

THE MADRAS PROVINCIAL ELEMENTARY TEACHERS' CONFERENCE.

WELCOME ADDRESS*

ON behalf of the Reception Committee, I offer you a most hearty welcome on this occasion of the First Conference of the Elementary Teachers of this Presidency. Many of you have come from very distant parts, at immense personal inconvenience, and expenditure, actuated by the highest sense of duty to voice forth your views on various matters that pertain to your personal and professional status as well as to express your opinions on the system of Elementary Education worked out by you during the last 3 or 4 decades.

I. PERSONAL EXPLANATION.

Before I pass on to indicate the work of the Conference, I should offer a word of personal explanation. When I was approached to be the Chairman of the Reception Committee I expressed my utter inability to do justice to this onerous work and humbly begged to be relieved of the responsibility. However, as usually happens, the stronger the disinclination the greater was the insistence of the organizers that I should accept the responsibility. I made up my mind to do so, in the belief that here was an opportunity afforded to me to demonstrate my gratitude, and pay my humble homage to those from whom I received my early education. Therefore, Gentlemen, you will pardon me my audacity and co-operate with me in my humble endeavour to make the Conference an absolute success.

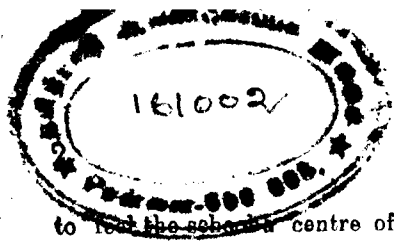
* By Mr. N. K. Thirumalachariar, B.A., B.L., Chairman, Reception Committee.

II. TRUE OBJECT.

Turning now to particulars, let me briefly indicate the several subjects which may properly engage your serious attention. At the very outset, I must say that our Conference is not intended merely for the purpose of ventilating our personal grievances but also for directing our attention towards those larger questions affecting the entire system of Elementary Education.

III. DURATION OF THE ELEMENTARY COURSE AND CURRICULUM.

In the first place, I believe that the duration of the Elementary course occupies a much longer period than what is necessary to serve any useful purpose. From various men connected with the actual working in the schools I am in a position to state that it is just possible to impart necessary and useful Elementary Education within a much shorter space of time. Probably this unnecessary duration is due among other things to the Curriculum of Studies prescribed for the Elementary course. On a perusal of the syllabus prescribed for the course, one will be startled to find that the young and immature student is called upon to exercise his mind in such subjects as Geology, Zoology, Astronomy, Plant Study, Plant Study, Physics, etc. Without any groundwork in very general and indigenous and familiar ideas he is over-loaded with complicated facts of a very abstruse nature. Perhaps it may be taken for granted that the student is merely given these facts to memorize, but as all of you know, the fact is, that he is also asked the why and wherefore of these facts. He gets intellectually subdued and takes no delight in his study, and feels the school a Plague house. On the other hand, one should expect the rising youth



to read the school centre of delight. Stories from indigenous traditions will afford a valuable ground-work for his future development. The deeds of valour performed by many a Hindu warrior would infuse in the student a spirit of courage and adventure. Text-books therefore modelled from the genius of the people of the country will be more useful during the formative period of the child's career than the simple but abstract booklets on scientific matters.

IV. TEXT-BOOKS.

With the subject of the Curriculum of Studies is closely allied the kindred subject of Text-Books. I do not wish to disparage the recommendations of the Official Text-Book Committee but I certainly feel that there is yet scope enough for outside talent. The complaint that is expressed in many quarters is that teachers are called upon to impart instruction through books which are neither interesting to the teacher nor to the taught. Unless a man feels a genuine interest in what he does, it is absurd to expect of him to do any really useful work. Some of the Text-books that have been recommended deal with such highly scientific facts as the conversion of a solid into a liquid, a liquid into a gas and *vice versa*. Gentlemen and Fellow Delegates, you as men engaged in the actual work, out of this curriculum will be in a better position to realise the justice of this grievance and it is for you to settle the ways and means to remedy this evil.

V. TRAINING.

The subject of training is a very thorny question. Some believe in the orthodox belief of efficiency and insist on a longer period of training, while others hold the contrary opinion that that high standard of efficiency as is required for collegiate teaching is not necessary for instruction in the lower grades. Again some are strongly of opinion that the present method of training based on Western lines otherwise called "Kindergarten" system is not only not

suitable but also useless, and absolutely unnecessary and insist upon the reversion to older methods.

The latter belief has, I find, very strong supporters and, if a layman be permitted to obtrude his opinion on the matter, he would certainly say that that so far at least as Elementary Education is concerned, an elaborately trained teacher is unnecessary especially in view of the fact that there is almost an universal demand for Compulsory Primary Education and that the present supply of teachers is very limited. If pedagogy could be introduced in the Curriculum of Studies prescribed for the Secondary Course, then with 3 months' vacation training it is possible to produce a very large supply of general and useful teachers.

Gentlemen, in making your recommendations, therefore, on this matter, I would appeal to you to take also the layman's view into your consideration.

VI. SALARY.

Coming to your personal status, it is hardly necessary for me to say that your salary is deplorably low and highly scandalous. I am constrained to use this uncivil expression in this civil assembly because I consider that in spite of repeated respectful suggestions for an early enhancement of your emoluments the authorities concerned have not indicated the slightest tendency to change their attitude of supine indifference and utter disregard. The lack of co-ordinate organization in the teaching profession and of continuous and sustained agitation is in my opinion the principal cause for the dereliction of duty on the part of the powers that be. The work of the Conference is to suggest a scale of pay moderate but dignified and agitate till that scale is brought into operation. The teaching profession was once the greatest but now it is the meanest. The teacher is a social boycott in high aristocratic circles. He has to be patronized though he himself is the

patron of learning and wisdom, of light and culture. Most of the social evils cannot be expected to be remedied unless there is a wide diffusion of learning and that will not be done efficiently unless the State discharges its primary and sacred duty of maintaining its teachers above want and place them comparatively on a decent status.

VII. PROVIDENT FUND.

The institution of Provident Fund seems to find much favour with most of the teachers. The reason for this is obvious. As a rule, the teacher and the lawyer are generally short-lived persons. Their constant intellectual activity coupled with an abnormal amount of vocal exertion tell upon their general condition and sooner than otherwise they rest in eternal peace. They are therefore not confident of living for a fairly long period after service, to enjoy the fruits of labour, in the form of a decent pension. The demand for the institution of Provident Fund as one of the conditions precedent for recognition will have to be made with increasing emphasis by this Conference.

VIII. FACILITIES FOR SELF-IMPROVEMENT.

Another important matter that will engage the attention of the Conference will be the devising of ways and means for the expansion of the intellectual equipment of the teacher. It will not be in the interest of the nation that a teacher is allowed to be stationary with regard to his mental store. Some facilities ought to be afforded in order to enable him to acquire fresh knowledge. Special extension lectures as are delivered in the Continental Universities, scientific exhibitions of the latest discoveries, periodical publications of literary and scientific pamphlets, introduction of

circulating libraries, may well be adopted within reasonable limits to ensure progress and efficiency of the teacher.

