the Syndicate of the University favour Government with their opinion on the Report, I have the honour, by order of the Syndicate to state, in what follows, the views which the Syndicate as a body entertain regarding the scheme outlined in the Report. I also have the honour to enclose herewith certain Notes on the Dacca scheme, written by individual Members of the Syndicate. Some of these notes raise questions which though important the Syndicate do not desire me to deal with specially in the present letter—among them the question as to the financial aspect of the Dacca scheme which, the Syndicate have on doubt, will receive full attention from the authorities; and the proposed perpetuation, in the contemplated University, of the distinction between an Indian and a Provincial Educational Service to which in the opinion of the Syndicate serious objection may be taken.

1. The Report claims for the contemplated Dacca University, that it will be a University of a new type essentially differing from the existing Universities. While the latter are characterized as being mainly examining bodies and exercising their function with regard to students coming from all parts of a Province (on which account the new designation 'federal' has been devised for them), the Dacca University will, the Report says, be a 'teaching' and 'residential' University, whose function it will be to impart instruction up to the highest stages to such students as reside at the Colleges situated in Dacca itself, and which will decline to concern itself with, and examine, any students not belonging to those few Colleges. That the arrangements proposed for Dacca will differentiate it to some extent from the other Universities must no doubt be admitted. At the same time the Syndicate are of opinion that some of the existing Universities also, notably the Calcutta University, have a very fair claim to be called 'teaching' and even 'residential' institutions, and that such claim will be very much stronger before long, provided those Universities be allowed to develop on the lines they have proposed

to themselves. Dacca no doubt will not exercise examining functions outside its own narrow sphere, and this will constitute a real distinction between it and the older Universities. But as far as teaching and residence are concerned the difference between the new Institution and the old ones will not be a truly fundamental and essential one—a point to which I shall revert further on. The true and no doubt highly important and significant distinctive feature of the contemplated Dacca University will be that the entire funds required for higher teaching and for suitable residence of students will be provided by Government on a scale and with a liberality unprecedented in the History of Higher Education in India.

Many of the details of the arrangements proposed for the Dacca Institution would afford room for criticism; the Syndicate however have no wish to take up these matters fully on the present occasion, and they abstain altogether from offering remarks on the courses of study and the syllabuses set out in the Report. The Dacca Committee evidently has gone into these questions very carefully, and the Syndicate have no doubt that the existing Universities may take many a useful hint from the schemes outlined. What the Syndicate desire me to dwell on in this letter, is in the first place some few of the details of the Dacca scheme which appear to derive special importance from the circumstance that they are likely to affect, by and by, the working of other Indian Universities in some way or other; and in the second place the effect which the foundation and maintenance at Dacca of a University on the conditions set forth in the Report is likely to have on the interests, position and prospects of the University of Calcutta which so far has singly guided and determined the development of higher education in Bengal. The Syndicate make no doubt that their special claim to be heard on this latter subject in particular will meet with ready recognition.

2. The first point on which I am directed to touch is the arrangement under which it is proposed to allow Dacca students to pass the Examinations of the University without appearing in all the subjects prescribed, at one and the same time. This measure, the effect of which of course will be to make it easier for students to get through the Examinations, was fully considered, and finally rejected, by the University Commission of 1902. It is to be feared that if Dacca should lower the standard of its Examinations in this way, other Universities will be tempted, possibly driven, to do the same; with the result that the intrinsic value of University Degrees would be diminished all over the country.

3. The second point I take up is the institution of so-called Islamic degrees to be conferred on students who, in place of the ordinary Arts and Science Courses of the University, have taken up a special course of 'Islamic' studies which will combine the study of English as a language with the study of certain branches of knowledge as viewed

and developed by the great teachers and scholars of Islam. The intention is to accept these Islamic degrees as equal in value to the ordinary Arts and Science degrees and to allow to their holders the same openings for entering Government service and the learned professions. This scheme, the Syndicate think, is open to very grave objections. The first question to be asked is whether a University which after all claims to be an essentially modern one and to train young men with a view to their taking part in the life and work of a community governed on modern and progressive principles, should undertake at all to confer degrees on students who have devoted most of their time to studies of an essentially non-modern and non-progressive character and hence have lost the opportunity of coming into fruitful contact with the thought and knowledge of to-day. It can after all hardly be maintained seriously that a knowledge of Islamic sacred law and tradition, and of systems of grammar, logic and philosophy elaborated by Mussalman scholars of long past centuries, is of the same value for the purposes of to-day's life, whether in India or in the West, as a knowledge of modern literature, history, economics, physical science &c. &c. There is every reason to fear that the 'Islamic degree'-holder when entering one of the higher walks of practical life—whether as an administrator or lawyer or judicial officer or medical man or engineer or manufacturer, etc.—would find himself placed at a very decided disadvantage, compared to a man who has been taught and trained on *bona-fide* modern lines. The scheme of Islamic studies is said to find much favour with the Muhammadan community or a large section of it; but the Syndicate apprehend that the attraction of the scheme lies mainly in the chance it seems to offer young men of entering remunerative employments on comparatively easy terms. That the Islamic courses are not intrinsically easier than the ordinary Arts and Science courses will perhaps be asserted; but of this the world at large will not be convinced if the function of testing the knowledge of candidates of either kind by examinations is entrusted to separate Boards of Examiners. And there can of course be no doubt that for the Islamic degrees the examining work would have to be made over to Boards of quite a special constitution. The Syndicate do not mean to deny the interest and, in a certain sense, importance of those lines of study which may be termed 'Islamic,' and they think that a new University might very suitably consider the question how such studies may, within due limits, be encouraged and promoted. But, with a view to the standing of the new University as well as to the true interests of the Muhammadan population of Bengal, they would decidedly object to any scheme tending to draw Muhammadan youths in large numbers away from truly modern and practical lines of study.

The scheme of Islamic studies and degrees proposed for Dacca, however, raises another extremely serious and far-reaching question. If the Regulations of a University allow of degrees, with all their connected advantages, being secured by men who

have been trained on old time-honoured Islamic lines, why should not arrangements be made to admit to the same privilege young Hindus who during their college career have devoted themselves mainly to the study of ancient Hindu lore—let us say Indian law and custom, the indigenous system of Grammar, the philosophic systems of the Nyaya and Vedanta &c. &c. ? This question, or as we might also say, this demand has in fact been raised already and appears to be by no means without justification. Why should not Brahminical or Hindu or Sanskrit degrees be established side by side with the Islamic ones? The special gravity of this question or claim lies, the Syndicate think, therein that it might before long make itself heard all over India. And this would mean nothing less than a re-opening, after a long period of quiescence, of the momentous question as to the comparative value—intrinsic value as well as value relative to the conditions and needs of India—of Oriental and Western systems of thought and learning. Our Universities might find themselves called upon to re-examine, and eventually, to reconstruct the very bases on which they rest.

4. In addition to the questions touched upon in the last two paragraphs—which must be considered as specially important in view of their having a direct interest for all Indian Universities—there are a few other points of more local import on which the Syndicate wish to offer a few remarks.

(a) *The establishment of a special College for the well-to-do classes*—The Syndicate wish me to say that they quite fail to see any reasons for the establishment of a college of that special kind, and on the other hand are convinced that such a college would be injurious in more than one way. Young men of the well-to-do, i.e., the wealthier section of the upper middle classes, should not, the Syndicate hold, be encouraged in any way to view themselves as a special class and to hold aloof from fellow-students whose parents may happen to be less wealthy than their own but who in all essential respects are their equals and probably in many cases their superiors. Nothing moreover should be done artificially to encourage the natural tendency of young men, or at any rate many of them, to go to needless expense in the matter of food, dress and the like. The authorities evidently intend to make the ordinary Dacca College and its hostels true model institutions of their kind, and places of that type should clearly be good enough even for the wealthiest student.

