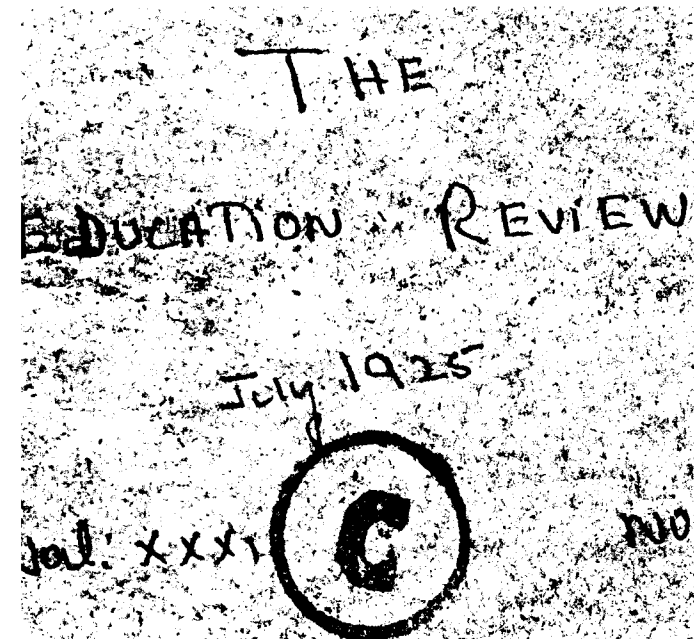


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CALCUTTA UNIVERSITY.

OPENING OF THE ASUTOSH BUILDING.

Speech by the Hon'ble Justice Sir Ewart Greaves,
Vice-Chancellor.

YOUR EXCELLENCY:

We welcome you here this afternoon as Governor of Bengal and as Chancellor of Calcutta University but we are not unmindful that when in your own Province you are still connected with the University as an *ex-officio* Fellow by virtue of your position as Governor of Assam.

Moreover, it is to this University that students from your own Province come to pursue their studies which forms an additional link in the chain of your connection with this University. This is an era of new Universities and it may be that the time is not far distant when Assam will found its own Uni-

versity. In the first of the Kamala lectures, which were established by the late Sir Asutosh Mookerjee, in memory of his eldest daughter, and which were delivered for the first time this year, the lecturer, Dr. Besant, drew an eloquent and entrancing picture of the old Universities of India established in sylvan glades and in pastoral surroundings and it may be that when Assam decides to establish her own University, some such setting may be found either by the mighty waters of the Brahmaputra or amidst those beautiful forests with which nature has so richly endowed Assam. Until, however, this happens we shall always welcome her students as we welcome you in our midst this afternoon. Calcutta University, by the force of circumstances, can look to no such setting as I have pictured for the future University of Assam; it must seek its expansion in the heart of the

city itself and must wrest to its use where possible land in the immediate vicinity of the Senate House. This, of necessity, must entail great difficulties in expansion and heavy cost when expansion is possible. The history of the building which you are here to open to-day aptly illustrates our difficulties. Many years have passed since the need for additional accommodation for the University became urgent, and so long ago as the year 1905 the University indicated to the Government of India the need for acquiring the site where the new building now stands for the purposes of the University. The site was eventually acquired in 1913 but owing to financial difficulties it was not possible to commence the building until the end of 1922.

Meantime, the University has had to continue its work in cramped and unsuitable conditions which have made things difficult alike for the teacher and the taught. And even now the building which I have the honour to ask you to open this afternoon is truncated and incomplete from lack of funds. Its incompleteness awaiting the addition of another storey or stories for their completion, tell their own tale and should move even the stony heart of a Finance Member or a Financial Secretary and I feel sure, Sir, that your æsthetic sense will be touched and revolted by these mute, dumb, incompleted pillars which cry aloud to heaven for funds for the completion of the building.

You will observe, Sir, that our financial needs are such that instead of having a fine facade facing on College Street we have been forced to erect on that side of the building shops from the rentals of which we hope to supplement the depleted finances of the University. This course was forced on us by sheer necessity.

By a resolution of the Senate of the University, passed on the 6th June last, the building is known as "The Asutosh Building."

It is only fitting that the name of the late Sir Asutosh Mookerjee should be associated with this building, for it is largely due to his energy and foresight that it exists to-day. He worked unceasingly for the acquisition of the site, and when this was acquired he strove, undaunted by rebuffs and disappointments, for the erection of the building and he took a very large part in planning it and in supervising its construction, and it is sad indeed that he has not been spared to see the fruition of his labours on behalf of the University which he loved so well. There is also another reason why this building should be associated with his name. Within it are to be housed a not inconsiderable portion of the classes of the Post-Graduate Department of the University with the establishment of which his name will always be connected as its real founder. The Department has gone through many vicissitudes and has been the subject of much criticism, but it is an enduring monument to his labours on its behalf and now at long last it makes its home in a building for which he fought and which he largely planned and in the years to come, when we have a completed building, the Post-Graduate Department will have a home worthy of its founder and of itself. The plans of the building were prepared by Rai Bahadur Annada Charan Sircar and the building is the work of two Contractors, A. K. Mitter & Co., and J. S. Mookerjee & Co. And I should like also to refer to the work of the Engineer, Mr. M. N. Mookerjee, who has supervised the building throughout with care and attention. Before I ask you to open the building I

should like to refer once more to Sir Asutosh Mookerjee. This is the anniversary of his birth and it is meet and fitting that on this day the building, named after him, should be opened.

I will now ask Your Excellency as Chancellor of the University to open the 'Asutosh Building.'

Speech by H. E. Sir John Kerr, Chancellor.

MR. VICE-CHANCELLOR AND GENTLEMEN :

I must thank you in the first place for your kind welcome this afternoon and for the honour which you have done me in asking me to open this building. I am proud indeed of my present connection with the University as its Chancellor, though my tenure of office is brief and in a manner accidental. In my younger days when I saw visions and dreamed dreams as to the posts I might hold later on, it never entered my head that I should one day act as Chancellor of this University, and I feel deeply that I have no qualifications which fit me for this exalted position in the academic world. The Vice-Chancellor, however, has reminded you that I am also connected with the University as an official representative of Assam on the Senate. I am very glad that the Vice-Chancellor mentioned Assam, because it gives me an opportunity of emphasizing a point which is perhaps not always realised, namely, the deep interest which the educated public of Assam take in the affairs of the Calcutta University. Most of our public men are graduates of the University. They follow its fortunes and misfortunes with the keenest interest, none the less because it still controls to a large extent the education of their children and their children's children. The day may come when, as the Vice-Chancellor has eloquently

prophesied, Assam will possess its own University, but many difficulties, financial and otherwise, will have to be overcome before that dream can be made a reality. In the meantime I think the Government and the Legislative Council of Assam would prefer to spend any funds that may be available on the development of Primary education rather than on the creation of an independent University. For some time to come, therefore, the Calcutta University must continue to control our collegiate education and this accounts for the keen interest which Assam takes in the controversies which arise from time to time in connection with this University. I sometimes feel that Assam in relation to those controversies rather resembles a small boy trying to join in a fight between two big boys and running the risk of being considered a nuisance by both of them, but that feeling is due only to my own natural modesty and has no foundation in fact. I desire to acknowledge gratefully the courteous consideration which Assam has received in regard to these matters at the hands both of the Bengal Government and of the Chancellor and the authorities of the Calcutta University. I have no complaints to make on that score and the kindly reference which the Vice-Chancellor has just made to Assam and its connection with the University will, I know, be highly appreciated in that province.

Now, Gentlemen, I will turn to the business of the day. It is perhaps not known to you that apart from my present connection with the University, as Acting Chancellor and *ex-officio* Fellow, I have another qualification for taking part in this ceremony. I cannot resist the temptation of telling you about it because it gives me an opportunity of speaking of my friendship with the great man

whose name this building is to bear. In 1912 I was Education Secretary to the Government of Bengal. Those of you whose memories carry you back over thirteen years will remember that at that time there was some controversy between the University and the Education Department of the Government of India regarding the arrangements, and particularly the financial arrangements, which were necessary in consequence of the Government of India's departure from this city. Lord Carmichael, who was then Rector of the University, deputed me to discuss the details of these arrangements with Sir Asutosh Mookerjee personally, with the object of arriving at some settlement. I well remember the Sunday morning in July, just thirteen years ago, on which I first visited Sir Asutosh Mookerjee at his house in Russa Road. I shall never forget my first view of the courtyard and ante-rooms, crowded like those of a Consul of ancient Rome with all sorts and conditions of men—Maharajas, Pundits, business men, lawyers and humbler folk—who had come there to seek advice and help from that man of stout heart and capacious brain. I well remember my discussion with Sir Asutosh on that occasion, the tenacity and ability with which he pressed his own case, the broad-mindedness with which he saw the case of his opponents and the acuteness with which he detected the weak points in their armour. I remember, too, one afternoon, a few days later, when Sir Asutosh brought me to this very site, which was then, as you remember, known as Madhab Babu's Bazaar or the fish market. I do not know who Madhab Babu was, but I can assure you that his Bazaar was what you would expect a fish market to be on a hot afternoon in July. I was in no mood to linger there longer than

was necessary, but Sir Asutosh would not let me go. I remember still the vigour with which he pressed upon me his view that it was a crying scandal and disgrace to have a fish market in the middle of this area round which stately temples of learning were even then rearing their heads. I remember the enthusiasm with which he described to me his own plans for utilisation of the building which he hoped to erect on this spot. The result was that after certain further discussions and negotiations I was able to draft a letter to the Government of India recommending an Imperial grant for the purchase of the fish market, and in compliance with that demand the Government of India made a grant of eight lakhs of rupees in their budget of March, 1913. Then came the War and other things to delay the construction of this building, but I need not go into those details now. What I have said will, I hope, be sufficient to show you that I am justified in taking a particular personal pleasure in the fact that it has fallen to my lot to take part in these proceedings to-day.

Well, Gentlemen, I must apologise for taking up so much of your time with these personal reminiscences, but I thought that they would be of more interest to you than if I attempted a task for which, as I have said, I have no qualifications and tried to lecture you on the academic aspect of the work of the University. I am grateful to the Vice-Chancellor for the delicate manner in which he has suggested the need for further financial assistance for the completion of this building. I am sorry the Finance Member was not present to listen to that pathetic appeal, but even if it had touched his heart to the extent of making him put his hand in his pocket, I fear he would have found nothing there but

promises to contribute to other schemes which must be redeemed before we can undertake new obligations. The whole question of the University finances is now being considered by the Government of Bengal, and you will, I am sure, recognise that it is impossible for me during my short acting Governorship to make any promises in a matter of this kind. I must, therefore, leave this painful subject with an assurance that you have my sympathy as one who also suffers from the eternal lack of pence. I shall be on safer ground if I remind you once again of the ideals of the man to whom the erection of this building is mainly due. His Excellency Lord Lytton in paying eloquent testimony to the achievements of Sir Asutosh, to the versatility of his intellect and the variety of his interests said that the Post-Graduate Department of the Calcutta University was the outstanding project of his great career. This building, therefore, is a fitting memorial to his life-work, an emblem of his devotion to the University and of his determination to make it a real and living home of advanced learning. I am aware that criticisms have been made regarding the details of his policy by persons more

competent to judge than myself, but no one will deny that he took his policy from the motto of the University, and that the "Advancement of Learning" became under his guidance a real description of the University's labours, as it was an epitome of his own life-work. It is a happy coincidence that these buildings are being opened on the anniversary of his birthday. I trust that they will fulfil the objects with which they have been constructed and that they will enable the graduates of the Calcutta University to increase the wealth of human knowledge and add lustre to the reputation which the University already enjoys for research and scholarship. In this way the Asutosh Building will enshrine the ideals of him, after whom it is named, and it will be the task of those who teach and study here to see that those ideals remain as pure and bright as they shone in the mind and heart of their creator and that they are handed down to future generations, living and untarnished.

Mr. Vice-Chancellor and Gentlemen, I have now much pleasure in declaring the Asutosh Building open.—*The Calcutta Review*, July 1925.

GOLDSMITH : THE VICAR OF WAKEFIELD (complete.)

EDITED

WITH INTRODUCTION AND NOTES

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THE DALTON LABORATORY PLAN

By

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INTRODUCTION.

THE beginning of the Twentieth Century has inaugurated two important innovations in education—the Montessori Method and the Dalton Plan. The latter of these innovations is the main theme of this paper. It is significant that both the innovators are women, when we realise that, of the three classes of wronged humanity in our society, the woman was the first to become articulate on her rights and privileges, to fight for liberty and equality and to institute the suffragette movement. It is but proper, that the woman, after having nearly succeeded so well in her own case, should have devised a scheme for the liberation of infant energy from the hampering conditions of the home and for the release of the pupil-energy from the fetters of the classroom and the time-table.

DESCRIPTION OF THE NEW PLAN.

The freedom of the child in education advocated by Rousseau, Pestalozzi, and Froebel in former times and worked out admirably in the Kindergarten and Montessori Methods is now carried a step further by an American pioneer, Miss Helen Parkhurst under the name 'Dalton Laboratory Plan,' so called as it was first applied to the mixed High School at Dalton, Massachusetts. It is well to remember that Miss Parkhurst was a student of Dr. Montessori for some time and was in charge of her interests in America, having been authorised by her to organise a

Training School for Montessori Teachers. Her plan was a result of the realisation of the futility of mass-teaching and the exploration of a method of learning in which each child may work for himself or herself as a unit. It is, however, interesting to add that sheer necessity in the first instance forced her to conceive such a plan, when in a rural school she had to manage, single-handed, forty pupils divided into eight grades or classes.

The term 'laboratory' is significant as it indicates clearly the new point of view, where the pupils are the experimenters, and the instructors the observers in the community life and situations provided by the school under the new organisation for the best means of intellectual and social functioning. It is not so much what a pupil learns, but how it is learnt, the experience derived during the process of learning that is claimed to be important for the full blossoming of the pupil's personality. As Miss Parkhurst has put it, 'we have not hitherto appreciated the fact that teaching is simply like taking the horse to water; it can no more make the pupil learn than the leader of the horse can make him drink.'

Freedom and co-operation are the two guiding principles of this plan—freedom to work at a subject when one's interest in it is maximum and to continue one's work only as long as one likes it, and co-operation, i.e., interaction of group-life to bring home the idea that no individual or group can live independently of others. To achieve this two-fold object, the energies of the pupils are released from the cramping and fettering influence of the time-table and the class-room and the pupils are allowed to study at any time any subject they liked in suitable subject-

laboratories fitted with all the necessary facilities and equipment such as reference-books, apparatus, maps, charts, and placed under the charge of specialist teachers ready to guide and assist the pupils. These teachers in the subject-laboratories are called subject-advisers and are expected to create the proper subject-atmosphere and to do everything they can to make the subject real, vivid, and interesting to the pupils and the laboratories are like inviting show-rooms inducing the pupils to come in and study of their own free will.