IX. GENERAL SUBJECTS.

Lastly, general matters such as the medical inspection of boys and girls, housing accommodation for the teachers, the introduction of co-operative societies purely for the benefit of teachers, introduction of the teaching element in all the local and self-governing institutions, and particularly in the Educational Council to be constituted under the new Act, free Secondary and Collegiate education to the children of the teachers, the formation of a permanent committee for the preparation of suitable text-books, the reduction of unnecessary school equipment, the publication of a monthly journal and similar useful subjects may well form the subjects of your deliberations.

CONCLUSION.

You are exceedingly fortunate in having secured the services of our distinguished countryman, Mr. S. Srinivasa Aiyangar, C.M.E. His unflinching loyalty and devotion to our cause is a matter of common knowledge. His earnestness and sincerity are beyond question. His erudition and learning is a marvel to many, and a source of fear to the antagonist. With his counsel we are positive that we can make a sound and intelligent demand and with his able advocacy we will win our cause. Ours is a just cause, and even as I speak, I see the invisible hand of Providence shaping our destiny towards the destined goal, and it now remains for me to pause, believing in the absolute wisdom of the Creator of our being. I now formally move for the election of our President.

Presidential Address

By

MR. S. SRINIVASA AIVANGAR, B.A., B.L., C.I.E.

[Mr. S. Srinivasa Aiyangar addressed the Conference in Tamil for about half an hour, observing that for some time past he had been feeling ashamed to address Indian audiences in English. Therefor the benefit of the Educational authorities and the Government to whom the Conference made its representations and in order to enable the Press representatives to report his speech at some length, he addressed the Conference in English for about an hour.]

I thank the Reception Committee for electing me as your President. This is the first attempt that the Elementary teachers make to build up a wider organisation for themselves. Little practical work can be done in the field of education without active co-operation of teachers. There are many educationists and teachers who possess the triple gifts of patriotism, character and ability and I feel confident that they will come forward with a comprehensive scheme of educational reform and lead public opinion. As the teachers are, so will the community be. It will be admitted by all that the condition of Elementary teachers of the province is not at all satisfactory. Elementary Education is the foundation of all education, and the feeling is general that the present system of Elementary Education is seriously at fault and that the lot of the Elementary teacher is a hard one. It may not be easy for the general public to support the proposals that Elementary teachers may make, but most thinking men have come to the conclusion that the salvation of India lies in the hands of humbler folk who are less likely to take pusillanimous views. It is only to the extent that Elementary teachers stand united that they would be able to make themselves felt. They must lead strenuous lives for the benefit of the little com-

munities they labour for. They should regard their mission as sacred and revitalise their country. The claims of the Elementary teachers to better their conditions at the hands of the Government and managers of schools are too well founded to be any longer denied. Elementary teachers are, in the matter of pay, treated hardly better than peons or menial servants. I am of opinion that a salary of Rs. 40 would be a reasonable minimum of salary for a qualified teacher of Elementary schools in the mofussil and Rs. 45 in the city of Madras. I am told that teachers in private schools get no privilege or medical leave with pay as is the practice in State schools. The present system of grants to aided schools is wholly unsatisfactory and calls for more liberal amendment. In the matter of grants, day schools and night schools should be treated alike. Your demand that you should be represented in the Legislative Council and the District Educational Councils is a reasonable one and you ought to press that claim as vigorously as you can because it is only through your own representatives in the various local bodies and in the Legislative Council that you can get that measure of reform which will really alleviate your present sufferings. I am in general agreement with your desire that teachers should be exempted from the production of attendance certificates to appear for higher examinations and that scholarships should be given to those who undertake industrial and scientific research. I hold strong views on the necessity for retrenchment in State expenditure in this Presidency but I do not agree that retrenchment should be effected in connection with the salaries of those who get less than Rs. 400 or 500 a month. Retrenchment is required in the higher grades and the pay of officers in the higher grades of both Europeans and Indians should be reduced to Rs. 3,000. Numerous appointments on high salaries are frequently announced and the High Court Judges

want substantial increase on their present salaries. The work that was done till the Reform Act came into force by three gentlemen on a pay of over Rs. 5,000 each is now distributed among seven persons, each of whom draws a salary of over Rs. 5,000 a month. Publicity Officer, Labour Commissioner and Agency Commissioner are officers, the country can very well do without. The revision of pay of the higher services by the Secretary of State and the Government of India enormously adds to the burdens of the State. All that naturally brought about an economic upheaval, and if the wage-earner of to-day—a clerk in the State establishments or elementary teacher in schools—presses for just recognition of services rendered to the community and wants adequate remuneration therefor he is resisted or his claims are not promptly attended to. The creation of highly paid appointments and retention of appointments on unnecessary scale in a system which is the costliest in the world must necessarily bring about discontent and prompt all classes of population to urge their claims for better economic treatment. There is no use of Government shirking this question. Instead of attending to the claims of lower and middle class population, the Government looks after the comforts and emoluments of superior officials and then works downwards to poorer classes of the population, and naturally when salaries are disbursed for the benefit of the bureaucracy of the service, there is little left for men in the lower grades of service, and then come retrenchment and preaching of patriotism and necessity of expansion of elementary education and the undertaking of gratuitous services in support of National cause and so forth. Why should not Government officials drawing high pay do that patriotic work? Why should not Europeans who are supposed to have come to this country on a civilising mission act just as Missionaries do in Colleges and take less pay? Why should Europeans get

higher pay in India than what they would get if they had remained in England? Then comes the plea that by taking less pay Indian self-respect is hurt. This is a bastard kind of patriotism. The real kind of patriotism is for an Indian to content himself with less pay than that of a European and use that as an argument for pulling down the pay of the European so that there may be a gradual elimination of the bureaucratic element. This is the only legitimate way of bringing about retrenchment. I hope that my countrymen who have been talking too much about self-respect, those who are drawing salaries from Rs. 3,000 to Rs. 6,000 will, at least, remember their duty to their country. I appeal to them in the name of the country that every Indian ought to train himself that he should not demand more than Rs. 3,000 a month from State funds. There are professions enough like law, engineering, and trade in which men want to make princely fortunes. Let not men ask the Government with its innumerable wants and enormous developmental work to give them princely salaries. Unfortunately, it so happens that those who are near the throne of grace are the very persons who draw the highest salaries. It is human nature and I do not blame them for it. Nature's fair wishes and demands are met with more readily than those who in the link of administration are far behind. A General gets better treatment than a soldier. One difficulty is that they have not yet realised that poverty is a problem which can be tackled only directly and not indirectly. I am somewhat sceptical about education reducing poverty. The Government ought to undertake those things which would make people produce more wealth and in that way try to solve the problem of poverty. The problems of poverty and unemployment are on the increase in some ways. What is the use of blaming Elementary school teachers for the miserable result of elementary education? The Elementary teachers