(b) *The arrangements to be made at Dacca for the residence of students and for the maintenance of discipline* present, the Syndicate hold, many admirable features. Dacca in this respect will of course start on very enviable conditions: suitable and even splendid buildings will be placed at its disposal in abundance; and means will apparently be found to entertain quite a host of tutorial teachers and house-tutors. The Syndicate, however, do not feel quite sure that a system under which students receive a kind of personal assistance in all

they do and which provides an elaborate set of restrictive rules meant to safeguard their moral interests, is in all respects the best one. The 'formation of character' is what is generally referred to as the main purpose and effect of well-organised collegiate life; but it appears doubtful whether a system which in so many ways limits and checks unaided individual effort will tend to promote in a sufficient degree the habits, so very essential in later life, of self-reliance and self-restraint. There are many who think that a youth whom circumstances have early compelled to think and act entirely for himself has had a better opportunity to develop 'character' than one whose every forward step has been watched, guided and assisted by well-meaning guardians and tutors. This however is a rather wide question on which the Syndicate do not mean to dwell further. They, on the other hand, desire me to say a word as to a special difficulty in the way of the development, in Indian Colleges, of that fine collegiate spirit which no doubt prevails in the Colleges of Oxford and Cambridge. The development of such collegiate spirit, with all its salutary influences, largely rests on intimate and spontaneous fellow-feeling between Students on the one and Tutors and Teachers on the other hand. All the conditions for the formation of such fellow-feeling are of course present in an English College. In India, on the other hand, there are obvious great obstacles which cannot always be overcome. Muhammadans and Hindus are divided from each other in many ways, and even between Hindu Teachers and Hindu Students difference of caste often prevents the formation of close ties of sympathy and trust. In the case of European Tutors in charge of Indian Students the difficulties are intensified and multiplied: differences of race, religion, habits of life and so on constitute a series of barriers which are not easily broken down and the existence of which calls for the exercise of a great deal of tact and caution on the Tutor's part. The young English Professor who is sent out to this country does not, the Syndicate apprehend, always possess the special qualifications required, and if, as may happen now and then, he should impress the students in his charge as strongly conscious of his position as a member of the ruling race, bonds of sympathy naturally will be very slow to form. The Syndicate of course fully admit that the students of our Colleges should be under some form of superintendence and restraint, and they consider it highly desirable that the Teachers and Tutors should take an interest in the Students' well-doing—bodily, intellectual and moral—out of lecture-hours also. Teachers and Students should frequently meet at games, debating societies, occasional social entertainments and the like. But they think that it will be wise not to expect or demand too much, and that care should be taken not to urge arrangements which in practice may possibly lead to results altogether contrary to what was intended—friction and ill-feeling instead of harmony and sympathy.

(c) *Engineering College.*—The Syndicate wish to say that they fully endorse the views expressed on

this point in the *Notes* by individual members of the Syndicate, especially the two Engineer Members. It appears to them that no serious argument for the establishment of an Engineering College at Dacca has been put forth, while the best of reasons speak for the maintenance of such a College at Calcutta. The Calcutta University has had an Engineering Faculty, based on the Civil Engineering College at Sibpur, for more than half a century, and would deeply regret being deprived of College and Faculty at the same time.

(d) *Law Teaching at Dacca.*—The Syndicate are of opinion that the provision contemplated for the Law Class at Dacca will be hardly sufficient for the adequate teaching of the full Law Course, and that it would really be a preferable arrangement to add the amount to be spent on Law at Dacca to the income of the Calcutta University Law College which is open to students from the whole Province, and which thereby would be enabled to effect important improvements in its own system of working. The Syndicate do not however wish to urge this point as they are quite aware that the existence of some kind of Law Class at Dacca will be in the interest of the local Institution as a whole.

(e) *Administration of the University.*—The Syndicate see no sufficient reason for certain provisions regarding the constitution of the Council of the University. Considering the fact that the great majority of the members of Convocation will be appointed—directly or indirectly—by Government, it is not clear why six Professors should be appointed to the Council by the Chancellor instead of being elected by Convocation. Nor do the Syndicate understand why ten Muhammadan Graduates should be specially nominated by the Chancellor as Members of Convocation.

5. I now turn to the second main point—the way in which the establishment of a University at Dacca may be presumed to affect the interests and prospects of the Calcutta University.

That the existence within the same province of a fully equipped University such as Dacca is meant to be, will touch the interests of Calcutta in various ways is evident. It will in the first place remove from the jurisdiction of the Calcutta University the important Colleges situated in Dacca, and will further beyond doubt draw away from the Colleges affiliated to Calcutta a certain, probably considerable, number of students coming from Eastern Bengal. This the Syndicate cannot help regretting in a way, for it means to their own institution a certain loss of prestige and income, but they do not mean to make a grievance of such loss: they quite understand that as the educational needs of the country expand new Universities are bound to spring up and that there will be to some extent an unavoidable conflict of interests between the old and the new institutions. And they, on the other hand, anticipate that in this sphere also no less than elsewhere competition as long as carried on on fair terms will bring with it certain advantages: it may

urge each of the rival Universities to perfect its arrangements for teaching and residence. But the Syndicate are apprehensive that if Dacca should be established in full agreement with the plan now before them the competition would not be an altogether fair one. I have dwelt above on two features of the Dacca scheme which would be specially likely to affect other Universities: their probable immediate effect on Calcutta in particular may be stated in a few words. The privilege eventually to be enjoyed by Dacca of conferring degrees on students who have passed their examinations in compartments would of course render many Calcutta students eager to join a Dacca College; Calcutta would then either have to put up with this loss or to claim the same privilege for its own students, lowering thereby its standard. And the establishment of 'Islamic' degrees at Dacca would no doubt act as a powerful magnet on the majority of the Muhammadan students of Bengal, drawing them to the place where Government employment and access to the learned professions can be had on easier terms.

6. The Dacca scheme however, I am desired to say, gives rise in the minds of the Syndicate to another misgiving of a much graver nature—a misgiving not due to any special feature of the planned University but to the scheme of such a University in its entirety. Now, the Syndicate ask themselves, is the fact of Government taking upon themselves the charge of providing a full teaching University at Dacca likely to affect their attitude towards the older University of the Province? Calcutta no doubt has for a long time been mainly a University of the so-called 'Examining' type (a designation, by the way, which obscures the fact of all the 'examining' Universities of India having all along been 'teaching' Universities as well, inasmuch as imparting instruction through their affiliated Colleges); but it has in recent years taken decided, and as far as they go, effective steps towards becoming a Teaching University in the full sense, by undertaking to organize post-graduate teaching under its own direct auspices. It therefore is naturally anxious that the new aspirations it cherishes and the new efforts it is making should not be crossed or in any way interfered with by a new rival University within the bounds of the same Province. This no doubt need not be the case, for two Teaching Universities may very well exist side by side, each possibly being benefited by healthy rivalry with the other. But the utterances on this point on the part of the framers of the Dacca Report are far from re-assuring. What, in the first chapter of the Report, they say as to the different possible types of Universities in India, seems to imply a decidedly curious view regarding the future organization and respective functions of the two Universities of Bengal. Their idea apparently is that there is to be one place where higher teaching of the best and most advanced kind will be given, and where students will live in superior residential style: this will be Dacca—the teaching and residential University. Side by side with this there

will be scattered all over Bengal, a number of Colleges where higher teaching of a rather inferior kind will be available, and where the students will be less well-housed and superintended. These Colleges—among them all the Colleges in Calcutta—will be massed together into a so-called 'federal University'—which will be of a non-teaching and non-residential character and whose only function it will be to examine the crowds of inferior students who belong to colleges outside Dacca, and in addition it seems the candidates for Matriculation from the whole of the Province including Dacca itself. This will be the University of Calcutta—an institution resembling what Calcutta was in old days, with the important difference however that the Calcutta of the future—distinctly labelled as 'non-teaching' and 'non-residential'—will be definitely cut off from all hope of higher developments and thrown altogether into the shade by the Teaching University of Dacca. The Report no doubt makes a reference to Calcutta having of late endeavoured to provide for higher post-graduate teaching; but the implication of the entire chapter, in fact of the whole Report, is that certain Universities (among them of course Calcutta) will have the function of examining—although it may be, found possible to allow them to arrange on their own account for as much higher teaching as they may manage to find money for. Dacca on the other hand will be nothing but a true teaching University of the highest type for which all required funds will as a matter of course be supplied by a liberal Government.

The Syndicate desire me to say that they must respectfully but decidedly protest against the position which the framers of the Report seem minded to assign to the older University. Calcutta has ever since the foundation of the Indian University system been the leading Indian University and has in fact, by the courses of study which it laid down and which were copied or imitated by all the other Indian Universities, determined the character of higher education all over the country. It moreover has, through its affiliated colleges, much the most important of which are located in Calcutta, been a teaching agency of a very high character: no degree has for the last fifty years enjoyed a higher reputation all over India than the Calcutta M.A. degree. The highest functions of a true teaching University were perhaps not fully realized by Calcutta before the passing of the New Universities Act; but, the Syndicate wish to point out, these functions were at that time not properly understood anywhere in India, no encouragement on that line was then received from Government and no funds for direct higher teaching on the part of the University were available. But ever since the New Universities Act of 1904—which Act was the outcome of a long and searching enquiry into the higher educational needs of the country—had explicitly and emphatically declared that the function of a University is not only to define courses of study and to examine but to be directly active in the sphere of higher teaching so