Under the Dalton Plan, therefore, the school does not consist of so many classes each containing a heterogeneous group of pupils at different levels of knowledge, mental ability and interest in work, all of them being driven blind-folded, as it were, apparently to the same uncertain goal of an examination; the school consists, instead, of so many subject-laboratories. Here the pupils work at their own pace, study any subject as long as they like, with full mental power resulting from their interest in the work, and consult one another and their teacher who is their general adviser and help-mate; and when they get tired of one subject, they merely proceed to another subject-laboratory to pursue the study of that subject. In order to give the pupils a general idea of the plan of their education and the work before them so that they may set about it systematically, the whole year's syllabus of work is laid before them at the beginning of the school-year, broken up into monthly assignments in each subject. These assignments are in the nature of contracts by which the pupils undertake to finish a certain amount of work in each subject during a month and they cannot proceed to the next

month's assignment unless they finish the month's work in all the subjects. This contract form is intended to give the work dignity and the pupil the consciousness of a set purpose. The pupils are thrown on their own resources, are free to choose their own order of subjects to learn every day and distribute their time among the subjects according to their discretion. Thus the pupils' wills become active forces in the learning process and the Dalton Plan secures training in self-discipline, develops initiative, and a sense of responsibility for which there is little scope in the usual class teaching.

The factor of corporate teaching, however, is not entirely ignored under this new plan, but such class-teaching is necessarily resorted to for select groups of pupils for purposes of explanation of the assignments set, for giving general advice and direction, for pointing out difficulties, for putting facts in proper proportion, etc. Under these circumstances, the class-teaching is very effective and useful for the following reasons:—

(1) These corporate lessons are closely related to the pupils' individual study. They feel the need for such lessons and, being eager to profit by them, bestow proper attention.

(2) Only those pupils are selected to attend these lessons who are more or less of a uniform level of attainment, having done the same amount of the monthly assignments and experienced more or less the same kind of difficulties in their study.

The Dalton Plan is not a 'petrified scheme of organization.' It easily lends itself to modifications and alterations. For its adoption it is not necessary either to change the existing curriculum or to abolish the present gradation of pupils into forms. It is merely

a method of organising conditions which enable the teacher to teach and the learner to learn efficiently. The success of the method adopted in several forms in a number of American and English schools offers eloquent testimony to its efficacy.

THE NATURE OF THE ASSIGNMENTS.

The whole success of the new plan hinges upon the composition of good assignments. They should be carefully planned by the teacher from the standpoint of the pupil and with an eye to correlation and unity as far as possible among the different subjects. They should contain sufficient details and directions to the pupil to get over difficulties in the execution of his work and also lists of questions to be answered. Helpful suggestions which Miss Parkhurst calls 'interest-pockets' should be a vital feature in the assignment. The interest-pockets are designed to motivate the pupil's work, to stimulate his interest and rouse his attention.

It will be well to indicate in an assignment the points where mutual discussion among voluntary groups of pupils is advisable and other points where appeal to the subject-adviser for useful suggestions and inspiration is recommended.

The monthly assignments may have weekly sub-divisions for the younger pupils who cannot organise their time properly and may also be graded into maximum, medium, and minimum varieties to suit the varying abilities of pupils in a form.

In blocking out the syllabus for the year into monthly assignments, care should be taken to see that all the assignments take more or less equal time for their completion. This will help the pupils to check their pro-

gress from time to time and plan their time consistently.

The following outline * prepared by Miss Parkhurst is very suggestive and gives an idea of the essentials to be kept in view in preparing an assignment:—

Subject.

(Form —) (No. of contract assignment).

Points to be Kept in Mind.

Preface to the Month's work.—

1st Week.

1. Topic (giving a central idea of the subject to be developed).
2. Problems (such as maps to be drawn, questions to be answered, exercises to be worked).
3. Written work (in note-books).
4. Memory work (such as lines of poetry to be memorised, formulae).
5. Conferences (announcing the subject for discussion and the date of discussion).
6. References (giving the pages in reference books, magazine articles, etc.).
7. Equivalents (to enable the pupil to take stock of the work done in terms of certain units).
8. Bulletin study (study of the pictures or maps displayed on the laboratory bulletin board or addition to the collection displayed in connection with the particular assignment.)
9. Departmental cuts (credit given for work done in one subject History as if it were done in another correlated subject English)

* For sample Assignments quoted from Miss Parkhurst's book, *vide* Appendix I.

THE RECORD-GRAPHS.

Three kinds of record-graphs * have been invented to record not only the progress of each pupil in each subject but also his total average progress in all the subjects from month to month. These records are made by the pupils under the advice and direction of the subject-advisers.

First, there is the Instructor's Laboratory Graph which gives a comparative estimate (relative to the pupils as well as the subjects) of the individual progress of each pupil in each subject laboratory. This will enable the subject-advisers to arrange conferences of pupils who have made similar advances in subjects and to offer special help and guidance to those who are particularly weak and slow in the assignments. This graph makes the pupils conscious of the work done and the work yet to be done and induces them to compare their relative progress and thus bring about friendly emulation. According to Miss Parkhurst, the graphic exhibition is invaluable in the spread of group control and the sentiment of fraternity. Elder students also develop interest in, and sympathy with, the progress of the younger children, and frequently help them, without any prompting from the teacher, with advice on the division of their time and on the best way to overcome difficulties of all kinds.

Secondly, there is what is called the Pupil's Contract Graph to denote the pupil's daily progress. This is a good and reliable progress-report for the information of the parents, if they could understand the symbolism. It enables the pupil to measure his speed and relative progress in the several subjects and

* For an exhibition of these graphs, *vide* Appendix II.

also to take up the thread of his work where he last left it.

Thirdly, we have the Form Graph which records, on an average basis, the entire number of units of work done in a month by each member of a form. This measures the average progress of the pupil in all the subjects taken together and gives a good index of his total ability.

Such a visible and brief representation of progress as described above will be of value only when the pupils as well as the teachers understand the true spirit of the Dalton Plan and co-operate to their mutual advantage. As the graph is after all a measure of quantity and not of quality, it may easily degenerate into a fictitious exhibition of results which, probably, have never been produced. The graph is no guarantee of a principle understood or a power gained.

THE DALTON PLAN *versus* CLASS-TEACHING.

We will now discuss the merits of the Dalton Plan as compared with the class-teaching method.

The new plan gives to the pupil freedom without license to follow his own methods of learning and involves less nervous wear and tear caused by sudden stoppages of interest and attention and frequent diversions of them into different channels which are inevitable under the class-teaching system with its time-tables. He may devote more time to the subjects in which he is weak and less to those in which he is strong. Further, since he is working at a subject only when his interest in it is at a maximum, he is able to master his difficulties more easily and assimilate and remember more thoroughly the matter studied than at present. There is neither indecent haste nor vexatious delay.

There is also considerable scope for originality and initiative.

The Dalton Plan is just the method of work as well as study in later life and is a good training for it. The pupil has to organise his activities himself and to produce a certain quantity of work at the end of a specific period. The graph exhibits the quantity of work done by him not merely before his teacher but also before his class-mates. Thus the new method develops a sense of responsibility, self-reliance, and self-control.

Under the prevailing system whose goal is a public examination, the class promotions being automatic, the pupil can be irresponsible; for he can easily attribute his failure in the examination to so many causes other than his own indolence such as the following:—

- (i) the questions being above the standard;
- (ii) his own (fictitious) illness;
- (iii) unjust valuation;
- (iv) luck.

When there is such a complex of causes, the pupil generally takes advantage of the difficulty to isolate his special responsibility.

Under the Dalton Plan, there is no such thing as failure and re-doing the same ground. The promotion can be based on capacity for work and actual work done and can be effected without causing any disturbance to school-organisation, in any part of the school-year. The advanced pupil has only to take up the assignment of the next higher form and work through it. He need not be alone in his work; probably he will have the company of the retardates of the higher form, who will be willing to co-operate with him at least in the initial stages and thereby experience a sense of

superiority and self-esteem which they missed in the company of their prior colleagues with whom they could not keep pace.

The pupil's progress is continuous. There is no marching by fits and starts ending in a repulse.

There is also unity in a pupil's work. Under the prevailing system, if a pupil is absent for some days, he misses a number of lessons and there is a gap in his learning which is rarely filled in. Under the new plan, he can take up the thread of his work where he left off.

One test of the success of any educational organisation is that under it each pupil shows work commensurate to his individual mental power or intellect-quotient (or I. Q. as they call it). Is it not a familiar experience that a pupil of excellent ability shows poor records of his accomplishment at school? Is it not common that those who show poor score at school come out brilliant in their profession later? Such anomalies are due to the school not providing work to the pupil suited to his capacities. The Dalton Plan will easily reveal such misfits in work and ability so that a humble or a superior curriculum may be arranged to suit the individual needs.

The Dalton Plan engenders friendly emulation and co-operation among pupils in the process of learning. In the class-room, though all the pupils are congregated together, each learns his lesson in isolation, all consultation among the pupils themselves being strictly prohibited in the name of discipline. The constant interaction among the individuals working in a group, which becomes possible under the new plan will tend to produce the proper democratic feeling showing

clearly the need for co-operation and demonstrating the impossibility for any individual or a group to live independently of others. The relation between teacher and pupils also becomes more cordial than under the existing system; the shy pupil no longer avoids the teacher, nor does the forward pupil attract too much of his attention. Every teacher comes into personal contact with every pupil in the school. The pupils are easily sorted out according to character, ability, and work done. The shirker and the unruly pupil are easily recognised and isolated from others; a different kind of work may be suggested to them and they may be kept steadily at a time-table in the so-called adjustment room until they get into a better frame of mind. The usual difficulties of discipline easily disappear and an atmosphere of increased happiness and industry pervades the entire school.

Lastly, it is claimed among the advantages of the Dalton Plan, that it will work well with large classes and meagre budgets; for, the teacher can get a large number of pupils occupied with tasks, while he goes round offering suggestions for the guidance of the individual pupils when they need them. But one is doubtful of this point.

The new plan will reveal the want of equipment in any school most palpably. What the teacher can supply now to the pupils from his own knowledge and experience, the pupils have to find for themselves in the subject-laboratories. These must therefore be properly equipped and be fairly large in size. The small class-rooms at present in vogue must give way to larger rooms with appropriate furniture for individual and group work

of the pupils; and reference books* have to be multiplied to provide for the simultaneous demands of several pupils working at the same assignment.

Some reduction in the staff may seem possible; but this too is dubious. In view of the great strain upon the teacher in composing assignments, in correcting written work, in preparing lessons, in giving lectures to large classes, and in constant ministration to the needs of the pupils in the subject-laboratory, it is certainly advisable that the subject-adviser should be assisted in his work by a staff of junior teachers. Otherwise the work is bound to become slack. We are sorry we cannot command the same confident optimism in India as the Americans do and put the responsibility for learning confidently and whole-heartedly on the children and rely entirely on their good faith for conscientious and accurate record of the graphs.

If the Dalton Plan should come to stay in our land, we may safely abolish the Inspectorial machinery; for there is no need for it. The control of slackness under the Dalton Plan lies in the plan itself even as the control of error lies in the Montessorian apparatus alone. If the assignments are not properly framed and the subject-adviser is indifferent and not enthusiastic about his work, the pupils will simply show a blank record-graph and confusion and noise will reign in the laboratory instead of orderly work. The well-meaning Inspectors making tours in the land broadcasting their pet notions of teaching methods for the benefit of the poor docile teachers may soon give way

* The Daltonists in their high enthusiasm for the new faith observe: 'Even the dearth of sufficient books to go round seems to have bred a spirit of helpfulness among the pupils.'

to a well-trained band of experimental and educational psychologists who can analyse with scientific precision the problems concerning the school pupil and test the efficacy of new methods in education.

So far, we have been studying only one side of the picture. Let us now turn to the other side. Though it is impossible to discuss adequately all the objections that have been urged against this plan, yet it may be worth while to review a few of them here in some detail. *

Is there not a fear that the pupils working under the new plan will learn things in an imperfect and superficial way, lacking as they do, the impetus which a good teacher in a class-room exposition can give to the clarification, proper understanding and appreciation of a text. All the inspirations and suggestions that a teacher can impart in an oral instruction are missed in an assignment. After a class-room repartee between the teacher and the pupils, do not both of them emerge as better and wiser souls than they were before? Is it advisable to reduce the opportunities for such advantages? But the Daltonists are too shrewd and calculating. Their reply is that such teachers are exceptional and that such inspirational lessons have only a temporary emotional value. 'The brilliant child admires them; the average child is moved by them, while the slower child may be awed by them.' 'They are of little actual remunerative value to the pupils.

In a country like India where the pupils learn all their subjects (even their vernacular) in a foreign medium, text-books and extra

* For fuller information, the reader is referred to "Education on the Dalton Plan," by Miss Parkhurst, pp. 129-143.

books for reading written in the English language are too difficult to be placed directly in the hands of the pupils for their unaided or partially aided edification. The languages, especially, are unsuited for Daltonisation as they involve speech-training and require much oral drill. In the English schools where the Dalton Plan has been tried, the language teachers have invariably condemned the plan.

But other subjects seem to fit in with the plan admirably. Still, in a subject like Mathematics another kind of difficulty is experienced. There are not suitable books of sufficient interest and simplicity to serve for extra-reading on the part of the pupils when they are tired of their text-books and want to do some marginal work. Again, text-books that are in use are not sufficiently explanatory and useful as self-taught books. There are hardly any suggestions for investigation and experimentation.

If children be trained in their formative years to do things at their own choice, how will they fare in real life where they have to do things set before them at a given time? Since the children are trained to follow the dictates of their well-developed interests and not any passing whim or fancy, there is no such danger as the question implies. Certainly, whatever the system may be under which we are trained, we do not care, in life, to do things that do not interest us directly or indirectly (as in getting fame or eking out our livelihood); if we have chosen our profession wrongly and suffer the pangs of uninteresting labour to keep our body and soul together, and complain that the world is not smooth-sailing for us, whose fault is it? Is there any special virtue in that system of education which does not help us to find ourselves, to

discover and develop our innate faculties, and direct us in the proper choice of our profession but which condemns us to an everlasting drudgery?

SOME SUGGESTIONS FOR THE ADOPTION OF THE NEW PLAN IN MYSORE.