is not given the needed training. I am of opinion that two years are not necessary for the training that is given in training schools, and that the required training could be easily compressed into one year. It is for the Conference to formulate proposals in this matter. In connection with this training, I am told that trained teachers have to execute agreements, one of the conditions of which is that they should serve for three years in some elementary school or other. I am told that there are innumerable number of cases in which abuses exist. One such abuse, I am told, is that a teacher is persuaded to accept pay lower than that mentioned in the pay roll. This is a serious abuse and the Educational Department ought to remove it, by withdrawing recognition from schools where such abuses exist. Only 36 per cent. of Elementary teachers are trained men and this percentage must be increased by establishing more training schools. A portion of the grants voted by the Legislative Council must be utilised for increasing the emoluments of Elementary teachers. In the report of the Director of Public Instruction there is no illumination, and it is as dry as dust production. The public expect a better kind of report from a talented gentleman who fills the high office of Director of Public Instruction. I have no particular grievance against any one in the Educational Department. I feel that the fact that you have put me into the chair gives me an added authority to voice that you are not as well treated as you should be. I have looked into the matter myself not for a political purpose, but in the true interests of education and Elementary teachers and for the purpose of relieving the ever-pressing problem of poverty in the country which I am afraid was not taken note of by the public and the Government as much as it should be. It is for you to decide whether you want a provident fund or bonus: you can not get both. It is made a com-

plaint against you that you take private tuition. That again is an argument for increasing your pay. The expenditure on Elementary education has been about Rs. 93 lakhs but the result is nothing like commensurate with the amount of expenditure. It is well-known that boys turned out by the Elementary schools are hardly able to write a few correct sentences. The experience of teachers ought to be utilised in the future more than in the past in settling the curricula of studies. They must exercise their sacred right of independent judgment. Their conferences must be periodical reviews of the administration of Elementary education not with a view to carp and cavil at the administration but more with a view to help the administration with criticism and suggestions. How can they make any constructive proposals without criticising the existing condition of things? Their criticism should not be in an uncharitable spirit, but in a just and reasonable spirit. There is no Nation which is more gifted to look at things in a just spirit than the Indian Nation. Our duty is now heavier than ever before when our ideas are being revolutionised and when it is becoming more and more incumbent upon us to co-operate with the Department in a spirit of reasonable independence coupled with courageous self-assertion on our part. The present course of eight years in the Elementary stage of education is too heavy. In my days the course was completed in six years and I do not know what greater marvels are now produced by the Department in consequence of the longer period prescribed. Why should we in a tropical country like India where youths mature earlier than in the West copy the western system? The sooner these useless comparisons and analogies between the East and West are given up by educational experts, the better it would be for the happiness and peace which the Government wish to produce in this country. I hear divergent

views on the usefulness of Kindergarten method of teaching. Many teachers feel that it is a good method and if well understood and practised properly it is capable of beneficent results. On the other hand I have heard that there is a great deal of abuse of the method. I looked at some of the books and the names of their authors. It appears to me that if you want to adopt the Kindergarten system properly you ought to adapt the system to Indian conditions. [Mr. M. C. Rajah: That is what is done]. In some of the schools which I have visited I saw foreign methods used and I certainly think that a great deal of westernisation exists in some of the schools. The readers require a careful looking into. Private enterprise, competition between authors helped by Government should co-operate for the purpose of producing an ideal set of textbooks. I am more dissatisfied than I appear to be in many of those respects, but I want to take a moderate line. There is a good deal of science teaching in Elementary classes. I am a passionate believer in a scientific training of boys but when such training should be given and how are questions on which opinions must differ. I take the view that in the earlier classes the scientific phenomena ought to be merely described and narrated and boys must be encouraged to observe them and they should not be told the why and wherefore of things and scientific exposition crammed into their young brains, which could not assimilate such exposition. As regards civics, one teacher tells me that the only use of civics in Elementary schools is that it enables boys to write petitions. I hold the view that civics should not be taught in the earliest classes. [Mr. M. C. Rajah: I am prepared to explain how it is done]. I differ from Mr. Rajah. The real point is that with the aid of collective wisdom of such a Conference as this you should press your view from your own standpoint and experience. What is needed is that you should press your views

with a single-minded devotion to the cause of Elementary education. Time has come for a change in educational machinery in all its steps. Education should be freed from the dominance of Western ideals, and it is obvious that there could be a satisfactory system of education only if it is devised to suit the genius and environments of the Indian people. The system must be adjusted to racial peculiarities and must fulfil the patriotic ideals and aspirations of the people, not ignoring the past history of the people and indigenous literature in the country. The educational reform must be such as to enable Indians to be true to themselves and must be essentially Indian in spirit, in content and in machinery. Consistent with this dominant principle, it ought to be easy enough to introduce elements which will help towards vocational training, practical bent of mind and love of outdoor work. Modern education requires emancipation from European control. With the best will in the world, European educationists can not succeed in settling Indian educational ideals any more than Indian educationists can succeed in planning education for English boys and girls. It is on this principle that education for Europeans in India is made a reserved subject. The Minister for Education can do nothing less the machinery is Indian. There must be an Indian Director of Public Instruction and the superior Inspecting Staff must be exclusively Indian. The help of European educationists as Principals and Professors will always be useful and welcome. Elementary education is the foundation of all education and it ought to be such as to unfold the Indian mind in its best and highest aspects, and in these days the Indian mind rebels in a majority of cases in accepting purely European inspiration or European methods. It is better to arrive at a working compromise. If the literary side and vocational side of education are entirely Indian and if only scientific, and practical side is borrowed from European sources, a harmonious combination of

Eastern and Western ideals and methods will be found. Indians recognise and feel grateful for the help that Missionaries and European educationists have given us in the past, but India has now passed over that day and Indians have nothing further to learn from them. This is the real pity of the situation. I say all this frankly in the interests of Government and of the people and in order to put an end to the racial misunderstanding which tends to increase rather than to soften and which no kind of Reform Act has been able to assuage. I wish that at least in the Department of Education, the transfer of control to Indians will be a real one, and it can become real only if the Director of Public Instruction and the superior Inspecting Staff are purely Indian. It is impossible for a European to understand the

mystery of an Indian mind. There are many things which books and long sojourn in this country cannot teach a foreigner. The weak spot in British administration is the administration of education in this country. Education is a racial matter and it should be so adjusted to the sensitive Indian mind as to produce the greatest possible happiness. My psychology tells me that we must allow the racial spirit to dominate in this matter, and it is only by yielding to that we would get peace in other matters. I do believe that as long as the British connection with India subsisted, it is necessary to have some sort of peace between the two communities. We have had no peace for the last so many years, and the only peace we can have is that education should be surrendered to Indian hands.

NANDANAR CHARITRAM IN EASY TAMIL PROSE

BY

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RESOLUTIONS PASSED AT THE MADRAS PROVINCIAL ELEMENTARY TEACHERS' CONFERENCE.

Held at Madras on the 29th and 30th Jan. 1921.

1. This Conference begs to convey to His Majesty King George V through His Excellency the Governor of Madras their devotion to the Throne and their unflinching loyalty to the British Crown.

2. This Conference places on record its deep sense of loss sustained by the Educational world by the much lamented death of Lok. Bala Gangadar Tilak, Professor S. Ramanujam and Moulana Mahmud-al-Hasan.

3. (a) This Conference desires:—That the period of Training for Teachers of all the grades should be reduced from two years to one year.