as to promote learning and research, the Calcutta University has most earnestly and energetically striven to come up to the new standards laid down. I am asked by the Syndicate to subjoin in this connexion a very brief sketch of what the University in the course of the last six years has managed to accomplish in the sphere of reform and extension of higher-post-graduate teaching. It began by extending to the M.A. teaching which had previously been carried on in certain colleges affiliated to the University, the same vigorous system of scrutiny and inspection to which the B.A. and B.Sc. teaching in all affiliated Colleges had been submitted. The immediate effect of this was that M.A. affiliation had to be largely restricted, owing to insufficiency of teaching staff and appliances; and that the few Colleges which were allowed to retain affiliation were obliged to appoint additional Professors, to add largely to their Libraries and to provide scientific Laboratories vastly superior to those they had possessed before. But as even after these reforms it was evident that the existing colleges were far from equal to the task of imparting efficient M.A. instruction in all the main branches of Arts and Science and to all students demanding such instruction, the University, proceeding on altogether new lines, next undertook to arrange for such teaching under its own auspices and partly from its own funds. To that end it in the first place—carrying out a scheme which had been mooted a long time ago and which indeed is specially suggested by the conditions prevailing at Calcutta—proceeded to constitute groups of M.A. Lecturers comprising the most qualified teachers in the bigger Calcutta Colleges: the idea being that in this way of combination and co-operation, effective teaching up to the M.A. standard in various subjects may be given for which the means of each individual college would not suffice. And finally the University further strengthened these groups of University Lecturers taken from colleges, by a certain number of independent Lecturers who do not hold Professorships in Colleges, lecture to University students only and receive salaries out of University funds. The lectures of all the University Lecturers—of either class—are delivered at the University building and are open to graduates of any affiliated college. This new scheme—although in its initial stage only and requiring a good deal of further strengthening and organization—has so far proved highly successful and attracted large numbers of students: I may mention that the University M.A. Classes in Mathematics are at present attended by more than one hundred students, and that there is about the same number in History. Further the University has striven to make a start in the department of such advanced special teaching as may be expected directly to promote research and the extension of knowledge. It has engaged from time to time the services of Readers to deliver lectures on special advanced subjects; among these Readers there have been men of great eminence whose teaching has had a powerfully stimulating effect on sections of our

senior students. And—most important of all—the University has quite recently succeeded in taking the first steps towards the foundation of a University Professoriate. Six Professorships have so far been founded, or as good as founded, although lectures have not yet been actually delivered by more than one Professor, viz., the Mintz Professor of Economics whose chair was founded as early as 1908. For two of the other Professorships—those of Higher Pure Mathematics and of Mental and Moral Philosophy—Government have promised to provide funds; one Professorship, for ancient Indian History and Culture, is maintained by the University out of its own funds; and the foundation of the remaining two—for Chemistry and Physical Science—has been made possible by the generosity of a private individual—Sir Taraknath Palit. It is expected that the University Professors of Mathematics, Philosophy, and ancient Indian History will begin to lecture in the course of next session or at the latest in the next cold season. University lectures in Chemistry and Physics on the other hand can hardly be started before well-equipped Laboratories for those two branches of study have been erected.

I conclude this short survey of extensions in Higher Teaching by referring to the total reform of Law teaching in Bengal which was connected with the foundation of the University Law College in 1909. In place of a number of ill-managed and inefficient Law Classes to which legal instruction in Bengal was previously entrusted, we now have one central institution where Law is methodically taught up to the B.L. and M.L. standards by a numerous and highly qualified staff and where the students are kept under effective control.

Apart from the reform of Law teaching were all that is possible for the present appears to have been done, the Syndicate are well aware that their endeavours to provide University teaching of the highest kind do not represent more than a beginning and that very much remains to be done. But they hold themselves justified in maintaining that the beginning is hopeful and establishes claims to effective help towards further development. The highly promising institution of University Lecturers would admit of considerable expansion and improvement if the University were in a position to devote more money to it. And the most essential want—that of a University Professoriate in which every important branch of study is represented by at least one teacher who is an authority in his subject—cannot of course be realised even approximately without subvention on a scale far exceeding previous scales.

In these circumstances the Syndicate of the Calcutta University naturally view with misgiving the Dacca scheme which, if realised as they see it on paper, will necessitate an enormous expenditure on the part of Government. What, they ask, will be left to meet the requirements of growing Calcutta? The task of building up a teaching University at Calcutta has been taken in hand, and the work begun may not be dropped. Calcutta moreover has

invested in this new development not only much thought and labour but a good deal of money. The greater part of the Reserve Fund of the University has in the course of the last six years been spent on acquiring land required for University Extension and in contributions towards the erection of the Darbhanga Library Building and the new Law College Hostel. And the remainder of that fund will have to go before long as a contribution which the University is pledged, under the terms of the Palit bequest, to make towards the erection of Chemical and Physical Laboratories. The greater part of this money would have been spent in vain if, by the unexpected withholding of further liberal assistance from Government, the University would see itself compelled to abandon the idea of higher developments in the teaching line. It must of course be kept in mind that in initiating a scheme of Post-Graduate teaching of an elaborate kind the University has not by any means struck out for itself a line of adventurous policy, the eventual failure of which it would be bound to accept without murmuring: the fact rather is that it has not attempted anything beyond what it was bound to attempt under the new Regulations framed in strict accordance with the Universities Act. In doing what it did the University therefore throughout felt assured of the sympathy and eventual help of Government; and it has not lost this confidence. The University surely will not be made to suffer for having been willing and prompt—in a much higher degree than any other Indian University—to give effect to the principles of University work and University aims which were announced, in very plain terms, by the authors of the Universities Act of 1902. And it surely has not yet been forgotten that hardly more than a year ago those principles were emphatically confirmed in one important item by no less an authority than our Gracious King-Emperor who in his reply to the Address presented by the Calcutta University referred to the establishment of teaching Faculties and the encouragement of Research as the most urgent task before the University.

No comparison in the proper sense can at present be made between the claims on Government assistance of the Calcutta University on the one and the Dacca University on the other hand; for while the former institution is a real living thing which has established claims by the work of half a century, the latter so far exists on paper only. But a word may be said, the Syndicate think, as to the relative claims of the cities of Calcutta and Dacca to be chosen as seats of Teaching Universities. It will suffice to point out very shortly the main qualifications of Calcutta: the contrast which Dacca presents on all those points need not be explicitly detailed. Calcutta is not only the biggest but beyond all comparison the most important town of Bengal—important not only as the seat of the provincial Government and as a great trading and manufacturing place, but also as undisputedly being, and as undisputedly certain to remain, the intellectual centre of Bengal. It contains within its boundaries, and is certain to

continue to do so, a body of educated men superior in intellectual qualifications to, and numerically very much stronger than, the corresponding bodies in any other town of Bengal. In consequence of this it possesses, and will continue to possess, a student population more numerous and on the whole more capable than that of any other place in the Province. To provide for the wants of its students, up to a certain stage, it possesses quite a number of well-organised and well-staffed Colleges, several of which by this time look back on a long and distinguished history. It is the seat of the foremost Indian High Court and of numerous learned Societies and Associations, among them the Asiatic Society of Bengal. It possesses a splendid Museum attached to which there are a number of scientific men holding higher rank in their respective departments than any other body of men in India. And it possesses several important Libraries which are of the greatest value to advanced students.

In view of all the facts stated above as to the present fitness of the Calcutta University for immediately developing into a Higher Teaching University, and the fitness of the City of Calcutta to be the seat of such a University, the Syndicate think that there would be a great deal of justification for the view that whatever money may be available at present for the promotion of Higher University teaching in Bengal should go to Calcutta and nowhere else. The Syndicate do not however wish to set forth this view as their own; mainly because they understand that Government stand pledged to the establishment of some kind of University at Dacca. But they would advise that nothing further should for the present be attempted at Dacca than the strengthening of B.A. and B.Sc. teaching, and of as much M.A. teaching as may meet local requirements. Higher things may eventually be attempted there later on when a sufficient basis may have been created for them. Should Government however be determined to start Dacca at once as a fully-equipped Teaching University of the highest kind, Calcutta should at any rate receive an equal amount of assistance towards its own development. The Syndicate would consider themselves guilty of a decided dereliction of duty if they failed to raise an energetic protest against any attempt to wreck the future of Calcutta in order to exalt Dacca.

7. Reflections of a similar kind suggest themselves to the Syndicate on consideration of what it is proposed to do at Dacca for the residence of students. That all Indian Universities are equally bound to make provision for the proper housing and control of their students is well understood, and the Calcutta University has endeavoured to do its best to comply with the new Regulations on that point. That this 'best' has not so far amounted to very much, is due solely to the fact that there were no funds available to cope with the enormous task. The Calcutta Mess scheme, with a subvention from Government amounting to Rs. 2,000 a year, has shown itself altogether insufficient: the great need of course is good College Hostels, situated near the

Colleges concerned and well supervised by the College authorities. Some lakhs of Rupees have been granted by Government for that purpose to certain Colleges; the utilization of the grants not being under the control of the University. But so far nothing has been actually done, and moreover the amounts granted are absolutely insufficient to meet the real requirements. The Syndicate are glad to understand that it is proposed to make very excellent arrangements to secure the physical and moral well-doing of the inmates of the Dacca Colleges—those Colleges which exist as well as those which it is contemplated to found. But they feel themselves fully justified in asking that the interests of the Colleges outside Dacca should be equally cared for. The needs of Calcutta in this line are crying, long recognised, much discussed; they certainly are vastly more urgent than those of Dacca. Here at any rate there appears to be absolutely no reason for differential treatment of individual institutions, except on the basis of actual difference of requirement. Even if Dacca were the only Higher Teaching University of the Province, by far the greater part of its students would continue to belong to the non-graduate stage, and why, one asks, should the young men reading in the Dacca Intermediate and B. A. Classes be provided for on specially excellent lines, while not even the indispensably needful has been done for the corresponding sections of students in Calcutta and ever so many Mofussil Colleges? Calcutta itself—understanding by this term for the moment only the affiliated Colleges in the city of Calcutta—will be fully as 'residential' as Dacca ever can be, as soon as each of its Colleges will have been provided with a really good hostel; for in what other sense can Dacca be residential than through proper residential Colleges? As to the Mofussil, the advisability of

providing a number of Mofussil Colleges with hostels large enough to take in considerable numbers and thereby to limit to some extent the present regrettable rush of Mofussil students to Calcutta, has often been pointed out; but nothing has so far been done to meet this very evident requirement.