Educationists in Bombay and Madras Presidencies are now taking steps to introduce the new plan in some of the schools. Teachers discontented with the present system may await the results of this plan in the Government Model High School at Rajahmundry. As an experimental measure it may be worth while to try the new method in a modified form in some small Secondary Schools in Mysore with not more than 100 pupils.

The class-rooms may be converted into subject-laboratories and in the first instance, only a few subjects such as Mathematics, Physics, Chemistry, History and Geography need be Daltonised. For Physics and Chemistry, there are already separate subject-rooms, and we have only to add one subject-room for Mathematics and one for History, Geography and Commerce. Work in the languages, *viz.*, English and Vernacular, need to be only partially Daltonised and this would require two more rooms. Already, to some extent, the new principle has been recognised officially in the introduction of discussion classes and library work.

Free study may be arranged according to the Dalton Scheme in the morning sessions from 11 A.M. to 1-30 P.M. on three days in the week (say Wednesday, Thursday and Friday), and the pupils may work at monthly or weekly assignments in Mathematics, Physics, Chemistry, History, Geography and Commerce, English and Vernacular. The assign-

ments per week may contain 6 units of work in each of the first four subjects and 3 units in each of the last two. The remaining 21 school-periods in the week may be devoted to oral lessons, the periods being distributed as follows:—

English	...	...	...	5
Vernacular	...	...	...	3
Mathematics	...	...	...	3
Physics	...	...	...	3
Chemistry	...	...	...	3
Physiology and Hygiene	...	...	...	1
Drawing or	}	...	...	2
Commerce or				
Additional Mathematics				
Group Conferences	...	...	...	1
				21

Saturday should be set apart for excursions to parks, banks, museums, exhibitions, or factories, which are desirable supplements of class study. Small bands of young pupils under the leadership of an elderly pupil may be encouraged to visit shops and markets and study the local prices and test the quality of the common articles of food, clothing, stationery and furniture and thus build up some useful practical knowledge of the world around them.

As regards assignments, the Inspector of Schools in consultation with the Subject-Boards of Study may draw up an official scheme of fairly complete monthly assignments distributing the work in each subject for a Form among the 8 assignment months of a school-year. The teachers in the individual schools may supply the interest pockets necessary, supplement and elaborate the assignments so as to suit the special psychological needs of their pupils. The order in which the 8 monthly assignments are to be

worked in any school may be left to the discretion of the individual subject-advisers.

Under the proposed plan, there is the fear that pupils may read without understanding, and copy the written work of the abler pupils. The teacher has therefore to cross-question each pupil to ascertain how he has worked at his assignment and test his understanding and memory by means of oral questions. The teacher has also to check every day the units of work professed to have been turned out by the pupils in the subject-laboratory; in fact, he should permit them to continue their work next day only when he is satisfied with their previous day's work. As a single subject-adviser cannot cope with all this work, he may be helped by one or more junior teachers according to the size of the school in the conducting of oral tests and correction of written work, while corporate lessons, debates, etc., may be conducted jointly by the subject-adviser and his assistants. When any teacher is absent, his pupils may be sent to the subject-laboratories to work at their assignments or do any extra reading they liked and thus the other teachers may be saved from the thankless task of shouldering extra work which is a great bane under the existing system.

The number of pupils working in any laboratory may be fixed according to the size of the room available and in addition to the usual laboratory graphs, an attendance chart (*vide* Appendix II, 4) may be hung in each laboratory for the pupils to mark the times of their entering and leaving the room. This will regulate admission and enable the teacher to find out whether a pupil is using his time properly.

As regards text-books, the Education authorities may recommend not one book

only but a number of books and the subject-advisers in the several schools may advise different groups of pupils to purchase different text-books and thus secure a large number of such books for circulation among pupils. As pointed out already, there is the peculiar linguistic difficulty in the case of Indian pupils; they have to learn everything in a foreign medium; they cannot make use of reference books written in English with the same facility as the English boys. Hence it is necessary and urgent that, in the first instance, at least a set of select chapters from reference books in various subjects be translated into the pupil's vernacular and be made available for class use. A Translation Board may be formed of experienced subject-specialists, who, with proper facilities afforded to them, can easily accomplish this task in a few years, working at it during their vacations.

A DIGRESSION.

For the Dalton Plan to work successfully, we would require a very superior class of teachers especially as subject-advisers, with great enthusiasm in their work; it follows naturally that they should also be well paid. The teaching profession must be made worth the while of a young, able, energetic, well-educated man. He should be properly trained and well tried before he is confirmed as a teacher. Unfortunately, the teacher's profession in India has now become the dumping ground of either disappointed and discontented men, men who have tried all other shifts in the world and failed, or men who have their eyes set elsewhere.

There is no use in merely complaining against a teacher that he lacks the sense of duty, when the authorities do not exercise the same care in the selection of proper

individuals for teacherships as they do in the selection of the Finance Officers and Civil Servants. It is believed that an educational qualification of a standard slightly above that of the pupils to be taught is sufficient for a person to be employed as a teacher for such pupils. Thus, persons who have passed the third form are considered fit to handle younger children of the Kindergarten age. The great danger, not to say the futility of entrusting early education to such hands, merely because they are cheap and docile, is obvious. Other professions must be found for these, *i.e.*, men with meagre education—not, on any account, teaching.

Our present educational organisation is top-heavy. The salaries of teachers vary from Rs. 5 to 1,000, being distributed more or less proportionately to the quality of mechanical book-learning imparted to the pupils. No attention is paid to the difficulty involved or skill required in imparting such knowledge effectively. No heed is paid to the teacher's role in the development of the pupil's personality. It is in the earliest stages of education that the teacher's role is very onerous, very arduous and difficult, while in the highest stages his work is lightest; a mere suggestion, a good direction from the teacher will suffice for the college student to give him the proper orientation in his life or his studies. Of course, advanced research work is a different matter; it requires men of extraordinary talents to inspire and guide such work. But such men are very few and such work is rarely undertaken in the ordinary colleges. In this connection, it may be urged that a distinction may be drawn between teachers and professors. The title of 'Professor' should not be bestowed on all and sundry that teach in colleges but should be

exclusively reserved for those gifted few who are capable of doing and directing research work of a very high order. Such Professors should not be burdened with any routine teaching. They may, however, be induced to deliver periodical, general and popular lectures for the illumination of the masses. Others, who form the majority, whose knowledge and mental endowments are of a different order can engage themselves purely in teaching. The common run of teachers and professors in schools and colleges are but examination coaches. Only the nature of the knowledge disseminated varies; but there is this compensation and compromise that as the pupils advance in knowledge, there is a corresponding facility in the actual process of imparting new knowledge to them. Hence there is no need for such a great range of variation in the salaries of teachers in High Schools and Colleges. They may all be of more or less similar qualifications, well-versed in educational theories, child psychology, educational and experimental psychology with a fair all-round knowledge in many subjects and a special knowledge in one subject. Whether they teach the Kindergarten children or the M.A. students, their pay may be the same, fixed according to a uniform time-scale of say (200–20–500). This will improve considerably the tone of the institutions under the Education Department and the high traditions of the colleges will not also suffer. There will be no discontent among the staff as they will all be in the same grade, while there may be a great saving also for the authorities.

There must be perfect mobility with regard to the distribution of work among these new teachers. Every teacher may work by turns in the Elementary School, in the Middle

School, in the High School, and in the College, a few years in each.

When once we secure a better class of teachers for our schools and colleges, there need be no inspectorial machinery which is more or less a duplication or a fair copy of the tutorial staff, serving little useful purpose. But we may have, instead, a band of what may be called 'scrutineers' to assist the new teachers in the mechanical part of their work, such as correction of exercises, supervision of practical work, organising excursions, games, etc. The new teacher, now working in an Elementary School, now in a High School, and now in a College, assisted by the host of scrutineers who are more or less permanent fixtures in each institution, has such exceptional opportunities for educational reconstruction as cannot be dreamed of under any other organisation.

CONCLUSION.

The modern civilization is characterised by its increase in scientific knowledge demanding specialisation, by its industrial system demanding practical men, and by its democratic tendencies requiring good citizens who can co-operate with one another. In the midst of such a civilization, it were the greatest folly indeed if the mediæval and sometimes pre-mediæval curricula and methods of instruction should be allowed to persist in our schools. The school alone should not vegetate while the rest of the world is advancing and developing. On the other hand, the school life should explain the real world.

The stock of knowledge of the world to-day is so vast and so various and professions so numerous that it needs deliberate training for the modern student to find out his own special interests and direct them in his choice of the

profession which will prove most fruitful for him. He *must* get beyond the text-book, look ahead of the teacher, develop a sense of social responsibility. This requires a new organisation of education and the Dalton Plan affords unprecedented facilities for its development.

APPENDIX I.

Reference:—Miss Parkhurst's 'Education on the Dalton Plan.'

Assignment No. 2.

(For Fifth Grade Pupils of 9 to 10 years.)

Grade V. History. 5th Contract Assignment.

The Persian Wars had ended, and the Greeks were no longer afraid of attacks by the Persians. The Athenians went home to find their homes in ruins, for you will remember that the Persians had burned Athens just before the battle of Salamis. The Spartans went home planning to make their city the greatest in Greece. In fact, each city had great plans of this same kind. Although they had all united for the time being to drive out the Persians, each city was jealous of its neighbours, and we shall see what hard times the Greeks had in the next three hundred years.

1st Week.

This week we shall study one of the great Athenian heroes, Pericles. He is, perhaps, the greatest of all the great Athenian leaders.

Problem.

After you have done the reading listed below, write out the answers to the following questions, using complete sentences in every answer:—

1. Tell the story of the Athenians rebuilding their walls.
2. What was Piræus?
3. Describe the Long Walls.
4. What are the names of the three kinds of columns used in Greek temples?

5. What were the names of two buildings on the Acropolis?

6. Tell what each building was used for.

7. Describe the Theatre of Dionysius.

8. Who were the three great Greek tragic writers?

9. What is a tragedy? What is a comedy?

10. Who was a comedy writer in Athens?

11. Who were two historians?

12. What changes did Pericles make in the laws of Athens?

Reference.

Read in Old World Hero Stories, the story called 'Pericles.'

Equivalents.

The reading counts as two units of work, and the writing as three units of work.

2nd Week.

* We shall learn more about the Age of Pericles this week.

Problems.

There will be three problems this week.

Problem 1. Draw a plan of the front of the Parthenon, naming the different parts.

Problem 2. Write a description of a Greek house. Tell how the house was arranged, and compare it with a modern house.

Problem 3. Tell, in a story, what the children in Athens did. Tell how they were taught, how they played, etc.

References.

The reference for Problem 1 is Tarbell's History of Greek Art. The reference for Problems 2 and 3 is Old World Hero Stories.

Equivalents.

Problem 1 will count for three units of work, and Problems 2 and 3 each one unit.

XXXI—48

Bulletin Study.

Examine the pictures of the Parthenon and of Greek houses that are on the Bulletin Board. These may help you in your work.

Departmental Out.

Miss Bailly is willing to credit you with three units of work in Art for the drawing of the Parthenon.

3rd Week.

After the time of Pericles, the Athenians had a hard time. They had a war with the Spartans, and the Spartans won. The Athenians were never again as happy and as prosperous as they were when Pericles was their leader. Almost three hundred years later there arose a great kingdom to the north of Greece called Macedonia. The king of this realm was named Philip, and he had a son named Alexander. This is the man we are going to study this week.

Problems.

Problem 1. Here are some questions to answer about Alexander. Write the answers in complete sentences:—

1. What tidings did the three messengers bring to King Philip of Macedonia?
2. Tell the story of the taming of Bucephalus.
3. Who was Alexander's teacher, and where did he come from?
4. After Philip's death, what did Alexander decide to do?
5. How big an army did he have?
6. What were three of his battles?
7. Tell the story of the Gordian Knot.
8. How many cities were named after Alexander?

Problem 2. The second problem is to draw a map of Alexander's kingdom. Use coloured crayons to show the territory that he conquered.

References.

Read about Alexander in Old World Hero Stories, and find the map of his empire in West's Ancient World.

Equivalents.

The reading is one unit of work; the writing is two units of work; and the drawing is two units of work.

4th Week.

This week we are going to start on the study of Rome. The first topic is the Founding of the City.

Problems.

There will be two parts to the work this week.
Problem 1. First we shall all read the story of Romulus, and be prepared to make an oral report on it.
Problem 2. I shall assign different stories to certain members of our group, and those certain members will be responsible for telling that story at the Conference on December 19th. These small groups may work together and plan about the telling of their stories in any way they wish. Here are the stories:—

- The Story of Aeneas
Margery, Edward, Harry, Jane, Mary.
- The Stealing of the Sabine Women
Loris, Louise, Donald, John.
- The Women Stop the Fight
Richard, Helen B., Joseph.
- The Treachery of Tarpeia
Edith, Alice, Eleanor, Arthur, Horace.

References.

The references for these stories are: Old World Hero Stories, The Story of the Romans, The Story of the Roman People.

Equivalents.

Problems 1 and 2 count as two-and-a-half units of work each.

Bulletin Study.

You will all be interested in looking at the pictures on the Bulletin Board illustrating the Story of Aeneas and the Founding of Rome.

APPENDIX II.

(1)

Instructor's Laboratory Graph.

Subject: History.		Form : VI.					Assignment : II.					Instructor : A. B. C.										
Names.		1st Week.					2nd Week.					3rd Week.					4th Week.					Instructor's Remarks.
		1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
1	A. B.																					Good. Slow. Fair.
2	C. D.																					
3	E. F.																					
4	...																					
5	...																					
6																						
7																						

(2) The Pupil's Contract Graph.

Name : M. S.	Name of School : X. Y. High School.			Date begun : Sept. 2.			No. of weeks: 4.	No. of days.	Absent.
Address.	Age 16. Form V.	Number of Contract Assignment. } 3.		Date Completed. Oct. 1.					
4th Week.	19.....	20.....	20.....	19.....	18.....	14.....	16.....		
									
	.....	17.....	.....	15.....	.....	12.....	14.....		
3rd Week.	18.....	.....	.....	13.....	11.....	10.....	13.....		
	.....	.....	.....	.....	7.....	.....	.....		
	.....	15.....	.....	10.....	.....	8.....	9.....		
2nd Week.	.....	13.....	8.....	.....	.....	.....	.....		
	15.....	.....	5.....	3.....	6.....	7.....	.....		
	.....	.....	3.....	2.....	.....	.....	6.....		
1st Week.	.....	12.....	.....	.....	1.....	4.....	.....		
	14.....	.....	1.....	.....	.....	.....	1.....		
	9.....	11.....	.....	.....	.....	.....	.....		
Subjects.	Mathematics.	History, Geography & Commerce.	English.	Science.	Vernacular.	Vocational Subject.			
Tests.									