(b) That in view of the abnormal rise in house-rent and food-stuffs, the stipend for a student undergoing training should be fixed at the following rates:—

Session School student	...	Rs. 15	0	0
Elementary Lower	...	" 20	0	0
Elementary Higher	...	" 25	0	0
S. S. L. C.	...	" 30	0	0

4. (a) This Conference is of opinion that teachers employed in schools under Government, Local Boards, Municipal and private managements should be paid according to the following scale of salaries:—

Mofussil.

Session School Grade Teacher.	Rs. 20—0—0
Elementary Lower	... " 40—3—85
Elementary Higher	... " 50—4—110
S. S. L. C.	... " 65—5—140

For the City of Madras.

Elementary Lower	... Rs. 50—3—95
Elementary Higher	... " 60—4—120
S. S. L. C.	... " 75—5—150

(b) An extra allowance amounting to 1/4th of the salary in the case of Headmasters should also be paid.

5 This Conference is of opinion that the grants now given to aided schools are quite inadequate and prays the Government to fix 1/4 of

the salary mentioned in para. 4 as the teaching grant.

6. This Conference prays that the Government should insist on private managements—

(a) To give the teachers the benefit of privilege and medical leave as is now done in schools under public management.

(b) To pay the teachers according to the scale of pay mentioned in para. 4 and to institute Provident Fund as a condition of recognition.

7. This Conference desires that untrained teachers of not less than 10 years' service under any recognised management shall be classified under the grade of trained teachers according to the general educational qualifications prescribed for such grades for grant-in-aid purposes.

8. This Conference desires that with a view to enable the teachers in Elementary Schools to improve their qualifications and status—

(a) *Bona fide* teachers be exempted from production of attendance certificates for the S. S. L. C. and University Examinations.

(b) Free special classes be opened in the High Schools and Colleges during certain hours in the week days and holidays when instruction can be imparted without prejudice to the usual work.

(c) Scholarships be awarded to those teachers who desire to undergo special training in scientific and industrial subjects.

(d) That certificates of proficiency in individual subjects be granted to enable teachers to take up Higher Classes in those subjects for which they qualify themselves.

9. This Conference prays that full grants be given to Day-School Teachers who work in the Night Schools.

10. This Conference requests the Government to give full grant to the following items of expenditure in all Elementary Schools:—

(a) Rent for the School House.

(b) Periodicals.

(c) Library on a small scale.

(d) Industrial and Agricultural sections.

(e) Apparatus and appliances.

11. This Conference is of opinion that the children of teachers should be exempted from payment of fees in all schools and colleges.

12. (a) This Conference desires that the invidious distinction between the various types and grades of Elementary Schools should be abolished as to dispense with the necessity for recognition of each standard above the Fourth, and that the course of instruction in a complete Elementary School and in a Secondary School up to the 8th Form inclusive should be reduced to a period of 6 years from 8 years.

(b) This Conference further desires that pupils who leave Elementary Schools after completing their course in any particular standard should on production of leaving certificates be admitted in the higher class in the High School without any further examination.

(c) This Conference is also of opinion that the syllabus should be so framed that pupils who come out from the highest class in any Elementary School should be admitted in the existing Fourth form in the High Schools.

13. This Conference desires that each Elementary School should have an Industrial or Agricultural section attached to it so as to suit the needs of the locality.

14. With a view to secure efficiency of teaching in Elementary Schools, this Conference desires that a sufficient number of teachers should be employed by the management so that each class may have a separate teacher.

15. In the opinion of the Conference it is necessary that there should be medical inspection of children in rural areas once in a quarter at Government expense.

16. This Conference requests the Government to nominate a representative of the Madras Provincial Elementary Teachers' Association to the Local Legislative Council.

17. (a) This Conference is of opinion that the teachers in Elementary Schools should be given the right to send representatives to Educational Councils, Municipalities and Local Boards as well as to the Text-Book Committee.

(b) This Conference also desires that the Text-Book Committee be so constituted that the majority of the members consist of those who are actually engaged in teaching work and that all the sections of the teaching profession are properly represented.

18. This Conference is of opinion that very large expenditure for buildings, laboratories, etc.,

for Elementary Schools is unnecessary and that the same should be curtailed as far as possible.

19. This Conference is of opinion that instead of increase in Inspecting Staff, more Elementary Schools should be established and the pay and training of teachers should be improved.

20. This Conference is of opinion that a Sub-Committee be appointed to draft a scheme for the establishment of a Central Organisation in Madras with powers to incorporate and otherwise render all possible assistance to the various Elementary Teachers' Committees working in different parts of the Presidency.

21. This Conference desires that the Central Association should take steps—

(a) To arrange for the early publication of a periodical on Elementary Education.

(b) To examine and recommend such text-books as are in accordance with the syllabus recommended by the Conference and if necessary to compile new text-books.

22. This Conference is of opinion that free quarters should be built for teachers near the schools.

23. This Conference is of opinion that certificated Drawing Masters of Elementary, Intermediate and Advanced Grades, should draw the same pay as stated in Resolution No. 4 according to Grade and that the Gymnastic Instructor should receive the Elementary Higher Grade salary.

24. This Conference is of opinion that the special allowance given to Muhammadan and Panchama Teachers while under training be enhanced.

25. This Conference is of opinion that special conveyance allowance be given to Muhammadan Mistresses.

26. That this Conference desires that a conductor (peon) be appointed in all Elementary Schools.

27. This Conference resolves that a deputation consisting of one representative from each district and 5 representatives from Madras should approach the Director of Public Instruction, the Minister for Education and His Excellency the Governor and place all the above resolutions for their consideration.

UNIVERSITY OF MADRAS.

SENATE MEETING.

A meeting of the Senate of the University of Madras was held on the 4th inst., the Hon'ble Mr. K. Srinivasa Iyengar, the Vice-Chancellor, presiding.

BUDGET ESTIMATES.

On behalf of the Syndicate, Mr. C. P. Ramaswami Iyer moved that the budget of the University for 1921-22 be sanctioned. In doing so, he pointed out that on account of the second Intermediate examination in October 1920, there was an estimated deficit of Rs. 21,120 in the fee-income for 1920-21; that the Government of Madras have been addressed to increase the amount of compensation (which was now Rs. 30,000 per year) for the acceptance of S. S. L. C. scheme. Mr. G. A. Natesan seconded the motion.

TAMIL LEXICON ACCOUNT.

Mr. P. R. Swaminatha Iyer objected to the passing of accounts relating to the Tamil Lexicon Committee, pending the circulation, among the members of the Senate of the correspondence on the subject dating from the Accountant-General's objection to the incurring of any extra expenditure without the sanction of the Secretary of State. It would appear that the Government contribution of Rupees 1 lakh was exhausted during the year 1920, and the Lexicon Committee reports that another one and a half lakhs will be necessary before the work is completed. In 1912 the Secretary of State sanctioned one lakh of rupees for the compilation of the Tamil Lexicon, subject to the condition that the estimated cost of Rs. 1,00,000 which is heavy should not be exceeded on any account. The Accountant-General accordingly objected to the incurring of any extra expenditure over the sanctioned amount without the sanction of the Secretary of State. The question of providing the additional allotment required is

now under the consideration of the Government of India.