8. Throughout, the Syndicate are of opinion, the framers of the Dacca Report have shown themselves rather partial and forgetful of general interests. Great questions such as providing higher Teaching and Residence for the students of a whole Province—for these are the real questions Government will be called upon to consider—require to be treated in a very different spirit. The Syndicate hold it to be evident that before the plan of founding an entirely new Teaching University—which will call for very heavy initial outlay and heavy recurring expenditure which is likely to be ever-increasing—the needs and claims of existing institutions should receive the fullest and most careful attention. Calcutta, it may be emphasized once more, has taken upon itself certain heavy responsibilities and obligations which were not created by arbitrary choice but imposed on the University by a body of Regulations framed in strict accordance with the demands of the Government of India itself. The framers of the Dacca Report may not have felt called upon to give their attention to anything but what might further the interests, and advance the grandeur and glory, of an ideal Dacca. But the Syndicate of the Calcutta University trust that the outlook of those whose task it may be to judge and eventually take action upon the Report, will be of a different kind—that it will be wider and higher, and that hence their final decisions may be fair and equitable.

THE HISTORY OF EDUCATION IN THE MADRAS PRESIDENCY

By DR. S. SATTIANADHAN, M.A., LL.D.

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AN ACCOUNT OF PROF. J. C. BOSE'S RESEARCHES.

[Reprinted from "The Modern Review."]

In our last number we invited our readers to kindly place us in possession of well-authenticated information relating to all original work done in India by Indian and English professors and their students. Having asked others to do their share of a patriotic duty, we thought we should not fail to do ours. So, having been among the earliest students of Prof. J. C. Bose at the Calcutta Presidency College, we print below our contribution in the form of a brief resume of the great professor's researches in different domains of science. We believe this to be the first list that has been compiled.

It is unfortunate that either through lack of knowledge or lack of opportunity, our countrymen have little definite knowledge of the important contributions that are now being made by India to the stock of the world's knowledge. In the present number we shall only give a list of the more important researches carried out by Prof. Bose. It is our intention to publish in the near future a series of articles giving a popular account of these.

Science is international; but we may perhaps expect a certain characteristic which distinguishes the Indian contribution. The Indian mind is eminently synthetic, and on this account when the Indian physicist undertakes to study the action of forces on matter, he is not satisfied with confining his inquiry into the realms of the inorganic alone, but must include in his broad survey the reactions of living matter also. He annexes to the imperial science of Physics, others which go under the name of animal and plant physiology. This consideration will supply a key to the many-sided scientific activity of our distinguished countryman. The researches which he has carried out in each branch of science will be found of fundamental importance in that branch. How important these have been will appear from the short extracts, which we shall make, from the

various scientific notices that have appeared concerning them.

Prof. Bose's first contribution was on his discovery of—

(1) *The polarisation of electric ray by crystals.*—Asiatic Society, Bengal, May, 1895.

This supplied a very important confirmation of the identity of electric radiation and light. At this time he discovered the very important property of the crystal *Nemalite* which as regards electric radiation, behaved like *Toutmaline* to light. His next contributions were:

(2) *On a New Electro-polariscope*: and

(3) *On the Double Refraction of the Electric Ray by a Strained Di-electric.*

These two Papers were published in the *Electrician*, (December, 1895) the leading electrical journal.

The determination of the index of refraction of various substances is of much importance; it has been possible to do this only in the case of substances which are transparent to light. But a very large number of the so-called opaque substances such as pitch, coal-tar, etc., are transparent to electric radiation. The determination of the index for this invisible radiation offered however great difficulties till Prof. Bose devised a method which enabled this to be done with the highest accuracy.

The results of his researches were communicated by Lord Rayleigh to the Royal Society:

(4) *On the determination of the Indices of Electric Refraction.*—Royal Society, December, 1895.

The Society showed its appreciation of the high scientific value of the research, not only by publication but the offer of a subsidy from the Parlia-

mentary grant made to the Society for the advancement of science.

His next contribution was :

(5) *On a Simple and Accurate Method of determining the Index of Refraction for Light.*—1894.

With reference to this it may be said that Dr. Gladstone, F.R.S., the discoverer of Gladstone's law in Optics, spoke in the highest terms of Bose's Refractometer.

His next contribution published by the Royal Society was :

(6) *Determination of the Wave-length of Electric radiation.* Royal Society, June, 1896.

At this time in recognition of the important contributions made by him for the advancement of science, the University of London conferred on Prof. Bose the degree of Doctor of Science.

During his first scientific deputation to Europe by the Government of India, he read a Paper before the British Association :

(7) *On a complete apparatus for investigating the properties of Electric waves.*—British Association, Liverpool, 1896.

"Among the most interesting features at the British Association this year was the paper on Electrical Waves by Professor J. C. Bose. This gentleman had by his strikingly original researches on the polarization of the electric ray won the attention of the scientific world. His later papers on the Determination of the Indices of Electric Refraction and of the Wave Length of Electric Radiation were published, with high tributes, by the Royal Society. Lord Kelvin declared himself 'literally filled with wonder and admiration for so much success in these difficult and novel experimental problems.' The originality of the achievement is enhanced by the fact that Dr. Bose had to do the work with apparatus and appliances which in this country would be deemed altogether inadequate. He had to construct himself his instruments as he went along. The paper which was read before the British Association the other day 'On a Complete Apparatus for the Study of the Properties of Electric Waves' forms the outcome of this twofold line of labour—construction and research."—*Times*.

His next paper published by the Royal Society was :

(8) *On Selective Conductivity exhibited by Polarising Substances.* Royal Society, January, 1897.

The behaviour of crystals like Tourmaline in exhibiting selective power of absorption of light had hitherto found no explanation. Prof. Bose working with electric waves showed that the selective transparency of crystals like Tourmaline

was due to selective conductivity exhibited by them.

The fame of the Royal Institution of Great Britain, rendered illustrious by the labours of Davy and Faraday, of Rayleigh and Dewar, has reached every quarter of the globe. The honour of being asked to deliver a Friday Evening Discourse in this Institution is regarded as one of the highest distinctions that can be conferred on a scientific man. Such a selection is only made in the case of one who has done the most distinguished work in the course of the year. This offer was made to Prof. Bose in the following letter:—

"It would afford the Managers of the Royal Institution very great pleasure indeed to find that you could give a Friday Evening Discourse, embodying the results of some of your original work on Electric Radiation (which has excited so much scientific attention) and illustrated by your apparatus."

(9) *Friday Evening Discourse at the Royal Institution on Electric Waves.*—Royal Institution, January, 1897.

"There is, however, to our thinking something of rare interest in the spectacle presented, of a Bengalee of the purest descent possible, lecturing in London to an audience of appreciative European savants upon one of the most recondite branches of the modern physical science. It suggests at least the possibility that we may one day see an invaluable addition to the great army of those who are trying by acute observation and patient experiment to wring from Nature some of her most jealously guarded secrets. The people of the East have just the burning imagination which could extort a truth out of a mass of apparently disconnected facts; a habit of meditation without allowing the mind to dissipate itself, such as has belonged to the greatest mathematicians and engineers."—*Spectator*.

"Professor Bose's description of the inductive method by which he was led to devise his form of receiver for wireless telegraphy and the reasons of its superiority to other forms of receiver were exceedingly interesting. It is also worth remark that no secret was at any time made as to its construction, so that it has been open to all the world to adapt it for practical and money making purposes."—*Electrical Engineer*.

That Prof. Bose's researches have materially helped practical application will be seen from the following letter from Messrs. Muirhead & Co., who hold patent for wireless telegraphy in the United States of America:—

"Just a line to say how pleased we were to have the opportunity of discussing with you the bearing of some of the results of your recent researches upon certain practical points in the manufacture of wireless telegraphic apparatus. We have already benefited by your work in the construction of the most important part of such apparatus."

He was next invited to address the scientific societies in Paris.

Professor J. C. Bose exhibited on the 9th of March before the Sorbonne, an apparatus of his invention for demonstrating the laws of reflection, refraction and polarisation of electric waves. He repeated his experiments on the 22nd, before a large number of members of the Académie des Sciences, among whom were Poincaré, Cornu, Mascart, Lipmann, Cailliet, Becquerel and others. These savants highly applauded the investigations of the Indian Professor."—*Revue Encyclopédique Paris*.

The celebrated physicist, Professor Cornu, President of the Academy of Science, wrote to him:—

"For my own part, I hope to take full advantage of the perfection to which you have brought your apparatus for the benefit of the École Polytechnique and for the sake of the further researches I wish to complete. The very first results of your researches testify to your power of furthering the progress of science. You should try to revive the grand traditions of your race, which bore aloft the torch light of science and art and was the leader of civilization, two thousand years ago. We in France applaud you and wish you every success."