(3) Form Graph.

Name: Form V.		Assignment 2.	
Names.		1	2
1	A.B.		
2	C.D.		
3	E.F.		
4	...		
5	...		
6	...		
7	...		
8	...		

[V.B.—2 spaces represent 10 units of work.]

(4)

Laboratory Attendance Chart.

<i>History Laboratory</i>					
Day and Date: Thursday, February 26, 1925.					
	Names.	Times of Entry.	Times of Leaving.	Time spent in	
				Hrs.	Min.
1	A. B.	11 A.M. 12-30 P.M.	11-30 A.M. 1-30 P.M.	— 1	30 —
2	C. D.	1-12 P.M.	1-39 P.M.	—	27
3	E. F.	11-15 A.M.	1-30 P.M.	2	15
4	G. H.	11-45 A.M.	12-45 P.M.	1	—
...					

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**RAMBLES IN DRAVIDIAN
PHONETICS.**

BY

MR. L. V. RAMASWAMI AIYAR, M.A., B.L.,

Ernakulam (Cochin State).

STUDENTS interested in philology cannot but be struck with the extreme paucity of research-work in the field of Dravidian phonetics and philology. All work in this region should be based on scientific principles deduced and deducible from a comparative study of the various languages comprising the group known as the Dravidian, including the fast-disappearing Kurukh, Brahui and Kond languages. Guess-work of the fanciful or phantasmagoric type which has nothing to buttress it except the shaky speculation of folk-etymology and folk-philology cannot advance the cause of research. Besides, a theoretical knowledge of rules without a practical study of the organic features of languages, will also be insufficient equipment for the philologist. As Otto Jespersen says* in connection with phonetics, "Ein Volles Verständniss kann durch blosses Lesen von lautwissenschaftlichen Werken nicht eingeholt werden; man muss völlig praktisch mit Lauten vertraut werden."

The value of phonetics for the study of philology cannot be over-estimated. Here again the weighty words of Prof. Jespersen† will bear quotation: "However much one may emphasise the fact that philology is not exclusively constituted of phonetics, it can nevertheless be never ignored that without a historical application of the principles of phonetics no philology can be brought into being." So far as the Dravidian languages

* *Elementarbuch der Phonetik*—p. 6.† *Ibid*—p. 2.

are concerned, the study of the phonetic features and the investigation of the underlying rules have not yet made great headway. In this connection it would be a good thing if Indian scholars and Pandits interested in philology could publish their views in English only, instead of using the medium of their respective vernaculars, as thereby their views will gain greater publicity and attract the attention of scholars who may not be acquainted with the particular vernaculars. A monumental work like Raja Raja Varma's "Kerala Paniniyam"—written in Malayalam—is practically a sealed document to students of Dravidian philology not conversant with Malayalam. M. Jules Bloch of the Paris School of Languages writes to me on hearing of the work of Raja Raja Varma: "Ne pourriez-vous resumer en anglais (dans un periodique) au moins certaines parties du travail de Raja Raja Varma? Je crois que même sans parler de moi, qui n'espere pas jamais lire aisement le malayalam, ce serait un moyen d'agrandir beaucoup le cercle de ses lecteurs." Even students in South India who may not be acquainted with all the Dravidian vernaculars are greatly handicapped by this lack of access to purely vernacular publications on the subject. I shall be obliged to readers of the "Educational Review" if they can kindly communicate to me or to the Editor, names of works on philology or on phonology which they have come across in their respective vernaculars, and also short descriptions of the topics which they deal with.

Amongst European scholars who have laboured in the field of Dravidian philology, the names of Bishop Caldwell, Julien Vinson, Dr. Sten Konow are classical; but epoch-making as their works surely are, they form

only distinguished pioneer work. Many modern scholars like M. Jules Bloch (Professor of Indian Languages, Paris), Professor Sylvain Levi, M. Przyluski, Prof. Otto Schrader (of Kiel University) are zealously endeavouring to shed light on the obscure field of the relationship of Sanskrit and the Dravidian languages and their early indebtedness to each other.*

In a recent article† M. Jules Bloch has discussed in detail the orthodox view held by Sten Konow and Grierson that the Sanskrit language had been in very early times affected largely by the influence of the Dravidian proto-language which, according to this view, had been current all over India when first Sanskrit came in contact with it. M. Bloch analyses the question in its three aspects: borrowings in phonetics, in grammar and in vocabulary, and he comes to the conclusion that the generalisation above formulated is no longer tenable. Says M. Bloch‡: "From what we have said above, certain conclusions result, which, though negative, should certainly act as a corrective against an opinion which we have been too easily inclined to accept hitherto. In the actual state of our knowledge, there is no warrant for us to say that the aspect assumed by the Aryan language in India is due to its adoption by the Dravidian-speaking peoples." M. Bloch concludes his brilliant article with the following words§: En ce qui concerne les emprunts fait par le Sanskrit, on a vu que les notions qu'on a jusqu'à présent demandent à être,

* I shall try, in later numbers of this Review to give a résumé of the results attained by the investigations of these scholars.

† Bulletin de la Société Linguistique—1924.

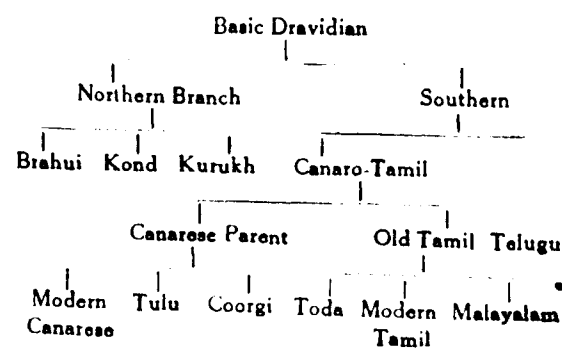
‡ Ibid.

§ Ibid.

soit revisées, soit précisées; et à mesure que S'avance la recherche, surgissent les problèmes et les embûches."

Commendable as the work of M. Bloch and others is, it touches only a corner of the vast field that still remains to be explored. A few other problems that demand discussion and investigation are the following:—

1. The nature and extent of the relationship between the several South Indian languages, e.g., the inter-relationship between Canarese and Telugu, that between Tamil and Malayalam, etc.
2. The discussion of the probable relationship of common origin existing amongst such widely-placed languages as Kond, Brahui and the South Indian groups. How far a tree like the following will be justified by our present knowledge and by further investigation:—



Note.—The table given above is purely a tentative one and is probably open to objection on various grounds.

3. The development, phonetic and philologic, of the several South Indian languages (not to speak of others belonging to the Dravidian group), after the times of the earliest records. For instance, to speak only of Tamil, changes so considerable in character have occurred after the period of the *Tolkapiyam* that a modern Tamilian is ordinarily unable without scholarship to understand the

old language. The origin and the development of the Malayalam language should also go along with the discussion of the development of modern Tamil and probably will claim a separate and complete chapter for itself.

4. Later influence of Sanskrit on the various South Indian languages. As far as extant records tell us the literatures of all the Dravidian languages—with the probable exception of Tamil—seem to have been cradled and nourished in the bosom of Sanskrit. The enormous influence of Sanskrit on the later development of the South Indian languages is nowhere more strikingly illustrated than in the case of Malayalam where Sanskrit influence has been particularly prominent in phonology, vocabulary and literature, though, in accident and in syntax, as is only to be expected, the influence has been negligible in spite of the efforts of pedants to graft foreign rules on Malayalam at a certain period of its development. Even as matters stand now, no one could be a Malayalam scholar without being a Sanskrit scholar too!

The above questions are only a few of the many problems that the researcher will have to tackle. In doing so, the philologist will not only have to equip himself with a working knowledge of the important characteristics of the various Dravidian languages but will have also to rely largely on the help of the archæologist and the ethnologist, working as he does in a field where extant remains of ancient conditions are so few.

In a very interesting paper* contributed by M. Jules Bloch to the *Memoires de la Société de Linguistique de Paris* of 1914, there is a discussion of some of the conclusions which

* Translated in the "Indian Antiquary."

could be drawn from a passage in the works of Kumarila Bhatta, a Sanskrit writer of the 7th century A.D., who cites certain Dravidian, presumably Tamil, words in the course of his passage. Though Kumarila Bhatta only attempts to propound a rather ridiculous piece of fanciful etymology in this passage, the forms of ancient Tamil words as cited by Kumarila have led M. Bloch to adumbrate certain propositions regarding ancient Tamil sounds, which I shall discuss here in their application to Malayalam. M. Bloch's conclusions are the following:—

1. Consonantal endings for words were the rule in ancient Tamil, the modern vowel endings being but a later development.

2. Inter-vocalic surds which have now the values of sonants except when doubled, remained as surds in Kumarila's time, as we see from the forms of the Tamil words cited by him in the above-mentioned passage.

3. In fact it may even be postulated that surds alone existed in ancient Tamil at one time, as the modern alphabet which excludes sonants (and aspirates) shows.

4. M. Bloch further attempts to postulate the existence in proto-Tamil of compound consonants, on the basis of certain phonological tendencies existing in modern Tamil such as the simplification of compound consonants and the change of inter-vocalic sonants into spirants.

Now it is interesting to see how far the above deductions are applicable to Malayalam.

The law regarding consonantal endings for modern Malayalam (and for modern Tamil and Canarese too) is that many words ending in consonants except l, (both front and back; both front and back) s, sh, ng (the sound

of 'ng' in bring) n (both front and back), y (as in 'yet'), and m—which sounds are known in Malayalam as *செவ்வகன்*—always have vocalic endings added to the consonants to form short syllables. This common short vowel has, in Malayalam, the sound of the vowel in 'bird' (without the length) and in Tamil it has a more front character.* The presence of this vowel ending is a characteristic feature which distinguishes the Dravidian languages from the North Indian Prakritic languages in which the *halanta* or consonantal ending is favoured very greatly (in Hindi much more than in Bengali). This tendency to adopt a vowel ending is so strong in the South Indian Dravidian languages that foreign words with consonantal endings are invariably (with the exceptions noted above in the case of *செவ்வகன்*) adopted with the respective characteristic vowel endings. An English word like 'court' and a Hindustani word like 'adalat' appear naturalised in Malayalam as *கோர்ட்டு* and "adalattu."

Now regarding those consonantal terminations of the words cited by Kumarila, I doubt if great value can be attached to Kumarila Bhatta's forms which appear 'halanta' as *chor*, *pāp*, *atar*, etc., for apart from the fact that words ending in *r* and *l* may have had even in that ancient time the alternative vocalic ending as in modern times, we have to note the further fact that, just as a modern North Indian Bengali or Hindustani, accustomed to the 'halanta' mode of sounding words very often ignores the short vocalic Dravidian ending when he utters South Indian Dravidian words unless his attention is directly attracted

to it, so too Kumarila in giving the above forms as "halanta" may have been influenced by the same tendency. The proposition therefore that consonantal endings wholly or pre-eminently prevailed in ancient Tamil and that the vocalic ending is a purely modern development does not directly arise from Kumarila's passage.

Now we come to the intervocalic breathed sounds in ancient Tamil which, according to Kumarila's forms, seem to have retained the character of breathed sounds only.

It is a phonetic law more or less common in many languages that breathed consonants when occurring in the immediate proximity of vowels, tend to acquire the sonority of the vowels and thereby to become voiced themselves. This influence becomes greater when the breathed consonant is neighboured on both sides by vowels. We know of such changes having occurred in the development of the English language where at certain stages of its growth, 's' has become "z," 'f' has become "v" and occasionally 't' and 'k' too have turned into 'd' and 'g' respectively. Modern Tamil, too, seems to possess this tendency to an extraordinary extent. This kind of assimilative process, however, is not universal as we see that the Sanskrit, Greek and Latin languages did not probably have it at all, and that even in the Teutonic languages the inter-vocalic breathed stops resist voicing in many cases.

Be this as it may, Kumarila Bhatta's forms definitely show want of voicing, and the "Sprachgefühl" or the genius of the language must have favoured voicing subsequently. In the Malayalam language, however, voicing

* I would equate the Malayalam sound with the International Phonetic Association [ɔ] inverted 'e,' and the Tamil sound with I. P. A. [u] inverted 'm.'

In the absence of definite evidence to show lack of voicing, we are only warranted in making this qualified statement.

in these circumstances has not become so common as in Tamil, and in the speech of the educated classes, inter-vocalic breathed sounds resist the tendency to the acquisition of sonority. A Malayali does not, like a Tamilian, say *kadei*, *pabam*, *vadakku* for *கதை*, *பாபம்*, *வடக்கு*. In fact, one of the difficulties which a Tamilian encounters in learning the Malayalam language is to preserve the breathed character of inter-vocalic breathed sounds of Malayalam words. The speech of the illiterate folk of Malabar may point to a tendency for the inter-vocalic breathed sounds to become voiced, but a rigid rule as in Tamil cannot be laid down for Malayalam.

Now, supposing there was no voicing in Kumarila Bhatta's time—i.e., 7th century—a time when Malayalam had not definitely branched off from the parental language—are we not justified in inferring that in Malayalam the tendency never arose at all under the dominating "puristic" influence of Sanskrit?

As for the other characteristics of the Tamil language which M. Bloch refers to, such as the alteration of inter-vocalic sonants into spirants, the simplification of compound consonants, the disappearance of the aspirate, and the changing of the initial sonant in a word like "dantam" into "tandam," the predominant influence of Sanskrit has here again enabled Malayalam to resist in a great degree the native tendencies inherited by the language from the parent group, though the colloquial especially as used by the illiterate folk will furnish us with many instances of the above rules. *மகன்* in colloquial Malayalam has developed into *மஸன்*, then into *மஅன்*, then into *மோன்*, all these stages being represented in common parlance. "Shraddham" appears in the colloquial as *சாத்தம்* and

"jyeshtan" as *சேட்டன்*. Instances may also be given from the colloquial for the other two rules mentioned above. Notwithstanding the existence of such instances in the colloquial, the literary language has been singularly free from such developments and the literary language being the recognised standard amongst the literate classes of Malabar, we may not be justified in giving recognition to the above rules as fundamental characteristics of the genius of modern Malayalam language.

In various other directions too has Sanskrit influenced the development of the Malayalam language, but I reserve the discussion of this question for a future paper.