Mr. P. R. Swaminatha Iyer referred to the original correspondence on the subject when it was stated that the work was expected to be finished in 5 years and the original estimate was only a lakh of rupees, whereas the Lexicon Committee now reported that a sum of Rs. 1,16,000 more would be required for the completion of the work and that the Lexicon could hardly be published before 1927. He therefore asked for the publication of the complete correspondence leading up to the proposed additional expenditure. The amendment was lost as there was no seconder to it.

OFFICE ESTABLISHMENT.

Mr. S. Satyamurthi gave notice of an amendment to reduce the "Remuneration to Examiners" by Rs. 5,000 and to make a corresponding increase under the head "Salaries—Office Establishment."

In view of Mr. K. V. Rangasami Iyengar's amendment asking for a committee to examine the question of remuneration to examiners he would not speak on that subject at present. He was now concerned with the increase of salaries to the office establishment. Mr. Macphail had already told them that the Syndicate was very generous in dealing with their officers and gave them ample increases. He understood that a deputation of the officials of the Senate waited on the Vice-Chancellor and the members of the Finance Committee and represented their grievances regarding their inadequate pay and prospects. It was said in the "Hindu" that the Vice-Chancellor promised to consider their grievances sympathetically. He did not see any contradiction of it. The first requisite to any good office was to have a contented staff and they could put their money to no better use than to see that their men were paid better. He was just then given to understand that the Syndicate was going to take up the consideration of their pay and emoluments and he was therefore willing to leave

the matter at that stage. He did not press the amendment.

The Budget was then carried.

The Senate also accorded sanction to certain items likely to exceed the sanctioned allotments for 1920-21. On the recommendation of the Syndicate, exemptions were granted to a number of students from the production of required certificates for several examinations.

PROFESSOR OF INDIAN HISTORY.

On behalf of the Syndicate, Rev. E. M. Macphail moved and Mr. K. V. Rangasami Iyengar seconded "that Mr. S. Krishnasami Iyengar, Professor of Indian History and Archaeology, who is at present drawing Rs. 800 as pay (exclusive of a pensionary contribution of Rs. 80) in the scale 500—50—1,000 be granted an immediate increase of pay by two annual increments without prejudice to his pensionary contribution and that he be entitled to the next annual increment on 1st November 1921, but that the maximum pay of the appointment remain unaltered." Rev. Macphail said that Mr. Krishnasami Iyengar raised the question as to whether it was not desirable that the stipend paid to him should be made the same as that paid to the Professor of Indian Economics. Though the Syndicate thought that it was desirable to make a change in the amount of salary, they felt that in view of the general rise in prices, it was desirable to give him something.

The recommendation was carried.

AFFILIATIONS.

The Senate then recorded its opinion that the following Colleges might be granted affiliations by the Government in the subjects noted below:—St. Ann's High School, Mangalore, in Group III Intermediate, Histories, Logic, Kanagase, Malayalam and French; Government Mahomedan College, Madras, in Group VI B.A., Arabic, Persian and Urdu; Ceded Districts College, Anantapur, in Group I, B.A. Mathematics and Group VI B.A., Sanskrit with early Indian History; the Maharaja's College for Girls, Trivandrum, in Group III Intermediate, Sanskrit; Union Christian College at Alwaye (Travancore) in Group III, Histories and Logic Intermediate; in respect of the application from

the Council of the Union Christian College at Alwaye, Travancore. Rev. E. M. Macphail who moved the resolution on behalf of the Syndicate, pointed out, that the Council had got only a sum of about Rs. 66,000, with which they could not possibly start a College. On inspection with Mr. Davies, they insisted that the Council should at least have a lakh of rupees, before applying for affiliation. He would rather have preferred to see that that sum was first put down because he knew that promises and payments were different things. He had had certain amount of experience in connection with affiliation of Colleges. He would not have recommended the affiliation but for the fact that leading Syrian Christians had undertaken to provide the sum. Professor K. Ramanujachar seconded.

Mr. Hodgson pointed out that the Travancore Government had only given an old Taluk Cutcherry building to the Committee on certain conditions together with 18 or 19 acres of land surrounding the building and the Travancore Government had not either given nor had promised anything more. The statement of the Secretaries of the Council that the Travancore Government had "extended financial support" was an incorrect statement. The Dewan had only stated that the building grant must lie over until it was known on what conditions such grants were given in the Madras Presidency. He did not consider that a promise of a building grant. He had no desire to oppose the affiliation but he said that if it was going to be a united Christian College, the Council was leaving out of consideration, the Roman Catholics who were in a great majority in Travancore, who numbered about 470,000 as against 330,000 Syrian Christians. The Roman Catholics ought therefore to be considered in any United Christian Association. The affiliation of the College was in the end recommended.

SPECIAL UNIVERSITY LECTURES.

The Syndicate recommended and Mr. H. S. Duncan moved that sanction be accorded for a short course of special University Lectures being arranged to be delivered in Madras by Professor W. A. Craigie, M.A., LL.D. of the Oxford University on a subject to be selected by himself at the end of the year 1921, the cost of the lectures being defrayed from the annual recurring grant of

Rs. 65,000 by the Government of India". Mr. Duncan said that Professor Craigie was visiting India at the end of the year. He was a distinguished scholar and the Editor of the new English Dictionary. The University of Madras should not lose this opportunity of asking him to give a short course of lectures on a subject chosen by himself. It was not often that men of such distinguished scholarship came to this country from the West. He would ask Mr. Satyamurthi to reconsider his amendment, the effect of which was that the subject should not be selected by Professor Craigie himself. Mr. Duncan hardly thought that the Syndicate was a suitable body to tie down Professor Craigie to a particular subject. It was desirable to allow him to choose his own subject. Rev. Gardiner seconded the motion.

Mr. S. Satyamurthi said in the Regulations it was specifically laid down that the subjects should be such as chosen "by the Syndicate." He agreed that Professor Craigie was sufficiently qualified to choose his own subject. But then the Senate had to live under the limitations of Democracy. The Professor could send in his subject by the next mail and the Syndicate could then approve of it. Supposing the Professor chose a lecture on Snakes in Iceland, how could the Syndicate then express its opinion. Unfortunately they were getting into the habit of depending upon the globe-trotting instincts of Professors in other countries. He did not think that the regulations were framed for that object. Why should not all the Universities in India co-operate and choose the best men either in India or in other countries whom the Universities thought were fit to deliver lectures and then invite the Professors?

The idea of depending upon such casual visits ought not to prevail any longer. He therefore moved an amendment to omit the words "by himself" and to substitute "by the Syndicate."

Mr. R. Swaminatha Iyer asked whether it was necessary to second it when the proposition was irregular.

The Vice-Chancellor said that the wording of the resolution was the result of a little bit of frankness on the part of the Syndicate. They generally asked Professors on what subjects they were prepared to

deliver lectures. Within the limit of his range of special subjects the Syndicate used to ask him to give a series of lectures.

Mr. M. Ramachandra Rao asked whether there was any correspondence in this case.