He was next invited to lecture before the Universities in Germany. At Berlin he gave, before the leading physicists in Germany, an address which was subsequently published in the *Physikalischen Gesellschaft*.

(10) *On Electromagnetic Radiation.*—Physik-Ges. Zu Berlin, April, 1897.

The Royal Society next published his Paper :

(11) *On the determination of the Index of Refraction of Glass for the Electric Ray.*

In this he showed the unexpected increase of the index of refraction of glass under ether vibration of slow frequency: this explained the theoretical difficulties raised by certain electrical properties of glass.

The thinnest film of air is sufficient for producing total reflection of light with its extremely short wave-length. But with the longer waves, Professor Bose discovered a new phenomenon, an account of which was published by the Royal Society.

(12) *On the Influence of Thickness of Air space on Total Reflection of Electric Radiation.*—Royal Society, November, 1897.

It was shown that the critical thickness of the air-space was determined by the refracting power of the prism and the wave-length of radiation. It opened out a possibility of new methods of determining the index of refraction and also the wave-length.

Certain substances produce rotation of the plane of polarisation of light. Professor Bose discovered

similar rotation of the plane of polarisation of electric waves.

(13) *On the Rotation of Plane of Polarisation of Electric Waves by a Twisted Structure.*—Royal Society, March, 1898.

He constructed two kinds of artificial molecules, which rotated the plane of polarisation to the right or to the left, analogous to the effects produced by dextrose and levulose. As a result of this research many of the obscurities in the phenomenon of Rotation were cleared up.

(14) *On the production of a "Dark Cross" in the Field of Electro-magnetic Radiation.*—Royal Society, March, 1898.

This important research reveals the circular molecular arrangement of various bodies. A disc of wood with concentric rings was shown to produce polarisation effect similar to that exhibited by crystals like Salicine.

(15) *A Self-recovering Coherer and Study of Cohering action of different metals.*—Royal Society, March, 1899.

The effect of electric radiation on fragments of metals has hitherto been regarded as due to cohering action, bringing about a diminution of electric resistance. As a result of Professor Bose's extensive researches on the effect of radiation on inorganic substances, the theory of coherence was rejected. This was due to his discovery that under electric radiation, potassium and other metals not only exhibited an increase of resistance but also an automatic self-recovery.

(16) *On the Electric Touch and the Molecular changes produced in Matter by the action of Electric Waves.*—Royal Society, February, 1900.

Instead of so called cohering action, the effect of electric radiation on matter is shown to be one of discriminative molecular action; it is further shown that the effect of radiation on metallic particles is to produce molecular or allotropic changes, attended by changes of electric conductivity.

A description of Prof. Bose's apparatus and an account of his researches on electric radiation will be found in the New Edition of the *Encyclopædia Britannica*. Frequent references to his contributions will also be found in the classical work of M. Poincaré, on Electric Waves.

During his researches on the behaviour of different receivers, he was led to the discovery of various reactions in inorganic matter parallel to

those of living matter; the result of these researches were given in his Address to the International Congress of Science at Paris, during his second scientific deputation to Europe by the Government of India.

(17) *De la Generalite des Phenomenes Moleculaires produits par Electricite sur la matiere Inorganique et sur la matiere Vivante*—Travaux du Congrès International de Physique, Paris, 1900.

He read another paper before the British Association.

(18) *On the similarity of effect of Electric Stimulus on Inorganic and Living Substances*.—British Association, Bradford, 1900.

The investigation of this subject was carried on later by the employment of a method altogether different, but which afforded independent support to his previous results.

(19) *On an Artificial Retina*—Exhibited at British Association and Royal Institution, 1900.

"Prof. Bose exhibited an artificial eye the interior mechanism of which was such as to enable it to give an electric response to radiation of every description, whether ordinary light, or Hertzian or Rontgen rays. Like all the inventive work of its originator it exhibits a marvellous delicacy and perfection of workmanship combined with a degree of simplicity in which few inventions can rival those of Dr. Bose. As to the mode of action of this eye, we believe that it involves an effect the discovery of which is originally due to Dr. Bose; it may be convenient to describe this as the 'Bose effect.' The model is not a mechanism capable of merely imitating the phenomena of vision; it goes much deeper and acts in identically the same manner as the living eye acts when sending an impulse to the brain on being exposed to light. Dr. Bose's model, therefore, essentially embodies a physical theory of vision. Such a sensitive receiver of electromagnetic radiation, perfectly prompt as it is also in its self-recovery after stimulus, should serve to revolutionise existing methods of wireless telegraphy and aetheric signalling."—*Electrician*.

Certain characteristics of his artificial retina led Prof. Bose to predict that the human retinae should exhibit binocular alternation of vision—a peculiarity which was quite unsuspected. For detection of this peculiarity he invented a special apparatus by means of which he demonstrated the new phenomenon before the Physiological Society of London.

(20) *On Binocular Alternation of Vision*—Physiological Society, London, 1900.

His next contributions published by the Royal Society related to the action of light on matter.

(21) *On the Continuity of effect of Light and Electric radiation on Matter*.—Royal Society, April, 1901.

(22) *On the Similarities between Mechanical and Radiation Strain*.—Royal Society, April, 1901.

In his next paper he advanced a new theory of photographic action, which explained many anomalous results.

(23) *On the Strain Theory of Photographic action*.—Royal Society, April, 1901.

At the British Association meeting at Glasgow he described a new method of investigation for determining the molecular change produced in metal by electric variation.

(24) *On the Change of Conductivity of Metallic particles under Cyclic Electromotive Variation*—British Association, 1901.

(25) *The Conductivity Curvograph*.—British Association, 1901.

The very thorough study which has been given to the curious action of coherer by Professor Jagadis Chunder Bose renders his paper before the British Association (Glasgow) a very important contribution to this branch of electro physics. In order to study the whole subject from a broad standpoint, the author made a number of experiments with a most interesting apparatus which he terms a curvograph. A number of properties is revealed by the curves drawn by this ingenious apparatus."—*Engineering Magazine*.

Prof. Bose was for a second time honoured with the request from the Royal Institution to give a Friday Evening Discourse.

(26) *On the Response of Inorganic Matter to Stimulus*.—Friday Evening Discourse, Royal Institution, May, 1901.

"The lecture on The Response of Inorganic Matter to Mechanical and Electrical Stimulus which Dr. J. C. Bose delivered at the Royal Institution last Friday evening, affords a striking illustration of the far-reaching character of the long and elaborate series of researches which the lecturer has been carrying on during the past few years.

"All these researches have rendered invaluable assistance, both in the progress of scientific research into electromagnetic radiation and in the practical improvement of wireless telegraphy and other forms of aetheric signalling. The latest researches, however, which served as the subject for last Friday's discourse, carry us further than the domain of theoretical and applied physics, into the regions of physiology and chemistry. They lead to the discovery of an universal action underlying certain phenomena in both living and inorganic matter. Returning to the actual researches, we may observe that a stupendous problem arises from their indications; the co-ordination between the response of living and that of the inorganic matter is a riddle, in front of which neither physicist nor physiologist should rest until they have obtained the solution; and no one is so well qualified to solve it as its originator. The scientific world is immensely indebted to Dr. Bose for the researches he has already completed and presented to it—researches which redound greatly to the credit of India, and more

specially, of the Presidency College of Calcutta."—*Electrician*.

Prof. Bose's next subject of inquiry was whether the ordinary plants were not fully sensitive. The prevailing view was against such supposition. He, however, was successful in devising a new mode of investigation by which the universal sensitiveness of plants was fully demonstrated before a special meeting of the Linnean Society.

(27) *On the Electric Response in Ordinary plants under Mechanical stimulus*.—Linnean Society, March, 1902.

"Prof. Bose performed a series of experiments before the Linnean Society showing electric response for certain portions of the plant organism, which proved that as concerning fatigue, behaviour at high and low temperatures, the effects produced by poisons and anaesthetics, the responses are identical with those hitherto held to be characteristic of muscle and nerve. He drew the final conclusion that the underlying phenomena of life are the same in both animals and plants, and that the electrical responses which he had demonstrated are but the common physiological properties of these."—*Nature*.

Prof. S. H. Vines, F. R. S., President of the Linnean Society, wrote to the author:—

"Your experiments make it clear beyond doubt that all parts of plants—not merely those which are known to be motile—are irritable, and manifest their irritability by an electrical response to stimulation. This is an important step in advance, and will, I hope, be the starting point of further researches to elucidate what is the nature of the molecular condition which constitutes irritability, and the nature of the molecular change induced by a stimulus."

The President of the Botanical Section at Belfast in his address said:—

"Some very striking results were published by Bose on the Electric Response in ordinary plants. Bose's investigation established a very close similarity in behaviour between the vegetable and the animal. Summation effects were observed and fatigue effect demonstrated; while it was definitely shown that the responses were physiological. They ceased as soon as the piece of tissue was killed by heating. These observations strengthen considerably the view of the identical nature of the animal and the vegetable protoplasm."