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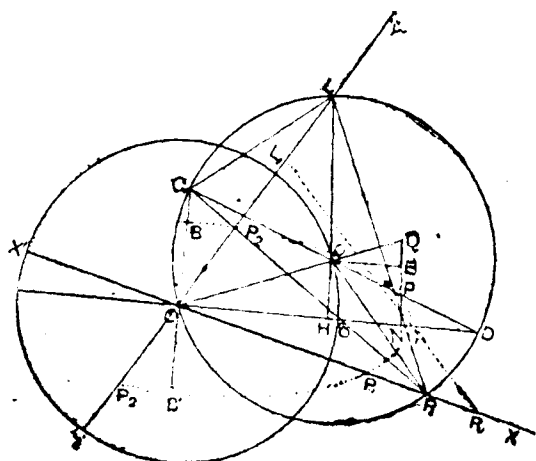
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THE ELLIPTIC COMPASS.

By RAO BAHADUR T. SUNDARA ROW, I.S.O.,
Coonoor, R.S.

1. The Ellipse is the locus of a fixed point on a line of constant length moving so that its extremities are always on two fixed intersecting straight lines.



Let X/CX , Y/CY be the two fixed straight lines intersecting at C and let LR be one position of the moving line with P the selected fixed point on it.

Describe the circumcircle about the triangle CLR with O for its centre. Join OC , OL , OR and OP . Then as LR and the opposite angle LCR are constant and the radius of the circumcircle $= LR/2 \sin C$, the circle is of constant magnitude. Therefore the locus of O is a circle of equal magnitude with centre C , and the triangle OLR and the line OP are also fixed in magnitude.

Draw C_1OPD the diameter of the circumcircle through P and join CD , C_1L and C_1R . Then as the angles DCR and DC_1R are in the same segment and equal, DC_1R can be superposed on DCR , and if on CD , CA is taken equal to CP , A will correspond with P and L_1AR_1 will be the lie of LR , and O will be on the line CD .

CA being the longest vector is obviously the semi-major axis of the ellipse.

P being one position of the moving point outside the major axis, we have to prove that P is a point on the ellipse of which CA is the semi-major axis.

Draw perpendiculars NPQ to CA , and OE , OH to NPQ and CA . Produce CO to meet NPQ in Q . Then $OHNE$ is a rectangle, $OP = OQ$ and OE bisects the angle POQ and is perpendicular to PQ .

OE being parallel to CA ,

$$\begin{aligned} NE &= CO \\ EQ &= OQ \end{aligned}$$

$$\begin{aligned} \text{Hence } QN &= CO + OQ = CO + OP = CA \\ PN &= CO - OQ = CO - OP = PD. \end{aligned}$$

Therefore the locus of P is an ellipse of which the rectangular semi-axes are equal to CA and PD .

2. When CX and CY are at right angles, the circumcircle has its centre on the moving line.

3. The point P may be taken on LR produced.

4. When LR lies on CX , P will be at a distance from $C = LP$ as CP , and when it lies on CY , P will be at a distance from $C = RP$.

When LR is at right angles with CX , O will be on CY and when LR is at right angles with CY , O will be on CX .

5. We have now a convenient way of describing an ellipse. Draw two intersecting straight lines X/CX and Y/CY . Take a slip of paper with a smooth straight edge and a length on the edge $= LR$. If the slip of paper be moved round so that the point L is always on X/CX and R on Y/CY , then any point as P on the edge of the paper will trace out an ellipse.

THE CENTRAL SCHOOL SCHEME.

By MR. K. H. V. S. NARAYANA, B.A., L.T.,
Dy. Inspector of Schools, Nandigama, Kistna Dt.

REQUEST to be permitted to place before the public a scheme for the improvement and extension of Elementary Education.

2. Central classes that are being held for the benefit of Elementary Schoolmasters do not bestow any good on the teachers proportionate to the trouble they take in coming over a long distance on foot from their villages to the places where they are held. The reasons for this are among others:

(1) Central classes, in order that they may be of any use to those attending them have necessarily to be arranged in a school which is well equipped, efficiently staffed, and sufficiently accommodating. Such schools are rare in many Ranges; and even the schools where they are held at present do not afford the required facilities.

(2) Since the number of schools where central classes are held are just a few, teachers have to come from a long distance, sometimes 10 miles and more to give their attendance there. After the long journey they made in going to the central class and with an equally long journey before them to reach home, there is very little they could grasp at the central classes.

(3) The maximum number of central classes possible during the year at present is about 9 or 10 with generally an interval of a month; and the duration of a central class is about two hours. The scope for improvement afforded by such central classes is too little to deserve consideration.

(4) In practice it is not possible for the Deputy Inspectors of Schools to attend each

6. An instrument designed for describing an ellipse on this principle will be composed essentially of—

(1) The frame consisting of two "legs" slotted longitudinally and hinged together so as to be adjustable at any given angle to one another.

(2) The limb—a moveable ruler fitted with two moveable studs (L and R) gearing into the slots of the frame; the length of LR being adjustable at will and M the mid-point of LR being clearly marked and recognizable.

7. An elliptic compass can be easily improvised with these strips of thick paper and drawing pins, straight creases or slits taking the place of the slots.

8. The elliptic compass can be used not only for describing an ellipse, but also for other constructions which cannot be effected with the ruler and compass, e.g. the extraction of the cube root and multisection of angles.

THE SCHOOL ARITHMETIC, BEING SOLUTIONS OF THE QUESTION PAPERS SET FOR THE LOWER SECONDARY EXAMINATION FOR THE YEARS 1880 TO 1904

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central class without prejudice to their inspection work. The teachers do not have regard for the Secretary of the Teachers' Association who is in many cases not better qualified than many of the teachers themselves. Hence the attendance of teachers is very poor at the central classes and the few who choose to attend twice or thrice a year do so reluctantly.

(5) There is no possible method of testing, shortly after a central class, what a teacher has learnt there.

It is therefore evident that central classes as at present possible to be conducted and organised do not serve any useful purpose. It must at the same time be conceded that the objects for which they are organised cannot be ignored and deserve to be achieved. I have long thought of a scheme by which the objects of the central class may be secured with surety. I have spoken about the scheme to a few Presidents of Taluk Boards and Educational Officers and Mission Managers who agree with me in regard to its merits which may be briefly summed up as follows:—

(1) Uniformity of work can be gained in the schools of a Range at first and those of a district ultimately if the scheme is developed and extended.

(2) There is scope for teachers to become acquainted with up-to-date methods and see them in practice.

(3) There can be greater harmony and co-operation among the teachers who can therefore exist as a body with the strength of their opinions and numbers.

(4) It affords ample scope for experimenting in the educational field after free discussions on existing or proposed methods.

(5) It promotes the general educational attainments of teachers who are generally found to be sadly lacking therein.

(6) Deserving teachers will have the appreciation of the group and this is a stimulus for better and more cordial work on the part of teachers.

(7) The scheme aims at replacing the present Training Schools scheme, and claims to achieve the advantages contemplated by the recent departmental proposal of attaching Training classes to deserving schools under the management of Local, Municipal and Mission bodies.

(8) The scheme does not require appreciable additional expenditure for its execution.

(9) The Deputy Inspectors of Schools will cease to be merely inspecting officers but will have the responsibility of improving the Range.

(10) The scheme gains for the teachers the sympathy and co-operation of the villagers.

3. The scheme may be termed the 'Central School Scheme' since it is to be worked mainly through central schools as briefly indicated hereunder.

4. Convenient places, sufficient in number, should be selected for the location of the central schools, keeping in view that every village has a central school within 5 miles' distance. Those places should have already a school under Board, private or Missionary management which can be made to serve as a model school with a little additional equipment and with slight changes in the staff. With the limited area under each Deputy Inspector in a Range, there will not be need for more than eight such schools in a Range. A secondary-grade trained teacher and another higher grade trained teacher should

be appointed for the school under ordinary circumstances.

5. If this number is distributed among Mission and private managers and local bodies, the cost of additional equipment and staffing will not be too heavy for any one of them; and the little extra expenditure can be realised by them in the shape of Government grants for good work.

6. The Deputy Inspector of the Range will practically be the supervising headmaster of these central schools being held responsible for the syllabuses, time-tables, organisation and discipline, efficiency, etc., of these schools and through them, of course, of all the Elementary Schools attached as it were to the central schools. The Deputy Inspector can in his inspection rounds halt at these central schools for a week and more, thrice a year, inspecting the schools in the neighbourhood and supervising the work of the central schools, apart from his other visits which may be necessitated from time to time. He can be in touch with all the schools more closely and know at any time during the year what portion is taught on a particular day in any school in his Range. This is just what is absolutely necessary for better organisation and greater efficiency in Elementary Schools for which one man can be made responsible.

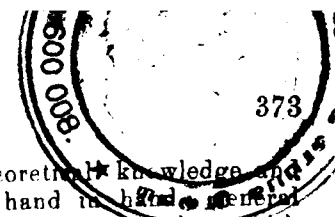
7. In these central schools, the teachers of schools attached to them will meet once a week on a Saturday from 11 A.M. to 5 P.M. with a break of one hour after 2 P.M. These teachers' meetings have to be organised so as to afford the practical training and theoretical instruction that are expected of training schools. The work for the week will be discussed, planned and settled in advance at these meetings. Model lessons, criticism lessons, instruction in methods and on subjects of practical value can find a place at these sessions according to the needs. According

to this scheme theoretical knowledge and practical work go hand in hand. The education of teachers improves along with their professional skill; and what is more, regularity is ensured in the working of Elementary Schools. This scheme, after a trial of a year or two, is bound to obviate the existence of training schools the staff of which can gradually be provided for in these central schools, so that in fact the scheme does not entail additional expenditure in the long run.

8. Since the teachers' meetings will be more in number than the central classes as held at present, individual attention can be paid by the Deputy Inspector or the Headmaster of the central school who generally holds these meetings, to the defects and needs of the members attending the meetings. There is scope for enlisting the sympathy of the villagers also by requesting the prominent of them to attend these meetings. Under the existing circumstances, viz., extensive range of the central classes, paucity of meetings and unwieldy strength of teachers comprising a group, it is not practicable for villagers to meet the teachers at these central classes, learn of their methods and sympathise and co-operate with them in their work. Along with the steps now taken to place the subject of education entirely in the hands of the public, it is highly desirable and expedient to educate the public beforehand on what lines and for what objects they should educate boys and girls.

9. As the teachers of central schools have to do more responsible and greater work and discharge more serious duties in training teachers and regulating their work, they will have to be paid allowances in addition to the salaries they draw according to scale.

I have mentioned the chief principles guiding the scheme which I hope will be found deserving of consideration by the public; and I beg to offer my explanation if any defects are anticipated in the details of its working. The opinions of all interested in Elementary Education are invited.



THE FIRST BIHAR AND ORISSA TEACHERS' CONFERENCE.

THE PRESIDENTIAL ADDRESS

OF

KHAN SAHEB MAULVI AMJAD ALI SAHEB.

TEACHING is an art. But it may be made a fine art. In the former the teacher is an artisan; in the latter the teacher is an artist. The artisan follows directions, plans, specification, and blue prints that have been devised and designed by others; the artist imbues his work with imagination. The artisan drops his work when the bell rings; the artist is so engrossed in his work that he does not hear the bell. The artisan plods at his task with a grudging mien; the artist works in a fine frenzy.

In his very delightful book "Teaching in School and College," Professor Phelps says, "I do not know that I could make entirely clear to an outsider the pleasure I have in teaching. I had rather earn my living by teaching than in any other way. In my mind, teaching is not merely a life-work, a profession, an occupation, a struggle; it is a passion. I love to teach. I love to teach as a painter loves to paint, as a musician loves to play, as a singer loves to sing, as a strong man rejoices to run a race." Such a teacher regards his work not as a task but as a privilege. Like the sculptor, he strives to bring the angel of his dream into the face of the child. He is the dynamo, but the light and heat that he generates manifest themselves in the minds of his pupils, while he remains serene and quiet. Wherever he walks there are resurrections because life begets life. No science, no mathematics, no history, no language can be dull or dry, when touched by his art, but all become vital because he is

vital. By the subtle alchemy of his artistic teaching, all the subjects of his school are transmitted into the pure gold of truth and beauty.

The message of our age is 'Believe in mind and let education go straight as a bolt to the mind of the pupil.' Carlyle very aptly says, "That one should be ignorant who has a capacity for knowledge—this I call a tragedy." The popular idea of education is that it is a process whereby the young are fashioned into money-earning machines. If education is to be a reality, if it is to be something more than a shibboleth which serves its turn as a watch-word in the campaign of politics, it must be worked for and prized as something of value in itself. No man can rightly be termed educated who seeks to amass information to pass examinations, to obtain degrees merely as stepping-stones in the process of getting on. The hero of many examinations is not necessarily a well-educated man. To deserve that term he must have the root of the matter in him, the love of truth, and the wisdom which comes not from mere possession of information but from the influence of knowledge or character. Education, then must be sought from within, since it cannot be imposed from without. But at least we may help to create or foster interest and enthusiasm. Man is more than a money-making machine, more than a citizen, more than a member of a society. He is nothing less than a son of God, endowed with special powers of mind and body. The object of education should be to develop freely, fully and harmoniously these powers. God takes the initiative to bridge the chasm between man and Himself. In saving man, God does it in such a way as to turn the heart of the evil-doer against his evil. Iron laws will not do it. Love must

win him to the right; but in order to do so it must be a principled love, as in Nalanda. It cannot be mere indulgence. A school-master loved his boys very devotedly. They recognized it, but in spite of this they disobeyed him, and broke his rules again and again, and they were as often punished. After this had gone on for some time, he called his boys together and said: "Boys, you have disobeyed me and have broken my rules. I have punished you. After this when you do wrong, I am going to take the punishment; you are to lay the rods on my hand." They smiled, not seeing the underlying principle. A few days later one of the boys, having done something wrong, was called to the front. The teacher with a look of severity mingled with love stretched out his hand and commanded the boy to strike the outstretched hand. The boy gave two or three strokes, and then looked into the face of his teacher and saw the suffering there, not merely physical, but mental and moral as well. Now he did not want to go on with the strokes, but the teacher commanded him to do so. After two or three more strokes, the boy broke down in tears, and most of the school with him. A new spirit went through the school. The boys began to feel that if this was what their disobedience was costing the master who loved them, they would stop it. It completely changed the spirit of the school and turned the hearts of the boys against their sin. Suffering love had done what mere punishment could not do. They saw that they not only broke law by evil doing, but hurt love.

A great Japanese nationalist, Neesima, did the same in regard to his school. The broken cane is still kept in the great University as memento by his grateful pupils and admirers.

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The best school is that which best helps the free and healthful development of each one's individual endowments, which best enables the youth to become such a man as God and nature intended him to be, not such as another's whim would make him. Not every one, even of the educated, can teach; the teacher's value lies more in what he is than what he knows. The true teacher strives to draw forth and strengthen in his pupil the sense for truth and justice and to develop in him a taste for the purer and nobler pleasures of life. His aim is to make men good and reasonable, not to make them smart, eager for wealth and the greatest measure of comfort, always remembering that a man is what he is and who he is, not by virtue of wealth or office, but by the quality of his thought and life. "Aids to noble life lie all within," says Matthew Arnold.