The Vice-Chancellor said that if the proposal was not sanctioned there was no use of corresponding with him.

Mr. K. V. Rangaswami Iyengar, while seconding the amendment said that he quite appreciated the Syndicate's frankness in the matter. But it was not open to any of them to set aside the regulations even though they might be frank. Unfortunately they were getting into the system in which the habit of over-riding the Regulations was becoming common. He however disagreed with Mr. Satyamurthi in his statement regarding their dependence on the globe-trotting instincts of Professors in other countries. On the other hand he thought that they would be saving the travelling allowance of these Professors, which the Senate would have to pay if they requested these Professors to visit India for delivering the lectures. At this stage Mr. Duncan accepted the amendment of Mr. Satyamurthy. Mr. Satyamurthy, "as a compliment" to Mr. Duncan accepting the amendment, withdrew another amendment that the cost of the lectures should not exceed Rs. 750. He hoped that the Syndicate would vote a reasonable amount. The resolution as amended was carried.

Mr. O. L. Cartwright moved and Major-General Giffard seconded.

"That sanction be accorded for a course of five Special University Lectures on 'Architecture' being arranged to be delivered in Madras between October and November 1921, by Mr. W. H. Nicholls, F.R.I., B.A., Consulting Architect to Government, the cost of the lectures being defrayed from the annual recurring grant of Rs. 65,000 by the Government of India."

The resolution was carried.

EXAMINATIONS TWICE A YEAR.

On the recommendation of the Syndicate the Rev. Mr. Macphail moved the following resolution standing in the name of Mr. F. S. Davies who was absent from the meeting:—

That a Committee of the Senate be appointed to consider the feasibility of holding the Intermediate

and the B. A. Degree Examinations twice in the year, and, in case such a scheme can be adopted, to report upon the consequential alterations required in the regulations.

That the Committee consist of the following members:—The Director of Public Instruction, Messrs. H. S. Duncan, C. P. Ramaswami Aiyar, S. Srinivasa Aiyangar, F. S. Davies, Basulullah Sahib Bahadur, K. Ramuni Menon, L. D. Swamikannu Pillai, F. E. Corley, C. L. Cartwright, K. Ramanujachari, K. V. Rangaswami Aiyangar, L. C. Hodgson, T. V. Seshagiri Aiyar and G. A. Natesan.

Mr. Macphail said that the Resolution did not reflect his opinion on the subject of holding two examinations in a year but he simply moved it on behalf of the Syndicate as a member of that body in the absence of Mr. Davies who was really an enthusiast. He opposed the idea of October examinations last year and had not changed his mind since. He knew perfectly well what an additional strain it imposed on the work of the members of the staff in colleges and in many cases the students themselves did not know what to do. He however thought that the matter required to be gone into carefully. There was much more to be said in favour of a second examination for B. A. than for the Intermediate. Examinations were held twice a year in Bombay for B. A. and not for Intermediate. There the colleges were closed for a month in continuation of the Durga Pujah holidays in October; and Assistant Examiners had thus time to do the correction work. In view of what had taken place already, it was desirable to appoint a committee to consider the feasibility of holding examinations twice a year.

Mr. L. C. Hodgson seconded the motion which was put and carried.

ORDINARY LECTURES.

Rao Sahab S. Krishnaswami Aiyangar moved for the sanction for a course of ordinary University lectures by Mr. C. S. Srinivasachari, M. A., on the "Evolution of Political Institutions in Ancient South India" and another by Mr. S. V. Venkateswarren, M. A., on "Moghal Polity."

The Senate accorded its sanction.

DR. NAIR MEMORIAL SCHOLARSHIP.

The Rev. A. Moffat moved:—

"That the Senate accept from His Highness the Maharaja of Kolhapur an endowment of Rs. 5,000 (invested in 6 per cent. War Bonds) for the purpose of founding a scholarship of the value of Rs. 24 per mensem for encouraging the study of Science among the Non-Brahmin Hindus of this Presidency." One of the conditions was that the scholarship should be called "The Chhatrapathi Nair Memorial Scholarship."

Dewan Bahadur M. Ramachandra Rao seconded the motion and it was carried.

SECONDARY AND INTERMEDIATE EDUCATION.

At the special meeting of the Senate held in January last, the Syndicate presented the report of the Senate Committee appointed on the 25th October 1919, to report upon the changes desirable in the University Acts and in the Regulations as a result of the recommendations of the Calcutta University Commission, and to present to the Senate their recommendations for such changes in the form of resolutions.

The Senate went into committee and considered the proposals in respect of the secondary and intermediate education.

Mr. C. P. Ramaswami Aiyar moved that the following resolutions adopted by the Senate in committee be confirmed:—

(1) That in the opinion of the Committee it is desirable to remodel the Intermediate courses in such a way as to provide:

(a) for the completion of school education at the Intermediate stage with a view to technical training and commercial life and the like

(b) for further education in University degree courses.

(2) That the control of the Intermediate courses and examination as contemplated in the resolution already adopted be vested in the University.

(3) That in order to give effect to Resolution 1, the Syndicate be requested to appoint, after consulting the Boards of Studies, a Committee to frame the necessary courses of study, and that the courses so framed be placed before the Senate for adoption.

(4) That at the S. S. L. C. Examination (corresponding to the present Matriculation) candidates be

permitted to answer either in the vernacular or in English, except in the subject of English in which English should be compulsory and in the vernaculars in which the respective vernaculars should be compulsory.

(5) That the medium of instruction and examination in the Intermediate institutions should be English (except in dealing with the vernacular and the classical languages).

Mr. R. G. Grieve seconded the motion and it was accepted.

MINIMUM AGE FOR MATRICULATION.

Mr. P. R. Swaminatha Aiyar proposed the deletion of Regulation, of Chapter XXI, which stated that "no candidate shall be admitted to the Matriculation Examination unless he shall have completed the age of 15 years on or before the first day of the examination."

He said that this regulation worked hard in the case of intelligent boys who were promoted to the VI Form but who had not attained the age of 15.

The rule was introduced in the year 1907 and on account of its operation, a good number of young boys lost all their interest, enthusiasm, and keenness in their studies owing to the fact that they had been forced to remain in the VI Form for one or two years to complete their 15th year. The Rev. Father Bertram had protested against this imposition of a minimum age and the Headmasters of Secondary institutions had also as a rule expressed themselves against it. Even the Calcutta University Commission Report was for the abolition of all restrictions as to age because in their opinion they were both unnecessary and mischievous.

Mr. R. Swaminatha Aiyar seconded the motion.

Mr. K. Ramanujachari in supporting the motion said that no case had been made out when in 1907 the rule was sought to be introduced. Even after the lapse of over twelve years, no advantage of the rule was evident. The rule was practically inoperative in 99 per cent. of their boys for they were over 15 years of age when they sat for the Matriculation Examination. It was only in the case of a few boys who were generally above the average that this rule was sought to apply and make them stay in the same class for an additional year or two and mark time. The result was that these boys got

deteriorated during the period of their enforced idleness.