(28) *Sur la Reponse Electrique de la Matiere Vivante*—Société de Physique, Paris, 1902.

(29) *On the Electromotive Wave accompanying Mechanical Disturbance in Metals*.—Royal Society, May, 1902.

He was next asked by the Royal Photographic Society to give a Discourse on his Strain Theory of Photographic Action.

(30) *The Latent Image and Molecular Strain Theory of Photographic Action*.—Transactions, Photographic Society, London, June, 1902.

His next communication was to the Linnean Society giving an account of his discovery of rhythmic electric pulsation in the Telegraph Plant.

(31) *On the Electric pulsation accompanying Automatic movements in Desmodium gyrans*.—Linnean Society, 1902.

His next work gives a complete account of the investigations on the response of inorganic and living substances.

(32) *Response in the Living and the Non-Living*.—Longmans, Green & Co, 1902.

"The responses in plants and metals were shown by Professor Bose, to be modified exactly in the same way as animal tissues are modified, there being not a single phenomenon in the response in muscle or nerve that has not an exact parallel in the response of metal and plant. Just as the response of animal tissue is found to be exalted by stimulants, lowered by depressors and abolished by poisons, so also it is found that under the action of appropriate reagents the response in plants and metals undergoes similar exaltation, depression or abolition. The conclusion reached by Prof. Bose, therefore, is that: capacity for response is not confined to living tissues; the living response in all its diverse manifestations is but a repetition of phenomena exhibited by the inorganic, there is in it no element of mystery or caprice, as is admitted on the assumption of a hypermechanical 'vital force' acting in contradiction or defiance of those physical laws that govern the world of matter; the response phenomena are not determined by the play of an unknowable and arbitrary vital force, but by the working of laws that know no change, acting equally and uniformly throughout the organic and inorganic world."—*Engineering Magazine*.

"Dr. Bose's remarkable experiments on living and dead matter show that there is a continuous transition from the one kind of matter to the other, and that some inorganic materials are capable of being stimulated, fatigued, poisoned and temporarily 'killed.' Thus another function of living matter has been annexed to physical science, or rather, the idea of life has been expanded. Prof. Bose has opened up a field which was hitherto considered absolutely closed."—*Electrician*.

"J. C. Bose, in his *Response in the Living and the Non-Living*, after showing that under electrical stimuli plants exhibit fatigue, etc., and are affected like animals by anaesthetics and poisons, goes on to prove the same properties of tin and platinum wire. These also become fatigued; there is a threshold of response; subliminal stimuli become effective by repetition; response increases with the intensity of stimulus up to a certain point at which another limit is reached; response is affected by temperature and the median range is most favourable to it; some substances act as stimulants upon tin and platinum, others like anaesthetics, others as poison destroying all response. A small dose may increase the response and a large dose of the same abolish it. The resemblance of these results to some obtained in Physiological Psychology is obvious."—*The Metaphysics of Nature*, by Prof. Carveth Read.

Herbert Spencer wrote to the author:—
"Notices of your investigations have from time to time excited my interest. The topic is one of extreme interest,"

and one which in earlier years would not improbably have received due recognition in my book."

During the next three years (1903—1905) Prof. Bose turned his attention to researches into the various responsive reactions of plants. For this he invented a number of original types of recorders which revealed many unsuspected phenomena in plant-life. We give accounts of only the most important of these.

(33) *The Mechanical response of Ordinary plants.*

By means of his delicate instruments he demonstrated that even ordinary plants gave motile response.

"These effects (of contraction) are observable not only in so-called 'sensitive' plants, but in all living parts of plants, and it is a definite advance due to Dr. Bose's delicate experimentation, to have it shown that all radial organs, stems, styles and stamens, shorten on stimulation."—*Nature*.

(34) *Effects of Drugs on Response of Plants.*

In this he demonstrated the remarkable similarities of effect produced by drugs in plant and animal.

(35) *Death-spasm in plants.*

No sign has hitherto been found to determine the exact moment of the death of a plant. Prof. Bose discovered that a spasm passes through the plant at the critical moment.

(36) *The Morograph.*

This instrument records the critical point of death of the plant with great exactness. It also demonstrates the translocation of the death-point under different conditions.

(37) *Polar Effect of Current in Excitation of plants.*

This important discovery by Prof. Bose shows that the excitatory reaction in a plant is determined by the point of entry or exit of an electric current. It establishes the identical nature of excitation in the animal and the vegetal protoplasm.

(38) *Electro-tonus in plants.*

In this the variation of excitability induced by Anode or Kathode, is demonstrated to be identical in the case of animal and vegetal tissues.

(39) *Electro-tactile Response.*

This discovery furnishes a new mode of detecting the passage of excitation in plants.

(40) *Multiple response in plants.*

The discovery of repeated responses in plants under strong stimulation, led to the elucidation of the most obscure phenomenon of spontaneous movements.

(41) *Inquiry into Causes of Automatic pulsation.*

One of the most intricate phenomena in physiology, is the occurrence of spontaneous movement, so-called. No satisfactory explanation has been offered to account for it. As a result of a long course of investigation, Prof. Bose succeeded in tracing the exciting cause.

"This is a most valuable and interesting account of experiments, offering an explanation of autonomous movement, and its relation to multiple response. After a careful perusal of this, one is convinced that 'Automatism' has simply been the name used to cover our ignorance of the reason for movements, which we did not understand, and for which we could see no immediate stimulus. Experiments here described on *Biophytum* and *Desmodium* show how 'automatism,' to use the old name for the movements characteristic of these plants, is simply the result of the condition of the plant, and the stimuli to which it has been submitted."—*The Athenaeum*.

Prof. S. H. Vines, F.R.S., President of the Linnean Society, wrote to him:—

"It seems clear that you have revolutionised in some respects, and very much extended in others, our knowledge of the response of plants to stimulus. Spontaneous movements have always been a difficulty, but your work seems to give the clue, to suggest that there is no such thing as an absolutely spontaneous movement, but that every movement is the result of the action of a stimulus which has been stored up. This discovery alone would be a striking result of all the time and labour you have devoted to these researches. However I cannot think, but that there must be a great deal more to be discovered along the lines that you have opened up."

(42) *Influence of Temperature on Automatic response.*

In this is shown the parallelism of effect of temperature on rhythmic plant tissue and the cardiac tissue of the animal.

(43) *Effects of various Drugs on the Rhythmic pulsation of plant.*

"Among the most interesting of the experiments are those dealing with the action of drugs. The identity of phenomena in both the contractile and rhythmic tissues of animals and plants is most striking. The author seems to have demonstrated in the most conclusive manner that there is an essential unity of the physiological effects of drugs on plant and animal tissue; and if this be the case, it is clear that investigations of the utmost value may be carried out on plants for the purpose of getting light on the problem of the modification of the effects of drugs on individual constitutions."—*Westminster Review*.

He next investigated the important problem of

(44) *The Different Effects of Drugs on Plants of Different Constitutions.*

By subjecting a specimen to certain specific conditions, he was able to make it immune to the action of poison from the effect of which others succumbed.

(45) *The Shoshungraph for Researches on the Ascent of Sap.*

This is a new type of instrument invented to record the suction of liquid by the plant.

(46) *The Growth Recorder.*

Accurate investigation on the phenomenon of growth has been rendered possible by the invention of this apparatus, which records and gives instantaneous measurement of the rate of growth.

"The apparatus and the experimental methods employed show great ingenuity and praiseworthy simple directness of attack. One feels that valuable results are to be got with the delicate optical levers, the Kunchangraph, the Balanced Crescograph and the Morograph. Workers on growth will be forced to abandon their primitive and clumsy method and much good will result from the refinements here introduced."—*Nature*.

(47) *The Balanced Crescograph.*

This instrument based on a novel principle is employed for determining the influences of various agencies on growth.

(48) *Researches on Thermo-crescent Curve.*

This is a long investigation on the effect of temperature on growth, and the determination of optimum point of growth.

(49) *Researches on Positive and Negative Geotropism.*

The outcome of this investigation is to show that the opposite reactions of growth on the shoot and the root are not due, as has been supposed, to two different sensibilities but to the differences in the points of application of stimulus in the two cases.

(50) *Determination of the Laws of Growth.*

Certain important factors in growth discovered by Prof. Bose, had not hitherto been recognised. Taking account of these, a complete law of growth curvature is enunciated.

(51) *Fundamental Responsive action of plant to the Stimulus of light.*

(52) *Researches on Positive and Negative Heliotropism.*

All the various responsive movements of plants under the action of light is shown to result from certain definite and fundamental reactions.

(53) *Researches on Diurnal Sleep.*

(54) *Torsional response under Stimulus of Light and Gravity.*

The conditions which determine this response are traced and a law enunciated.

Prof. Bose next published his exhaustive work on responsive reactions of plants.