Ladies and Gentlemen, your Conference is, I take it, an organised effort to draw public attention to this highest aim and ideal of education, a rich heritage handed down to you from time immemorial, from the palmy days of Nalanda, with a break from the ill-starred day when Macaulay introduced English education, to wake up our officials to the facilities and possibilities for sound education, which our Province may provide and to encourage our citizens to use them to the fullest possible extent, and to become educational Oliver Twists—always asking for more. To be poor is the greatest crime on the earth to-day and the poor suffer the full penalties of their poverty—bad food, shabby clothes, jerry houses, a warped mind, disease, dirt and an early death. An uneducated people will always be poor. An educated people will not tolerate poverty. Poverty was not sent by God; it was manufactured by men. Poverty

can only exist where you have cunning and selfishness on the one hand, and ignorance and fear on the other. I love education because I hate poverty. If we educate our children to-day, poverty will disappear to-morrow. We all say we love children, if we do love them we will educate them. To my mind if a man is going to achieve anything really worth while—if he is going to help others to a higher plane of life and thought; if he hopes to leave the world better than he found it—then he must, first of all have a right spirit within him, and, accompanying that, have knowledge, breadth of outlook, and dauntless enthusiasm. To inculcate these should be the aim and object of all true education. The Right Honourable Mr. Fisher, ex-President of the Board of Education, U. K., is ever true in what he says, and is never more true than in this: "The capital of a country does not consist in cash or paper, but in the brains and bodies of the people who inhabit it." Again, "Obviously education is important. Everybody who has a child knows that the future of his child depends upon the way he is brought up. Is he to be competent for the business of life or incompetent, a profitable member of the community or a parasite? Is he to be prudent or profligate, cultured or ignorant, refined or brutal, social or anti-social, a citizen or an anarchist? The answer to all these questions is to be found partly in descent but far more largely in circumstances which unlike the unalterable traits, handed down in blood, can be affected for better or for worse by education. Education does not bear fruit in the science and art of earning a livelihood 'alone' but yields 'the science and art' of living."

Ladies and Gentlemen, I have given you above a roseate picture of education as it

should be. But I have heard people say that much of our present education is very poor stuff, and that the wrong things are being taught by the wrong people in the wrong way. But if this be so, who is responsible? The culprit is the nation. The State contribution is insufficient in amount; an undue share of the schools are undermanned; and the teachers are underpaid. Are not our children as good, if not better, an asset as other property? We invest money and the interest brings us happiness; we start industrial concerns and we grow rich; we have landed property and we fatten on it, similarly, if we have properly trained children, they will become the most precious goods of life. So the more fully and equally education can be distributed the more happy we shall be and the stronger will be our community. National education is not only an "investment but an insurance" as well. In the opinion both of Dr. Besant and Principal Vaswani, there are three chief principles of national education. They are "Viveka" or right knowledge in an environment of freedom; "Vairagya" or plain living and high thinking; and third "Mumukshatva" or longing for freedom—a spiritual democracy built upon idealism, Dharma, upon love.

But how can we realise this with millions of starved teachers? In 1913 out of some 4,700 teachers in privately-managed High Schools, about 3,300 were in receipt of salaries less than Rs. 30 a month, and 900 between Rs. 30 and Rs. 50 a month, and only 500 above Rs. 50 a month; out of this 500 a few only were receiving more than Rs. 100 a month! These are patent facts, appalling and staggering! And we are the Nation-Builders! Doctors and lawyers make their piles very quickly. An ordinary doctor gets a fee of Rs. 2 for a

minute's visit to a patient. Are we less important members of the society than doctors? If they are doctors of the body, are we not doctors of the mind? Is it not considered almost a crime if a doctor treats all his patients with a common patent medicine without due consideration to their individual signs and symptoms of ailments? Similarly, how can we teachers, commit the sin of moulding all children alike by serving them with the same stereotyped patent curriculum and syllabus? With the present system we can at best make them machines but not men.

To make men we require powerful beings like God, at least men, but not machines. Unfortunately, the present generation of teachers in India have been brought down to the level of machines. What were considered starvation wages more than ten years ago are still the hard lot of most of us to get to-day! Where lies the remedy? We have to make ourselves indispensable like the doctors, the engineers and the lawyers. Let the State come forward to increase the amount of grant-in-aid to schools, and to supplement the amounts made available for the purpose from the taxes and the rates by raising additional national debt. If it is legitimate to raise money by loans for railways and for defence and for contribution to the Imperial War Fund, why is it not legitimate to take loans for National Education, for what I may call an "Imperial Peace Fund," because true education is the mother of peace?

In the Government Report, "Indian Education 1920-21," page 12, it is said: "Even where some steps have been taken their inadequacy is emphasised." One in Bihar lost fourteen teachers in a year and the

results of failure to retain the services of competent men in schools which form so large a part of the Secondary Schools system must necessarily be grave." This is, for want of a milder expression, simply scandalous, to say the least of it. In Government Progress of Education in India, 1917-22, page 80, it is said, "In Bihar and Orissa the necessity for levying a contribution on parents towards the increased cost of the teaching staff was recognised and fees were raised in 1921, the whole of the sum so realised being ear-marked for raising the pay of the teachers in Aided Schools. Unfortunately owing to a fall in the number of pupils attending Secondary Schools the teachers have hitherto only benefited slightly." Thus parents or Government have directly contributed nothing towards the increment of salaries of teachers. Now that students have returned to the schools, is it too much to expect that the Government will translate this pious wish into action? After speaking of the enhancement of the salary of teachers in Government Schools, the Government remark: "It is easy to understand that new terms of pay have greatly stimulated recruitment to the profession." What a contrast to the other side of the shield, where one school lost fourteen teachers in a year!

The question of salary therefore rests chiefly on, as I said, making ourselves indispensable by regulating the law of demand and supply. Let us increase our demand and restrict supply. Larger demands for teachers can easily be created by multiplying good schools for which there is plenty of room in the Province. The supply of good teachers may be reduced to a maximum by having a Teachers' Registration Council on the lines similar to that in England. Many who join

our profession are mere birds of passage. They consider schools as mere stepping-stones to more lucrative avenues of service. Let us combine to see that "the profession of Education should not be an asylum for the imbecile, or a shelter for the refuse."

The lot of an Indian school-master compared with that of a German and a French master is a miserable one and we should set our face against the admission of undesirables in the proposed Register of Teachers. The lead given by Europe and America in promoting the sense of an *esprit de corps* should be an eye-opener to us.

It is a notorious fact that young men of promise and talent shun this profession. If, as suggested by the Sadler Commission, the minimum salary and rates of increment for each place in a school, both public and private, be fixed and the same be made a condition of recognition and grant, if also a written contract and a special tribunal be introduced, thus putting an end to the vagaries of unscrupulous managers, and if, besides introducing the common superannuation fund, the transfer of teachers from one school to another be made easy, far better men will be available for educational service. If only this precaution be taken, there is no reason why men of the type of those who now enter the Government Educational Department should hesitate to take service in private schools, there being practically no difference between service in Government schools and that in private schools, inasmuch as all of them will be brought under the control of the Board of Secondary Education in at least certain vital matters.

It is an irony of fate that the call to sacrifice comes unasked from every quarter

to the school-master. Saddled with the burden of a joint family and extra work as a home tutor, the teacher is buried in his misery. Nearly one-third of the salary of the average teacher goes to pay the rent for his house for which a more fitting name is a dungeon. He has to pay for the doctor's bill and sundry other items. Even if he keeps his family in his village home, the door of the school hostel, if there be any, is generally barred against him. Our Dailies and Weeklies never advocate the cause of these sufferers. Will they not press the Managers of private schools and the Government to offer better facilities to the teachers to enable them to do their noble task properly and efficiently?

The ex-Minister of Education in Bengal, Sir P. C. Mitter, in his Presidential Address at the last All-Bengal Teachers' Conference, has made this noble utterance about the pay of teachers: "Is it not shameful to record that a very large proportion of our teachers get as their pay something less than the wages which are earned by our unskilled labour employed in large towns and in manufacturing centres?" The blame lies both on the Government and on the public. Nor has any persistent complaint gone forth from us. We have never even begged any privileges from our employers. The cause, however, lies not in taking up a begging attitude. We must organise, and establish our claim to recognition, power and privilege. Here is a practicable solution of the problem suggested by Sir Pravas Chandra: "Those drawing Rs. 40 and less should get an increment of 50 per cent. Those drawing Rs. 41 to 80 should get an increment of 33 per cent. The rest should have an increment of about 20 per cent. It will be a good working basis, if we

aim at increasing the fees of the pupils in our Secondary Schools by about 20 to 25 per cent., but in order to meet the cases of poor students we should ask the Education Department to agree to increase the percentage of half-free studentships to about 33 per cent. of the total strength in each school. This will meet the case of the poor students. This increase of income should be spent in increasing the teachers' salaries. The Government grant-in-aid should proportionately be increased to relieve the distress of teachers."

Ladies and Gentlemen, equally important is the problem of your status in the society. "Experts are necessary side by side with administrators" is an accepted truism. What a pity it is that we are looked down upon by outsiders! Even more. Some "administrative officers," says Principal Thickett, "are very great persons indeed and find much self-satisfaction in describing teachers as subordinates. But the teacher is in close touch with the child, and for this reason his work is on a higher plane than theirs. In the scale of educational values, administrative officers and examinations may very well be bracketed together near the bottom. Both are necessary evils." Alas, how low is the standard of national respect for education! The remedy of the evil lies in the revival of the status that our far-off forefathers used to give to the teachers of our country. I earnestly appeal to you, brother teachers, to claim your rightful place in the Board of Secondary Education. Where there is responsibility, there is growth; and where there is power, there is status, there is respect. When will this happen? Let Mr. Jacks answer: "It will come the moment the public shakes off its present indifference to education and realizes what education is and what it means." How is that

indifference to be conquered? Some would start a lecture propaganda; some would appeal to the M. L. C.'s. All these methods are useful up to a point. But there is another. Why not work through the children themselves? To every school-master I would say, "Make it your aim in spite of all the difficulties which officialism inflicts upon you, to bring your school, whether Primary or Secondary, to such a level of efficiency that every boy or girl will look forward to the day when he has to leave that school as the darkest day of his life. Make your scholars unwilling to leave." Attack the parents through the children, attack the public through the children, not forgetting that the children are the public of the future, just as every child who leaves school asking for more is a missionary of education, so every child who leaves school with the feelings of a prisoner released from jail is a dangerous force on the other side.

If a full and living interest in the whole life of humanity is to permeate and determine the teacher's work, then he must first be free in his profession—free in the fullest sense, responsible to his own conscience, responsible to his colleagues in the actual teaching world, but not subject to extraneous, political or politico-economic authorities, whether national or local. There must be a relation of full and free confidence between the public and the teaching profession.—*Education: Allahabad, May-June 1925.*

(To be continued.)

**PRESIDENTIAL SPEECH* OF
THE HON'BLE
MINISTER OF EDUCATION, U. P.**

GENTLEMEN,

It is a matter of great pleasure to me to welcome you to this informal Conference to consider the best means of securing co-operation between the various Universities situated in these Provinces, and to advance generally the cause of higher education within the limited resources at our command. I am conscious of the great inconvenience which the journey must have caused to some of you, particularly in this indifferent weather; but my excuse lies in the urgency and importance of the questions which need your careful attention. But before I come to them, I wish to make it perfectly clear that our meeting to-day is merely of an informal and preliminary nature; and I do not expect that the views expressed to-day by the representatives of the various Universities will in any way commit those bodies to them. At this moment we have more or less to explore the possibility of devising some sort of *modus operandi* and if we can arrive at one, it will form the basis for discussion and decision by the responsible bodies in the Universities. In these Provinces we have four Universities, two of which depend almost entirely upon the funds supplied by the local Government, and though we may not hold ourselves directly responsible for financial assistance to the two All-India Universities, yet we must recognize their existence and utility in the educational economy in so far as they affect the scheme of higher education in these Provinces. It is for this reason that I have invited the repre-

* Delivered at the Conference of the Vice-Chancellors and other members of the four Universities in the United Provinces held at Naini Tal on 27-6-25.

sentatives of those Universities also to take part in our deliberations to-day.

The first point to be considered is as to whether any co-ordination is possible between the various Universities in the matter of specialization of subjects. If we wish to set up institutions of the highest standard in this country, these institutions must necessarily be costly. As we have to husband our resources, concentration and specialization are inevitable. Teaching certain subjects up to the degree course would be tantamount to teaching the Three R's of the University, but there may be other subjects of the degree course or of post-graduate courses where specialization must come in. I would particularly draw attention to research work, provision for which is admittedly extremely expensive.

Certain Universities have advantages in this direction; for instance, no place would be fitter for research in the Ancient History of India than Benares, and for the Muslim period, Aligarh University would be the most suitable. Its proximity to Delhi and its general atmosphere of Islamic culture are irresistible factors. I forbear from going into details as regards differentiation because it is for this informal Committee to approve the principle and then work out the details. It is for experts to decide this question and it should be decided irrespective of sentimental considerations. The public purse is limited and if a rupee is to go to the full length of sixteen annas, then no consideration of *amour propre* should deter us in axing the departments for which there is neither the local atmosphere nor the demand. Nothing, however, could prevent endowment from the public or from a wealthy individual of a chair or chairs for specific subjects, but till that stage is reached,

EDUCATION IN BRITAIN.

By CYRIL NORWOOD.

i.e., till the public is taken into partnership in the advancement of the bounds of knowledge, we have to go slow and hesitate before launching on new schemes.

The next point to which I would draw your attention is the criticism that has generally been levelled against the rise in the cost of the maintenance of the staff. We have particularly to see that a reasonable proportion is maintained between the number of students in a particular department and the staff employed to teach them. Also the number in the various grades of teachers may be fixed in accordance with some general principle. In this connection it may also be considered whether it is desirable to appoint teachers, particularly the Professors on short terms, which may be renewed on the basis of their worth and work. It has also been urged that the output of work has not yet been commensurate with the increased expenditure on the Universities; and traditions have yet to be established to make them true centres of creative thought. The work of a good teacher should not be judged merely on the basis of the amount of teaching that he does, but also on the original work which he is able to put forth, and on his ability to inspire methods of independent thinking and research in his students. I would ask you to devise means to meet the above criticism. We may also consider whether it is possible to establish a convention which will prevent teachers from migrating from one University to another without strong and adequate reasons.