Mr. G. A. Natesan also supported the resolution. He said that both the parents and boys felt a sense of humiliation whenever this rule had to be put in force. At the same time it occasionally provided a temptation to advance the age of the boy by a year or two.

Mr. Corley in opposing the motion said that the rule was introduced in 1907 advisedly in order to give protection to some promising boys from being pushed too much into their studies either by parents or by teachers. The rule was necessary to prevent them moving in a wrong direction so as to do harm to the boy.

Mr. Satyamurthi said that Mr. Corley's objection was only imaginary. On account of the arbitrary nature of the rule, the Manager of the Hindu High School in this city, had to detain six brilliant boys in his school from appearing for the examination. No harm whatsoever would be done by abrogating this rule; and he cautioned the Senate against importing their ideas as to age-limit from other countries.

Mr. K. V. Rangaswami Aiyangar said that the rule gave much facility for deception and on that ground alone it should be rescinded.

Mr. R. G. Grieve said that at a recent meeting of the S. S. L. C. Board the question of removing the age restriction was considered. The majority of the members favoured the view that in exceptional cases exemptions might be granted allowing under-aged boys to appear for the public examination on the recommendation of the Headmaster supported by a Doctor's certificate that the physical development of the pupil would not suffer by this concession being given. The resolution of Mr. Swaminatha Aiyar was quite a different one and he could not agree to it.

Mr. C. P. Ramaswami Aiyar proposed that the subject be referred to the Syndicate as a committee to consider this question and to report their recommendations on it.

Mr. Corley seconded the proposition.

Mr. S. Srinivasa Aiyangar opposed it on the ground that no useful purpose would be served by referring to a committee a matter on which opinion

was fairly decided. He was aware of the general feeling among the Headmasters and teachers of High Schools and College lecturers that this rule should be abrogated. The members of the Senate had more or less settled views on this question and he desired that they could straightway vote on the main resolution without referring it to a committee.

The Rev. Mr. Macphail supported Mr. C. P. Ramaswami Aiyar's motion, while Messrs. G. A. Natesan, A. Krishnaswami Aiyar, A. C. Pranatharthibara Aiyar and S. Satyamurthi opposed it.

The motion for committee was put and lost.

Mr. K. C. Desikachari in supporting Mr. Swaminatha Aiyar's resolution said that the idea of the S.S.L.C. Board granting concessions in exceptional cases was most dangerous. Either they must have the rule or rescind it.

Major-General Giffard observed that in the interests of the health of the boys, a minimum age should be prescribed. The absence of a rule providing for that, would only be the means of inducing the parents of clever and promising boys who were seldom strong to physically push them into their further studies to the detriment of their health.

Mr. K. R. Gurusami Aiyar said that whatever the medical men had to say on the subject, the opinion of the parents and teachers was fairly unanimous that the rule should be abrogated.

The Rev. Mr. Zumbro said the question whether a boy was strong enough physically to bear the strain should be left entirely to his parent. The University was concerned with the point as to the suitability of the mind of the boy who receives the education and fit for the examination. The University need not take upon itself the responsibility of looking after the health of the student which was primarily the parent's duty.

Rao Sahab S. Krishnaswami Aiyangar said that the rule in practice tended to obstruct the career of brilliant boys and in the interests of their education, it should be deleted.

The resolution was put and carried by a majority.

PROCEDURE IN CONVOCATION.

Rai Sahib T. V. S. V. S. Sastri moved to add the word "Teaching" after the word "Medical" in line 2 of Regulation 14 of Chapter IV in the question to be addressed to the candidates for professional

degrees. He said that his motion was purely a formal one referring to the procedure to be observed in the Convocation.

Mr. H. S. Duncan seconded the motion which was put to the meeting and carried.

OFFICER OR SERVANT OF UNIVERSITY.

Rao Bahadur K. B. Ramanathan had given notice of his intention to add at the end of Chapter XV the following:—"17. that no officer or servant of the University do accept nomination or election as Fellow of the University."

Rev. Macphail drew the attention of the Vice-Chancellor to Regulation 28 in Chapter 3 section 18, page 103 and asked if the motion was in order. His objection, he said, was purely technical.

Vice-Chancellor: I would allow him to formally move and make the necessary alterations.

Rev. Macphail wanted to know how the new Regulation would read.

Mr. Hodgson said that there was the prerogative of the Chairman to nominate.

Vice-Chancellor: You may give me some time to see if there is any objection at all.

Mr. Ramanathan made some verbal alterations so as to make his resolution read as follows:—"That it be a regulation that no officer or servant of the University do accept nomination or election as Fellow of the University and that the same be numbered 17 of chapter XV."

Mr. Alladi Krishnaswami Aiyar said that the term 'officer' might include 'examiners.'

Dewan Bahadur M. Ramachandra Row moved "That this item be postponed to the end of the meeting."

Vice-Chancellor: Do you mean that the House do pass on to the next business on the Agenda? If so you may move it.

Mr. Ramachandra Rao kept silent.

Surgeon-General Giffard thereupon moved "That the House do pass on to the next business on the Agenda."

Lt. Col. Niblock seconded the motion.

Mr. G. A. Natesan said that if the motion was carried the consideration of the question would be dropped altogether. That was not their object. They would like to give their vote one way or the other.

Surgeon-General Giffard referring to Rule 28 said that it was intended to stop that kind of indiscriminate scramble over the rules.

The Surgeon-General's motion was carried.

SYNDICATE MEMBER AND REMUNERATION.

Mr. S. Satyamurthi moved the following resolution:—

That Regulation 2 of Chapter VI be altered as follows:—In line 4, after the word "Faculty" add the following sentence:—"No member of the Syndicate shall, during his tenure of office as such, receive any remuneration or honorarium from the University, except travelling allowances."

He said that he did not cast any aspersion on the duties of the members of the Syndicate. His object was to remove all possibility of suspicion. For instance when the Syndicate had got to dispose of the salary of a University Professor, would it be proper to have that particular Professor on the Syndicate and allow him to take part in the decision of the question of his own salary. Before 1904 the members of the Syndicate did not receive such honorarium. He admitted that his resolution covered examiners too. The presence of one or two experts on the Syndicate might be of value. The danger of the removal of such experts from the Syndicate might easily be exaggerated. There were altogether about 13 members of the Syndicate of whom three or four were likely to fall under the category of experts. It was not necessary they should be examiners. They could easily find examiners outside the Syndicate. He had asked for the incomes of the members of the Syndicate for the last ten years and the information was denied to him. Whatever might have been the practice in the past, the House should vote for the proposition in order that its affairs might be above all suspicion.

Mr. S. Srinivasa Aiyangar seconded the resolution.