(55) *Plant Response as a means of Physiological investigation.*—*Longmans & Co. 1906.*

"A biologically equipped reader will experience dazzled admiration for the logical progressive way, in which the author builds up, not in words, but actually experiment on experiment a complete functioning plant from three simple conceptions. These conceptions are: *Stimulation*, the transference of the external energy in the plant; *Contraction*, the direct response, of plant cells to stimulation; *Expansion* including growth the indirect response to stimulation. There are literally scores of special points of the greatest interest in the course of the book. All such experimental cross-examination will make for the progress of knowledge, and we think that Dr. Bose can claim that his book will be an external stimulus to the growth of plant-physiology and the responses of future investigators."—*Nature*.

"This book may be acclaimed as a path-breaking one; for it shows a method of attack and refinement of instrumentation for the study of the phenomena of irritable reactions in plants, that is sure to be of the utmost service."—*Botanical Gazette*.

"Prof. Bose's work is a monument of scientifically directed industry, patient observation, far-reaching ingenuity and logical investigation. While chiefly of interest to botanists, it cannot fail to attract the attention of serious biologists, and every student will welcome it as a helpful contribution to the unravelling of the problem of life. The many experiments here described are admirable in conception and in their execution the author has designed many peculiarly delicate and beautiful forms of apparatus. The chief merit of the work is that it demonstrates the fundamental unity of physiological response in plant and animal."—*Medical Review*.

"The work represents an enormous stride in our conception of the vegetable kingdom. It throws light on many problems in general physiology, and is a welcome contribution to our knowledge of molecular physics. It fully and clearly demonstrates, that the various energies of the outside world influence the vegetable like the animal organism, and by a more or less similar mechanism."—*Electrical Review*.

"With the appearance of the important book by Professor Bose, on 'Plant Response,' we have for the first time a conception which embraces all the expressed or unexpressed 'sensitiveness' of plants. We are now presented with a complete theory of their movements. We may add that it is one which no plant physiologist can afford to ignore, which no student of any branch of botany should overlook, and which should prove suggestive to animal

physiologists, possibly even to psychologists."—*The Athenæum*.

"It may be unhesitatingly said that a careful reader of the present volume must be impressed by the ingenuity of device, and the delicacy of manipulation, obvious throughout the whole of the experimenting. Assuming that the instruments work exactly as described, it is difficult to reach conclusions which differ materially from those stated by Professor Bose."—*American Journal of Science*.

"His theory of the fundamental uniformity of all plant response is certainly most illuminating, and one for which he brings forward a great weight of evidence. The value of his book lies in the general theory put forward, and in the fact that he is the first to apply to the study of plant response, apparatus which he has elaborated to an extraordinary degree. The book certainly marks an epoch in the method of attack on the problems of irritability in plants."—*Journal of Botany*.

In the Plant Response, various excitatory effects were detected by means of mechanical response and recorded by the specially sensitive instrument invented for the purpose. Prof. Bose next turned his attention to discover and perfect other methods of investigation by which the various invisible excitatory reactions in the plant, induced by different forms of stimuli, could be detected and recorded. The methods now employed were electrical, by means of which various response phenomena were discovered in the plant, the existence of which was quite unsuspected. These particular investigations were carried on for the next three years from 1906 to 1909.

(57) *The Electromotive Response of plant.*

This gives an account of the result of research on various effective methods of quantitative stimulation of the plant, and the electric record of the resulting response.

(58) *The Relation between Stimulus and Response.*

Weber-Fechner's law is shown to be applicable to the plant-response as in that of the animal.

(59) *Rheotomic Observation of Electric Response of plant.*

This research determines the time-relation of initiation, climax and decline of electrical response.

(60) *Demonstration of Dual Character of Response.*

In this is given an account of the discovery of the existence of two distinct kinds of response, whose signs are opposite. The discovery of positive response throws light on many physiological reactions which had hitherto been regarded as very obscure.

(61) *Detection of Physiological Anisotropy by Electrical Response.*

An account is given how owing to the differences in the previous history, different parts of an isotropic organ become anisotropic; an electrical method is described to detect such physiological anisotropy.

(62) *Natural Current in a plant and its Variation.*

This investigation was carried out to determine the condition under which there is a flow of electrical current in a plant, and the changes in the current.

(63) *Electrical Investigation on the Action of Drugs on plant-tissue.*

The physiological change induced in the plant-tissue by various drugs is determined by means of variation of electrical response.

(64) *Determination of Variation of Excitability of plant-tissue by Method of Interference.*

This is a new and extremely delicate method by which a slight physiological change is detected.

(65) *The current of Injury and Negative variation in plant.*

(66) *Current of death.*

(67) *Effect of Temperature on Electrical Response.*

(68) *The Electrical spasm of Death.*

This is a remarkable phenomenon discovered by Prof. Bose, of a sudden electrical current generated in the organism at the critical moment of death.

(69) *Multiple and Autonomous Electrical Response.*

It is here shown how the electrical response becomes repeated under a single strong stimulus. This is an independent demonstration of the fact that living tissue can store up, for the time being, the energy of its environment, to be given out later in the form of repeated pulsations.

(70) *The Electrical Response of Leaves.*

It has been supposed that the leaf of *Dionaea* was alone sensitive. This research shows that every leaf is excitable and gives electrical response on excitation.

(71) *The Leaf considered as an Electrical Organ.*

It is shown that owing to physiological anisotropy of the upper and lower surfaces of leaves, a feeble electrical discharge takes place across the leaf when certain conducting tissues, in the petiole are excited.

(72) *The Theory of Electrical Organ.*

The complex organ of the electrical fish consists of a series of plates. Prof. Bose shows that the electric action of each plate is fundamentally the same as that which causes an electrical discharge in a leaf. In connection with this he shows that the so-called "blaze current" which has been supposed to discriminate a vital reaction, is observed also in certain inorganic preparation made by him.

(73) *Researches on the Electrical Response of Skin, Epithelium, Gland and Digestive organs in plant and animal.*

(74) *Electric Response of plant to the Stimulus of Light.*

The various characteristics of the response of plant to light is shown to be similar to the electric reaction of light on an animal retina.

(75) *Geo-electric Response.*

In this research is described a new method of detecting excitation induced in the plant by the stimulus of gravity.

(76) *The Conductivity Balance.*

The invention of this method enables very accurate determination of the effect of various drugs on the conductivity and excitability of the plant-tissue.

(77) *Response by Variation of Electric Resistivity.*

Another new method depending on variation of electrical resistance, is described for the detection of excitatory change.

(78) *The Molecular Theory of Excitation and its Transmission.*

In this the author enters into detail of the molecular aspect of excitatory change induced by stimulus.

(79) *Inorganic and organic Memory.*

Prof. Bose puts forward an interesting theory of memory as an after-effect of sensory stimulation, and deals with the much more difficult problem of the revival of an image long after it has apparently faded. It has been suggested that this process of revival depends on the existence of some "scar" or fixed impression on the brain, or on a certain persistent disposition or tendency to movement created there. Prof. Bose gives reason and some experimental evidence to show that such a revival of memory consists of two distinct factors; first, that molecular change with concomitant change of properties; and second, the effect of an internal stimulus, delivered as a blow from within, by an impulse of the will upon the sensitive surface in which the image is latent."—*The Athenæum*.

His next work is a complete study of various electric responses in plants and their relation to the corresponding phenomenon in the animal, treated according to the comparative method.

(80) *Comparative Electro-physiology.*—Longmans & Co., 1908.

We must regard the common divisions represented by the various sciences—say physics and biology—as purely man-made categories, excusable, and indeed convenient for our purposes, but without any ultimate warrant in reality. We shall, therefore, always be prepared to listen when a student of one science introduces his methods into another. It might easily be shown from the history of science that the great steps in our knowledge have coincided with these invasions. It might also be predicated from current inquiries in many fields that the great scientific achievement of our century will be none other than the synthesis of the sciences. The less we recognise boundaries and demarcations, the more we recognise the supreme truth. Notable at the present day, amongst those who show how puny and artificial and cramping are the accepted barriers among the sciences, is the Indian Physicist, Prof. J. C. Bose of Calcutta. Seven years ago Dr. Bose began with inquiries into response in the living, and non-living which he has now carried a long stage further in his book "Comparative Electro-physiology."—*Westminster Gazette*.

The electrical physiology of muscle and nerve has undergone many changes both in theory and practice. It has been left to Prof. Bose to take a wide view of the subject and to correlate the electrical changes in the neuromuscular apparatus of the animals with similar, but less known changes occurring in the botanical world. The author has made a valuable contribution to the knowledge of the extremely difficult subject of electro-physiology. His observations are useful alike to the physiologist (concerned with animals and plants), the physicist and the psychologist."—*The Athenæum*.

"This book will interest a large circle of scientific readers, dealing as it does with the problems of physics, botany, physiology and experimental psychology. The author, when he was in England, acquired a reputation for the skill and ingenuity with which his apparatus was designed, and in the present volume he has given further instances of this. The book contains much that is novel. His *Sensimeter* will probably become a part of the curriculum of the psychologist. To the physicist, perhaps the most interesting thing is the Magnetic Conductivity Balance. These experiments are of exceeding interest."—*Electrician*.