In short, we have to deliberate on all those means which would establish fruitful co-operation between the teachers and students of the various Universities, ensure the best results from the necessarily limited expenditure on the higher education of these Provinces, and would so quicken and invigorate the intellectual life inside the Universities that their *alumni* might contribute their share to the progress and advancement of science and knowledge worthy of the glorious traditions of our people.—*Wealth and Welfare*: Lucknow, 17-7-25.

EDUCATION is a public service which perhaps more than any other has suffered from the war. During the war itself many of the boys' schools fell perilously near the line of inefficiency, and many of the strongest personalities among the teachers, with whom lay great promise for the future, were sacrificed on the battlefield. Their sacrifice was not in vain, but the vigorous influence of these men, who would now have been in the middle-thirties, is sadly missed to-day. The war, on the other hand, did good service in converting the nation to a greater sense of the need of education, and bred the idealism which launched the Fisher Act. There were high hopes in those days. But the results of the war, the burden of debt, and the restriction of credit, acted as a killing frost on the luxuriant plans of educationists, so that a much soberer mood prevails to-day. It is some comfort to reflect that vigorous pruning often results in stronger growth, and that there are signs of this to-day.

It may well be that future generations will consider that the most productive labours of the post-war period were done in the medical work in the schools, and that the foundations of sound national hygiene were then laid. The reports of Sir George Newman indicate not only the extent of our present deficiency, but they record a great volume of remedial work.

The Health of School Children.

For instance, in 1923 it was found that probably more than two-thirds of the school population was suffering from dental disease,

but it was recorded that in Cambridge, where there had been annual inspections for many years, and the necessary remedies applied, among 4,923 children in the schools there were only fifty-nine diseased teeth. Similar, if not quite such striking, results follow regular treatment of defects of the nose and throat, just as a comprehensive orthopædic scheme applied thoroughly for a few years would greatly reduce the need for "crippled schools."

Allied with this, and in part arising from it, is the demand for newer and better school-buildings: the need for light and air has been discovered, and the new school-buildings of to-day provide them. North Wingfield School in Derbyshire was indeed built before the war, but it has been the model for a good many since, and, it is to be hoped, of more to come. These schools, and they are to be found now not only in Derbyshire, but in Liverpool, Preston, Torquay, Swindon, and elsewhere, are lit from above by sky-lights, and ventilated by glazed doors running the full length of opposite sides of the class-rooms, and opening on covered verandahs. The children live and work virtually in the open air: in the country they look out on a garden. If this type of school can replace the cramped, insanitary quarters which do duty as rural schools, and the gaunt, asphalt-girt barracks of our cities, a great advance will be made towards the building up of a healthier population, and it will be due to the medical officers, teachers, and architects of the present time.

Teaching Self-Reliance.

A change, too, has come over the spirit of the teaching. It began with the century, but it has grown in strength and self-confidence

since the war. Briefly, it lies in doing away with restraints, and in every way fostering the self-development and the self-reliance of the pupil. A wit has said that the change has been best marked by the Greek grammars. In the nineteenth century the school-boy learned "tupto," I beat, through all its moods and tenses, though the verb was as a matter of fact not used by the Greeks; to-day he substitutes for it "luo," I loose. The old pedagogue said that it does not matter what a child learns, so long as it is hard, and he is made to do it: the new says that it must be made easy because it must always be the thing which the child wants to do. Hence has arisen a great flood of experiment which extends to-day right through every stage of education.

It begins with the nursery schools which both in this country and abroad are full of promise, especially for the children whose homes are in slums and mean streets. They offer amusement, games, healthy occupation, in surroundings as jolly as possible. The chief inspiration has come from the research of Dr. Montessori, who after many years of patient inquiry, has worked out what she holds to be the most favourable environment in which children can learn and grow strong in mind, body and spirit, without the loss of their natural joyousness. Her method is all for freedom in so far as children can choose their own subjects, but she prescribes with some rigidity the methods and apparatus which are to be used. She has had a profound influence in making all those, whose duty is to train the early years of childhood, question their own methods and seek for improvement.

The same principle extended to later stages appears in the "Dalton Plan," which has

been applied to a few elementary schools and to a larger number of secondary schools. It is unlike the Montessori system in that a free choice of subjects is not allowed, but there is considerable freedom both for teachers and taught in the use of methods. Each child usually completes his "assignments," i.e., makes certain definite progress, in all his subjects, each month, but he does it to a large extent in his own time and in his own way. The teacher co-operates, but does not drive. The ideal is to make instruction in class entirely subordinate to self-instruction, and it is claimed that it introduces into the schools a new interest and a new spirit.

Self-Government Experiment.

The same movement comes out again in experiments at self-government by forms and by whole schools. It often runs into extravagances, and it suffers from the exuberance, and at times the lack of humour, of its own devotees. But it is a salutary protest against the pedantry and the drill-ground methods into which the old school too often sank with content, and its results are bound to be better than those of teachers who wrestle with large classes by methods of routine. Whether they will be better than those of teachers who know how to inspire a class of reasonable size and level attainment under that normal discipline which is never indeed felt as such, where the class has caught the teacher's enthusiasm, remains to be seen. Indeed, the danger of the whole modern movement is its tendency to forget the saying of an educationist as old and as neglected as Hesiod, that "in front of excellence the gods have set sweat." The critics complain that in the modern classes the pupils do not know how to "sweat," that privilege is reserved for their teachers.

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The same insistence on the study of the individual, as an individual, and never as one of a mass, comes from the side of psychology also, and here much work of value is being done. Psycho-analysis indeed is entirely a method for the rare expert, and its proper subjects are not the normal, but the highly abnormal, children: but, putting that aside, psychology has done much already, and will do more, to clarify method, and to attach the right teaching to the appropriate years. In one particular respect, the discovery of intelligence by short and formal tests, the pioneer inquiries have been chiefly prosecuted in America, though the movement began here. The recent report of the Consultative Committee on "Psychological Tests of Educable Capacity" goes to show indeed that no method has yet been elaborated which will enable teachers to dispense with the time-honoured methods of the oral interview and the written examination, but that a valuable instrument has been discovered for measuring general intelligence in the early years of school life.

The Need of Aesthetic Training.

Perhaps more important is the greater emphasis now laid with increasing general consent on the need for a fuller aesthetic training. It comes out in the reform of physical training, in the growth of Eurythmics, in simple folk-dancing and drama, and in particular in the increasing confidence with which a place is demanded, and conceded, for Music and Art as full equals of Language or Mathematics or Science in the secondary curriculum. There are schools already in which Music has been made the basis of the most advanced school education, though of course only for those specially gifted, and it will be interesting to see how far the movement will

be carried. There are many true friends of Music and Art who fear that if these subjects are forced on the schools, as matter for regular examination, the result will not be more musicians and artists, but only more Music and Art teachers. There are others who hope that by better work in the schools, the whole level of æsthetic appreciation in the nation will be raised.

In speaking of new movements there is danger of neglecting two very solid pieces of work which stand to the credit of the post-war generation. The first is the production of the four great reports on Classics, Modern Languages, Science and English, which represent the educational mind of the period on the chief branches of school work, and must be the starting-point for future developments. The report on English in particular may well be the basis of a new conception of elementary education, and indeed of secondary too. The other is the perfection since the war of the great examination system for secondary schools, the School Certificates awarded to pupils just over sixteen, and the Higher Certificates awarded two years later. It is perhaps likely to be the most lasting of the achievements since the war, and its effects are profound. But it would require an article to itself, and can here only be mentioned: it is perhaps as responsible as such a system can be to the needs of a national education which at the present moment is full of unrest and experiment, and that discontent which is making for better things.—*The Mysore Economic Journal*: June 1925—*Weekly Westminster*.

Reviews and Notices.

CHAMBERS' REGIONAL GEOGRAPHIES:—(1) THE BRITISH ISLES, BY J. H. BIRRELL. pp. 128. Price 1s. (2) THE BRITISH EMPIRE, BY T. S. MUIR, pp. 144. Price 1s. (LONDON: W. & R. CHAMBERS, LTD.)

The list of text-books on the Geography of Great Britain is lengthening very rapidly; but each one coming into the field claims for itself some new feature and a little more usefulness to the reader than its predecessor in the shape of a better arrangement of matter, a better selection of questions and answers, more carefully chosen sketch-maps, etc. The books under review cover a good deal of useful matter, giving first a general view of the regions covered and then a detailed regional survey of the various parts—the matter about the products and peoples of the British Isles being particularly good. The appendix in the 1st book on the value of the position of the British Isles explains how Britons were enabled to build up Britain Overseas. Ireland is treated separately in its two parts, Northern Ireland and the Irish Free State. The questions and answers serve a double purpose referring to the subject-matter of the text and also requiring elementary references by the pupil to the gazetteer on the Encyclopædia.

In the second book the British possessions are treated by regions, like the cold temperate, warm temperate and tropical. The future of the British Empire is indicated in a chapter at the end, especially in view of the rapid movement to complete self-government that is manifested by almost every part of the Empire. A note gives us the necessary details about Palestine and Iraq, Britain's two most important mandated territories. The book is marked by frequent requirements imposed on students for drawing diagrams and sketch maps.

ADVENTURES OF EXPLORATION—General Editor: ERNEST YOUNG—

BOOK I. FINDING THE CONTINENTS. pp. 128. Price 1s. 6d.

BOOK II. CENTRAL AND SOUTH AMERICA. pp. 156. Price 1s. 8d.

BOOK III. ASIA. pp. 164. Price 1s. 10d. EACH WITH ILLUSTRATIONS, MAPS, PORTRAITS, ETC., BY SIR J. SCOTT KELLIE AND S. C. GILMOUR. (GEORGE PHILIP AND SON, LTD.)

These are the first instalments of a series of supplementary readers intended to quicken interest in geography by stories of adventurous travel. As the learned authors say, "they will afford an idea of some of the main steps by which knowledge has been gained, first of the world as a whole and then of the separate continents outside Europe. The first Book tells us of the voyages of Columbus, Vasco da Gama, Magellan, Drake, Barents, Tasman and Captain Cook who actually enlarged for us the bounds of the known universe and discovered new continents and seas. The second book deals with the exploits of Cortes and Pizarro in Spanish America, with Sir Walter Raleigh's quest of the chimerical El Dorado, in the valley of the Pinoco, with Godin's journey from Quito across South America along the Amazon to the sea with the work of the great naturalists, H. W. Bates and A. R. Wallace, with the achievements of the English party which climbed the Aconcagua in 1896, with Roosevelt's adventurous voyage down the River of Doubt and with the voyage of Sir Ernest Shackleton in *The Endurance* to the South Pole. The third book dealing with Asia, begins with the story of the Venetian Marco Polo of the 13th century, with the adventures of Jourdain, with adventures in Siberia, in Tibet, in the valley of the River Mekong, in Western Persia and Turkestan, detailing the explorer-achievements of men like Manning, Layard, Garnier and Barnaby and finally with recent explorers of the Arctic, and the Khotan Desert and Mount Everest like Nansen,

Stein and the Everest Expedition of 1922. The pathos and tragedy of many of these noble attempts are well brought out, and appropriate illustrations and sketch-maps enhance the attractions of the stories which are fit material to kindle the imagination of boys and girls.

CHAMBERS' COMMERCIAL GEOGRAPHY:—

PART I. THE BRITISH ISLES, BY A. J. HERBERTSON—THOROUGHLY REVISED EDITION, BY J. H. BIRRELL. pp. 152. Price 2s.

PART II. THE WORLD OUTSIDE THE BRITISH ISLES—THOROUGHLY REVISED EDITION, BY J. H. BIRRELL. pp. 382. Price 3s. (LONDON: W. & R. CHAMBERS, LTD.)

The first book is an up-to-date edition of Mr. Herbertson's courses of lectures on the commercial geography of the British Isles delivered about 1899, with the statistics and other material brought up-to-date. After an introductory sketch of Britain's industrial history, the author traces the distribution of men, animals, minerals, occupations and industries and the existing trade-routes and centres of trade; and later the food supply of the country, its import of food-supplies and raw materials and its export as well as the great trade-routes from and to the British Isles. Wherever possible, an account of the previous history of institutions, manufactures, trade-routes, the growth of the trade-routes, etc. is given. The account of the distribution of manufactures and manufacturing centres is full, while the nature of the entrepot trade of the British Isles and the commercial advantages and disadvantages of the British Isles are clearly brought out.

The second book is prefaced with an account of the general economic geography of the world, and this portion treats of land and water, climate belts, zones of life, minerals, the chief manufacturing areas and transport, and its account of man as a producer of wealth is clear and instructive. The latter portion of the book deals with the detailed

economic geography of the various regions of the Empire first with the regions in the temperate zone which most resemble in their conditions the British Isles and then India, Ceylon and other tropical parts. The account is primarily for the student of the British Empire geography; though the account of non-British lands is also fairly full. The main division in the arrangement of chapters lies between those countries which produce raw materials. The student is advised to perceive only the illustrative value of the statistics given and not to memorise them and also to supplement them by references to the *Statesman's Year Book*, "the most complete of geographical statistical manuals"; or *Wentaker's Almanack*. The author and the editor would both urge the intelligent use of the daily and commercial newspapers.

A CHOICE OF SONGS FROM THE VERSE OF KIPLING.
(METHUEN AND CO. 1925). pp. 66. Price 2s.

Kipling's fame which has reached such tremendous proportions was anticipated even as early as 1900 when Mr. Richard Le Gallienne said, "he may make a complete picture of British and American rule and so become the snapshot Balzac of Anglo-Saxon colonisation, his gifts for getting up a country and its people are so exceptional." He has more than justified these great expectations held of him. His poetry is undoubtedly clever with a great amount of genius and pathos lurking behind it; he invests all his subjects with a halo of enthusiasm and energy; his greatest work as a poet cannot be said, however, to be Anglo-Indian; he is the uncrowned poet-laureate of Imperialism. The selections that have been made in this manual include such as "The English Flag," "The Merchantmen," "Big Steamers" (1914-18) and "The Recessional." The collection, or rather selection must appeal to men proud of the English heritage and burden—being the cream of his Imperial poetry, one of the four main divisions of his work and bound to be of

permanent value to the Empire as well as to literature. His "sustained loftiness of thought, the pervading mysticism of tone, and the extraordinary spiritual ecstasy displayed" as in "The Native Born," and "The Young Queen" and other poems are always manifest and do not pall with repeated readings. We wish we had similar choice collections containing the best of his other songs.

TALES OF THE ROUND TABLE—RE-TOLD FROM SIR THOMAS MALORY, BY R. A. SPENCER. (W. & R. CHAMBERLAIN). pp. 94. Price 1s.