"In sequence to his books on Response in the Living and the Non-living (1902) and Plant-Response (1906) Prof. Bose has published a third volume on Comparative Electro-physiology. Prof. Bose has great ingenuity in device of experimental apparatus, fertility in initiating new lines of observation, and a clear style of setting forth his experimental results. There are in Prof. Bose's book a great many very interesting observations and ingenious methods of experimentation which repay the reader's attention. In particular his experiment on root-pressure, and the rise of sap; those by which he seeks to demonstrate that not only sensitive plants but all plants respond to excitation by variation of turgescence and electrical state; his comparison of the glandular structures of sundew and pitcher plants with animal glands; his demonstration of "blaze current" in a brominated lead plate and assertion that it

cannot be regarded as a sign of life; his demonstration on the motile leaflets of *Biophytum* of the anodic and cathodic effects of constant current, and the velocity of transmission of excitatory waves; his comparison of retentiveness of molecular change in metals with memory, in fact the whole book abounds in interesting matter skilfully woven together."—*Nature*.

After the publication of the *Comparative Electrophysiology*, the Government of India sent Prof. Bose on his third Scientific Deputation to the West (1908-1909). In answer to invitations extended to him by different Universities and Scientific Associations, he visited America and delivered a series of lectures on the results of his own researches. He gave an address at the annual meeting of the American Association for the Advancement of Science held at Baltimore, and lectured before the New York Botanical Society, the Medical Society of Boston, and the Society of Electric Engineers at Chicago. He also delivered a series of post-graduate lectures on Electro-physics and Plant-physiology at the Universities of Illinois, Ann Arbor, Wisconsin and Chicago.

The United States Department of Agriculture is the largest in the world, controlling as it does, numerous experimental stations and having in its staff a very large number of experts for investigation into the problems of plant-life. He received an invitation from this important centre to lecture before "a large number of scientific men who are keenly interested in your experiments and who wanted very much to make your acquaintance." In compliance with this invitation he lectured at Washington on the results of his physiological investigations.

We have given a list of 80 important investigations carried out during fifteen years, between the years 1895 and 1910—investigations that have profoundly affected not one, but many branches of science. We understand that another very important and extended series of investigations carried out for the last two years has just been brought to a conclusion. An account of this work will be found in Prof. Bose's forthcoming book, which Messrs. Longmans hope to publish at the beginning of the coming year.

One of the essential conditions for the discovery of new physical or physiological phenomena, is the successful invention and elaboration of apparatus which should combine at the same time an extreme sensitiveness and the highest accuracy. Facilities for this are only available in Western countries with expert mechanics and high-class instrument-makers. The lack of such facilities was regarded as one of the difficulties that could not be surmounted in India. Prof. Bose accepted the

limitations imposed, and succeeded with the help of Indian workmen in constructing those instruments of exquisite delicacy, which were so invaluable for research, and which have been so highly eulogised in Europe. It must be a matter of much gratification to us that America, which stands unrivalled in her mechanical and instrumental resources, should have to come to India for instruments of research. The following letter from Prof. R. Harper of the Department of Plant Physiology in the University of Wisconsin will be read with much interest in this connection. The letter further shows how Prof. Bose's visit has been a source of stimulus and inspiration to various workers in the Universities of America.

"I wish to express to you once more our very high appreciation of the stimulus and inspiration which you gave our biological work by your recent lectures at the University of Wisconsin. They attracted a great deal of attention in all the scientific departments here. I wish to urge again the very great importance for all the Universities and Agricultural Colleges in which plant-physiology is taught, of having your instrument put in the market, so that they will be available for all laboratories. In our course in general physiology, we have for several years repeated and confirmed such of your simpler experiments as can be made with a galvanometer and we are most anxious to extend our work to the whole field of the quantitative study of plant responses which you have opened up. Plant-physiology is a subject of such fundamental significance from the standpoint of agriculture, and the courses in it are being so rapidly developed in the Western Universities, that I am sure that there would be a good demand for such apparatus. It is certainly of first importance for agriculture, that such studies as yours of the seasonal variation of condition in plants, rate and factor of growth and so on, should be developed in our departments of plant physiology to the fullest extent, and for this purpose apparatus for quantitative studies is quite indispensable."

—*The Modern Review*, December, 1912

Living and Non-Living.

Few of us can realise the difficulties that stand in the way of a pioneer who initiates a new line of inquiry. He has to make tangible what had hitherto remained beyond the cognizance of human sense. But this is not his only difficulty. A new accession of knowledge necessitates the re-adjustment of the old. Conservatism in science is as rigorous as in any other domain. It therefore takes a long time before the significance of a discovery is fully realised.

In the study of the phenomenon of life, the difficulties met with are so numerous that any attempt at a consistent explanation had been found to be a hopeless task. Hence a hypermechanical vital-force was assumed which seemed to act in contradiction or defiance of the physical laws that govern the world of matter.

It was in 1900 that Prof. J. C. Bose announced at the Paris Congress the continuity of responsive phenomena in the Living and in the Non-living. How widely this discovery has affected different departments of knowledge, will be seen from the following extracts:—

Prof. Caryeth Read in his *Metaphysics of Nature*, speaks of its influence on Physiological Psychology:

"The differences between the organic and inorganic are much less than we are accustomed to assume. J. C. Bose, in his *Response in the Living and the Non-Living* after showing that under electrical stimuli plants exhibit fatigue, etc., and are affected like animals by anaesthetics and poisons, goes on to prove the same properties of tin and platinum wire. These also become fatigued; there is a threshold of response; subliminal stimuli become effective by repetition; response increases with the intensity of stimulus up to a certain point at which another limit is reached; response is affected by temperature, the median range is most favourable to it; some substances act as stimulants upon tin and platinum, others like anaesthetics, others as poisons (destroying all response); a small dose may increase the response, and a large dose of the same agent abolish it. The resemblance of these results to some of those obtained in Physiological Psychology is obvious. Inorganic matter is much simpler than organic, and so is its molecular activity; the simpler an organism, the simpler its consciousness."

Prof. Kennedy Duncan, the eminent Chemist, in his *Chemical Interpretation of Life*, after giving a full account of the discovery of Inorganic Response by Prof. Bose, says that it has thus been shown:

"that the whole power of an animal or plant to respond to stimuli is a function not of 'Life' but of matter, and with the out-and-out proof of this has passed away the necessity of postulating for it any unknowable and arbitrary vital force."

The physiologists have hitherto been, generally speaking, upholders of the *Vitalist* theory. But now one of the leading physiologists has, as a result of his recent work, been constrained to arrive at a different conclusion. Prof. Schafer in his Presidential Address before the British Association, this year, (1912) says:

"that the dividing line between the Living and the Non-living substances is not so sharp as has hitherto been supposed; both are governed by the same laws."

This may be regarded as a re-affirmation almost in the same words of the concluding portion of Prof. Bose's Friday Evening Discourse before the Royal Institution, eleven years ago, that "the responsive processes seen in life, have been foreshadowed in non-life—that there is no abrupt break, but one uniform continuous march of law."

or the concluding sentence in Prof. Bose's *Response in the Living and the Non-Living*:

"These investigations prove to us that these things are determined, not by the play of an unknowable and

arbitrary vital force, but by the working of laws that know no change, acting equally and uniformly throughout the organic and inorganic worlds."

—*The Modern Review*, November, 1912.

Prof. J. C. Bose's Discovery.

By publishing a complete account of Professor Bose's discovery of nervous impulse in *Mimosa* in its Philosophical Transactions, the Royal Society has done him signal honour.

The leading plant physiologists, Pfeffer and Haberlandt, had authoritatively declared that in plants like *Mimosa* there was no transmission of excitation comparable to the nervous transmission in the animal. On account of the eminent position of the German physiologists this view accentuating the physiological difference between the animal and plant has received universal acceptance. Prof. Bose's investigation has, however, upset the hitherto accepted theory, and demonstrated the identical nature of the nervous impulse in the plant and animal. The success of the investigation is due to the invention of a new apparatus of extreme sensibility, by means of which the plant records automatically its perception of stimulus and the speed of its nervous impulse. This new apparatus, the Resonant Recorder, based on a novel principle, records time intervals as short as a thousandth part of a second, and is far more accurate than the chronographic recorders which have hitherto been employed. The time required for the plant to perceive a blow has thus been found to be 6 hundredth part of a second, a period which is not of a different order to the latent period of the muscle of a frog. The perception period of *Mimosa* is appropriately modified as in the animal under varying external conditions. Under fatigue the perception period is very much prolonged; after a severe shock the plant remains dazed for a considerable length of time. The speed of nervous impulse in *Mimosa* in summer has been found to be about 30 millimetres per second. This speed is enhanced under warmth and depressed under cold. The nervous impulse in the plant can be arrested as in the animal by various physiological blocks. Thus local cooling induces a paralysis of the plant-nerve. An electrical current can be made to arrest the nervous impulse in the plant. Various anaesthetics and poisons also inhibit its excitatory impulse. The investigation on the simplest type of plant-nerve is expected to cast a flood of light on the very obscure phenomenon of nervous impulse in general and the causes operative in bringing about the degeneration of the normal function of the nerve.

—*The Modern Review*, August, 1913.