This small book introduces to the boy-reader the principal characters in the great story of King Arthur and the Knights of the Round Table, and it is intended to stimulate the child to explore for himself first Tennyson, the great modern master of Arthurian legend and at a later stage Malory himself. The author gives in the introduction the geographical background of the whole story which lies in the south of England and also an account of the institution of chivalry of which the story of the Round Table is the greatest reminder, as well as about Malory who in the 15th century made his name endure for ever by writing *Morte D'Arthur*. The Sword Excalibur, the Quest of Sir Gawaine, the Quest of Sir Tor, the Quest of King Pellinore, Sir Lancelot, Sir Tristram, Sir Gareth and Sir Galahad, are all brought out in their true form in bold relief and the story ends with the passing of King Arthur. The series of questions and exercises appended at the end greatly help the pupil to appreciate the stories and to stimulate and widen his imagination.

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The Educational Review.

It was an excellent idea of the authorities of the Women's University of Poona.

Poona to have arranged to have got a written address from the Rt. Hon. Mr. Fisher for the last Convocation of the University. Some of the observations made by Mr. Fisher on the occasion are worth much wider attention, his practical experience as an educationalist and as an ex-Minister of Education enabling him to look at the problems discussed with profound insight. Mr. Fisher argued that there must be a certain amount of differentiation between the curricula of men and women at least at the present stage of progress: "I am inclined to think that some differentiation is desirable and that while at the beginning of the movement for female education, it was necessary to demonstrate that women could equal men in the severest branches of Academic study, the higher mathematics for instance, or the classical languages of Greece and Rome, it was a mistake to attempt to enforce on both sexes, as was often done at the Secondary School stage, a uniform curriculum. I gladly notice that the authorities who control the curriculum of your University have not fallen into this error but have included certain subjects of instruction, such as Domestic Science, which are peculiarly appropriate to women and are not ordinarily taught to boys." The Women's University of Poona from the very

beginning has employed the vernacular as the medium of instruction, but in view of the fact that the language is understood only in a small part of the country, the University has been prevented from attracting a large number of students from all over India. While Mr. Fisher thinks that the use of the mother-tongue is fundamentally wise, he finds it necessary to utter a note of warning against the possible neglect of English. "In the higher education of the Indian people, English must always hold an important place as being the one language common to the whole Indian continent, but also as being a modern world-language capable of expressing all the latest ideas in pure and applied science. Every Indian scientific student, male or female, ought to be in a position to read and write the language in which so much original scientific work is done. The Indian chemist or biologist who can use English, addresses scientific men and women all the world over. If his ideas are sound and well-expressed they fly anywhere. If on the other hand, he knows nothing but his own vernacular, he is condemned by that very fact, to a small audience and to a comparative obscurity. I hope therefore that while the use of the vernacular is freely practised especially during the earlier stages of the University career, English will not be neglected and that students having any prospect of eminence in scientific subjects may have their attention most powerfully directed to the advisability of obtaining

a complete command of that language. Macaulay, indeed, went too far in one direction. It is possible to go too far in the other." The training of teachers is an important branch of the activities of the Women's University and Mr. Fisher therefore thought it necessary to address a few observations on the technical aspects of teaching. "How many quite capable men and women," he said, "fail to impress their class by reason of some fault of manner or delivery, or some defect of teaching technique which could easily be remedied by training. I have listened to lectures delivered both by Englishmen and Indians at such a breathless, headlong speed as to frustrate all the advantages which the lecture was designed to secure. The audience were incapable of following the spoken word. Great orators tell us that their achievement is the fruit of infinite study. And teaching is in a sense a branch of oratory. It too is a subtle and delicate art, depending, indeed, as does that of oratory, upon the presence of favouring natural qualities, but capable of almost infinite improvement by wise direction."

We are not concerned here with the general aspects of the pronouncement recently made by Lord Birkenhead, the Secretary of State for India, on the Indian situation. But there is a reference in the course of his address to students in the East and their interest in revolutionary movements, to which we should take exception in its application at least to Indian students. Whatever

may be the condition of things in China, we have hardly any knowledge of students in India taking a leading part in political disturbances. There has of course been excitement among the student community on occasions of political agitation, but of active participation in revolutionary propaganda, there has been none. Even the political excitement which existed sometime ago in the active days of Non-Co-operation has happily subsided and the Indian student community seems to be pursuing once more the even tenour of its intellectual life and progress. We are ourselves opposed to the disturbance of academic peace by the unhealthy excitement of politics and we have therefore particular pleasure in recording the improvement there has been in recent years in India in this matter.

According to the last report of Public Instruction in the Bombay Presidency, the number of recognised institutions increased from 13,269 to 13,512 or by 1·8 per cent. The number of pupils in recognised institutions was 947,051 representing an increase of 35,399 or 3·9 per cent. Some of the other statistics are more interesting. Eight per cent. of the male population and 2·1 per cent. of the female population were attending school and taking the proportion of the population of school-going age at 15 per cent., it may be assumed that roughly half the boys and one-seventh of the girls in the Presidency were attending school. Taking the figures of the last

seven years Bombay shows an increase of 29 per cent. in the number of pupils compared with 9 per cent. for the whole of India; and whereas in 1916-17, Bombay stood fourth in the list of provinces as regards the proportion of boys attending school, and second in the case of girls, by the end of 1922-23, Bombay had risen to the first place for both boys and girls. Moreover statistics show that the expenditure in Bombay per head of the population is more than twice as much as the average for the whole of India.

The following information with regard to admission into Oxford Research Degrees will interest Indian students of an advanced kind of whom a large number have been leaving in recent years to qualify themselves for the degree:—

The minimum course of study for the degree of D. Ph. has been reduced to two years, but admission to the status of advanced students will, in future, be more difficult as it will usually be restricted to those who have already obtained the degree of B. Litt. or B. Sc. Graduates of other Universities including Indian Universities may be admitted, but only if they produce evidence of special fitness in a manner satisfactory both to the Committee for Advanced Studies and to the Board of the Appropriate Faculty.

Ordinarily, a research student will be admitted to study for one of the degrees, B. Litt. or B.Sc. and must have obtained an approved qualification. In exceptional cases he may be admitted without that qualification, if he satisfies the Board that he has qualified to enter on a course of special study or research.

In the case of B. Litt., the candidate is first admitted as a probationer student, and after consultation with his supervisor he chooses the precise subject for his thesis. This choice has to be made at any time within the first three terms, and after the subject has been approved by the Board of the Faculty concerned, the candidate is admitted as a student for the degree of B. Litt.

It is necessary to point out that these research degrees are not necessarily the next stage after a degree at an Indian University. A student who wishes to study a particular subject further is often best advised to read the degree of B. A. at Oxford and M. A. in due course. Research degrees are intended for the man who has studied a particular subject and is qualified to make a further special study of it. Therefore the rules specify that he must not only state precisely the branch of study which he proposes to pursue but give evidence of his fitness to undertake a course of special study in it. Further applications must be made in good time to enable the Committee for Advanced Studies and the Board of the respective Faculties to consider them. These bodies meet in term time only.

Dr. Hartog, who is retiring from the Vice-Chancellorship of Dacca, was entertained the other day at a distinguished gathering in England and speeches were delivered in appreciation of his work. Sir Michael Sadler, whose colleague Dr. Hartog was on the Calcutta University Commission, was the main speaker on the occasion. Sir Michael said that Dr. Hartog by his five years' work at Dacca had imbued the new University with a fine tradition of scholarship, science and social service. He had aimed at quality rather than at numbers, had reduced the examination

fever without blunting the students' intellectual interest and had fostered the spirit of independent study and investigation in his colleagues and the younger graduates. He had upheld the study of the vernacular and of Indian thought, History and Art, and had improved the methods of teaching the English language which Indian students used as a medium of communication with the Western world of learning and discovery. As an administrator he had shown self-abnegation, wisdom, tact and patience and looking far ahead into the future of the University, he had striven to make its first steps sure. Replying on the occasion, Dr. Hartog drew attention to the serious problem of middle-class unemployment in India, which according to him was the most serious educational problem to-day in the world. Dr. Hartog thought encouragement should be offered for educated middle-class Indians to turn their attention to new avenues of employment. At present only a small percentage of the educated community was employed in agriculture, though it was the greatest industry in India. In commerce, technology and industry, there was more opening, though less he feared, than the general public of India supposed at present. But the real opening for the employment of the middle classes on a large scale lay, he thought, in the education and the right education of the illiterate millions. Of a population of 320 millions, only 22½ millions were literate and here was opportunity for the employment of a whole army of educated people as teachers.

In view of the efforts which it is proposed to make in some parts of India, to relieve unemployment among the educated classes by arranging schemes of land colonisation, it will interest our readers to know that arrangements are being made in England, to start an agricultural college at the University of Norfolk for training educated men as agriculturists with a view to their migration and settlement in Australia. At this, college-educated men with a small capital will be trained as settlers and subsequently sent to Queensland under very favourable conditions. We are told that the scheme has been launched by a few idealists of Australia and England and the Government of Queensland is offering valuable concessions for this purpose. A large tract of land is to be reserved and the Government is also to help settlers with loans not exceeding £750 each. Each settler will get 160 acres and it is also proposed to put the colonists into groups so that they may find congenial company among themselves. It has been estimated that the income in the first year is likely to be £300 per settler. We wonder if the Government in India cannot take some steps in this direction and do something to relieve educated unemployment in the country.

To those who are so blind as to imagine that education has not improved in modern times and who would like to cast wistful looks behind at past times, we would commend the *Changing School* by P.B. Ballard (Hodder and Stoughton).

Training Agricultural Settlers.

The "Changing School."

6s. net. The real fact is of course that there is not a single department of school-life or education in which momentous changes have not taken place. Mr. Ballard's book is an interesting record of how the school has changed in recent decades. The reading of a single chapter should be enough to convince one of the great transformations which have taken place. What about corporal punishment for instance? There was a barbarous fondness for corporal punishment and parents actually believed that the measure of educational efficiency lay in the frequency of corporal punishment administered to the pupil. There is record of a teacher who called up a pupil and told him—it is not a mere story—"I want to tell you that your father has just been to see me and has given me six pence for thrashing you this morning. Now remember, next time it is going to be a shilling." It cannot also be denied that there has been considerable improvement in the kind of literature purveyed to the children at school. There were morbid appeals in the name of teaching religion and morality, to the sense of fear in the unfortunate young pupils who were placed into the hands of these austere teachers. Here is a specimen :

Have you not heard what dreadful plagues
Are threaten'd by the Lord,
To him that breaks his father's law,
Or mocks his mother's word.
What heavy guilt upon him lies!
How cursed is his name
The ravens shall pick out his eyes,
And eagles eat the same.
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The teacher has now a more refined sense of what true religion is and it has meant a great revolution indeed in the atmosphere of the school-room. Reference is made to numerous other directions in the course of the book in which also considerable changes have taken place. It is sheer perverseness which will not see with pride, the growth of new ideals in the world of education.

We congratulate the authorities of the Ramakrishna Students' Home on their having been able to build a Residential High School in connection with the Home. With religious inspiration of a high order and a practical sense of true education, the active workers of the Ramakrishna Students' Home have already a very long record of useful service to the student community in Madras. With the opening of the school, the usefulness of the institution has increased considerably and we hope the new High School will have as successful a career as the Home. We congratulate Rao Bahadur C. Ramaswami Iyengar, B.A., the Secretary of the Home, and his co-workers on this very useful piece of service they have done to the educational world of Madras.

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TATTVA-TRAYA

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One of the most important of modern developments in this science is that made through the observation of individual differences. Although education is a social process and children are social in nature, yet we cannot deal with them too much in groups without doing great injustice to matters in which they are unlike. Studies made in Europe and America have their value for Indian teachers, but observations made in India, as Miss Gordon's have been, are of great value in enabling us to ascertain the similarities and differences with children of other countries, and the differences among groups and individuals here. Miss Gordon has not only given the result of her own observations but—what is even more important—she has shown teachers and others how they may observe for themselves.

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Education, March 1925.

The distinguished author of the book under review is one of the few enthusiasts in India who have taken to a systematic study of child-nature. The book embodies the results of close study, by the author, not merely of the existing literature on the subject, but of the actual mental and physical growths of children, as witnessed by her in several schools in Britain and India where she has had the opportunity to work. Within a brief space of 200 pages, the author has contrived, in her plain, matter of fact, and at the same time, engaging style, to elucidate the various topics connected with child life such as the sense perception, play, the service of Hand in Mental Development, fatigue, exceptional children, measurement of Intelligence and the Kindergarten system; touching the various theories on these topics and supplementing them by her own views based on personal study and investigation. We would especially commend to our readers the beautiful and inspiring chapter on the Kindergarten system in which without going into technical detail, the author has surveyed the basic principles of the system and pleaded in accordance with these principles for the Indianisation of Indian education. We are sure that this little book will prove an excellent handbook for teachers as well as parents and others interested in the subject and kindle in them a deeper interest therein. It has been already recommended by the Academic Council of the Madras University as a suitable text-book for the students appearing for the L. T. Examination and we hope that other Universities will soon follow suit. We congratulate both the author and the publishers on this valuable publication and recommend every teacher to secure a copy thereof.

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The Madras Christian College Magazine, January 1925.

The study of child-nature is exceedingly important for both of the sciences of Psychology and Education. Its importance for Psychology is from the genetic point of view. In the child one is able to observe in simpler forms many of the processes at work which in adult experience become so complex as to make them difficult of analysis. Its importance for Education is too obvious to need extended notice, and yet there are some who are so short-sighted as to neglect it. Here in South India there are a great number of schools in charge of teachers who do not know the elementary facts about child nature. But with the progress of education the time will surely come when it will be considered as dangerous to employ a teacher who is ignorant of child-nature as it is to employ a man for a physician who knows nothing of anatomy and physiology. Such a book as that which Miss Gordon has written will serve a useful purpose in hastening that day by putting teachers in possession of a primer which contains the fundamentals of the subject in a readable style. It is the type of book which we would like to see translated into our South Indian vernaculars, because it not only includes the principles of the science, but states them with special reference to the needs of Indian teachers.

A personality is the outcome of forces which are both hereditary and environmental so that child study must take account of both sets of factors. Much more is to be gained by teachers through the study of children for themselves than the mere perusal of books on the subject, however authoritative they may be. The trouble with so many students of other things as well as of child nature is the evident desire to be spoon-fed. They desire to get their information at second-hand rather than take the trouble to study for themselves. In many instances teachers have not the technique necessary to observe intelligently. Very valuable, then, is Miss Gordon's chapter on 'How to Study a Child,' particularly for those who are beginners in child study, and it is a matter of vital concern as much for the parent as for the teacher.

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