Rev. Macphail in opposing the resolution first of all wished to deprecate Mr. Satyamurthi's tone. Mr. Satyamurthi, a great orator, was trying to prejudice the case by his oratorical artifices. There was the self-denying ordinance in the Syndicate for a certain number of years not to appoint members of the Syndicate as examiners. Even

then there was an exception. Dr. Bourne was examiner for Biology year after year. It had been said that members of the Syndicate should be above suspicion. If there was any scandal in the matter, it should be gone into thoroughly. If members of the Syndicate who were incompetent, appointed themselves as examiners, it would be a scandal. Otherwise, why should the University deprive the Syndicate of the opportunity of appointing experienced educationists as Inspectors of Colleges or Examiners. He was not a member of the Syndicate at present for he felt he had too much to do. A good many people would have been quite pleased if he had continued on the History Board and acted as Chairman of that Board. That was a loss to the University. He was also extremely sorry when Mr. Allen refused to take any work. It was all very well to say they could easily get examiners outside the Syndicate. Why should people be asked to do gratuitous work for the University if they happened to be examiners. It had been once said by Dr. Nair that people went to the Syndicate in order that they might have a hand in the appointment of examiners. He the speaker would say that a person might be a member of the Syndicate but not an examiner. Still he might exercise his influence in appointing his friends as examiners. There was the implication in Mr. Satyamurthi's speech that the members of the Syndicate were corrupt. (Mr. Satyamurthi—I did not even imply that). He apologised to Mr. Satyamurthi for saying so. He could not see the force of Mr. Satyamurthi's argument unless there was scandal. (Mr. Satyamurthi—There is possibility of a scandal and a House like this should prevent such a thing). Mr. Satyamurthi was putting the case in a hypothetical manner. If there was a scandal let it be brought out. If there was no scandal let the system which had been going on for the last 15 years continue. Mr. Satyamurthi said he had asked for information as to the incomes of the members of the Syndicate for some years but the information was withheld. The Syndicate was afraid of giving it. That was an insinuation. By the presence in the Syndicate of men who had been engaged in examination and inspection work the Syndicate was kept in touch with the rank and file of

the University and was able to give more reasonable decisions than it otherwise would be able to do. It would be unfair to the men if the Senate first honoured them with their confidence by putting them into the Syndicate and then said they were unfit to be examiners. If the resolution was carried some people experienced in examination and inspection work would not like to become members of the Syndicate. The suspicion of the chance of a scandal underlay the whole proposition. The proposition aimed at penalising one who could be an examiner.

Mr. Papworth in also opposing the resolution said that it was unnecessary and uncalled for. The Syndicate contained the most trustworthy and capable men. Where was the justice in saying they would not be paid because they were capable. The whole thing was neither justice nor common sense. The resolution suggested that members of the Syndicate had an opportunity of filling their pockets out of the University money. The Senate sent to the Syndicate only trustworthy men.

Mr. Alladi Krishnaswami Iyer said that the speeches of Messrs. Macphail and Papworth were irrelevant to the point at issue before the House. Mr. Satyamurthi's resolution did not imply the question of competency or incompetency of any particular member of the Syndicate, or cast any reflection on any particular member of the Syndicate. There was not more than one member in the Syndicate representing a particular faculty. But in that faculty there were more professors than one who were competent to be examiners. He therefore did not see how the University would lose the services of the best men in the field. Further the term of the members of the Syndicate was two years. So the Syndicate would not be deprived of the services of a professor as examiner for more than two years, unless they wanted to perpetuate the same executive for all time. Again, the contention that the best professor would be able to do good Syndicate work could not hold good. The two things were different. If a body had a right to appoint examiners or other people, it was only fair that they should not be put in the delicate and unfortunate position of having to appoint them themselves. The Syndicate is a sacred body and must be above all cavil.

Mr. Ramachandra Rao in supporting the resolution said that a certain amount of heat had been brought into the discussion by Messrs. Macphail and Papworth. The principle underlying the resolution was good. When the City Municipal Act was discussed in the Council it was settled that those who had dealings with the Corporation should not themselves be Commissioners, because certain Councillors might be parties to contracts and in their case there would be a conflict of their interest and their duty to the Corporation.

Mr. G. A. Natesan in supporting the view of Mr. Ramachandra Rao said that it was wrong to say that the Syndicate denied Mr. Satyamurthi information regarding the incomes of Syndicate members for the last ten years. The answer of the Syndicate was that the member was at perfect liberty to collect the information from the papers and the Syndicate was unable to supply the information as it would entail a lot of work. On previous occasions other members had collected whatever information they wanted. On a previous occasion he brought forward a similar resolution. When Mr. Littlehales told him what he had in mind had been virtually put a stop to, he withdrew his proposition. It was an undertaking given by the Syndicate. The object of the resolution had been accomplished except in the case of one who was even now lingering in some shape or other. It was but right that they should lay down a general principle. Mr. Satyamurthi had made out a case. But he, the speaker, would not adopt his language and method.

Mr. S. Krishnaswami Aiyangar in opposing the resolution said that he was a member of the Syndicate and when the question of his salary as University Professor came up before the Syndicate he went out of the Syndicate meeting as he did out of the Senate a few months before. The Senate must have confidence in Syndicate members. In the Mysore University professors were *ex-officio* members of the Council. The principle underlying the resolution was not adopted in the Dacca University or Patna University. The Syndicate's work was administrative work intimately connected with matters educational.

Rao Bahadur K. V. Rangaswami Aiyangar moved for an adjournment of the meeting.

Mr. R. G. Grieve:—Vote! Vote!!

Vice-Chancellor:—We shall finish this resolution.

Rev. Chandler said that the best way to honour men was to trust them.

Mr. Ramalinga Reddi said that the principle underlying the resolution might be taken as one of the constitutional principles of this University which unlike the Mysore University was a large one, and was increasing. But it was better to do the thing by an understanding rather than by a rule. Mr. Macphail's dilemma is unfortunate. He said, "If there is scandal, go into it thoroughly and remove it; if there is no scandal, you ought not to raise the question". Nothing would be lost but a good deal gained by adopting the principle contained in the resolution.

Mr. Satyamurthi in reply to the criticisms said that his resolution was not aimed at educationists alone, but also against practising lawyers who might wish to be examiners and members of the Syndicate. The analogy to other Universities was not quite correct. Mr. Krishnaswami Aiyangar said that he went out of the meeting of the Syndicate when the question of his salary came up before the meeting. He, the speaker, did not want that any member of the Syndicate should go out of a meeting on account of a personal matter.

The resolution was put to the meeting and lost, 16 voting for and 35 against the resolution. The majority of the members who voted against the resolution were Europeans.

The consideration of the other items on the agenda was postponed till 12 noon on Saturday, the 5th instant.

5th instant.

CHANGE OF DATE OF EXAMINATIONS.

Mr. Satyamurthi moved the following resolution:—

"That the Syndicate be directed to obtain the opinions of Principals and Professors of affiliated colleges, Head-masters of recognised schools and other educational authorities, as regards the desirability of changing the dates of University examinations from March and April to November and December and place them in the form of a summarised report before the October meeting of the Senate."

He said he was in favour of the older system of holding examinations in November and December. The examinations were now held in March and April, the hottest months in the year. He did not know what the compelling reasons for this change were. If examinees worked hard in the hot months their health became spoiled. The University should take into consideration the candidates' physical welfare. Further, a very large body of people were anxious to revert to the old system. He was not asking too much when he asked the Senate to consult the opinions of those who were best competent to give them. He would make a slight amendment in the resolution by omitting the word Headmasters, because they were not directly concerned with the University examinations.

Mr. R. Swaminatha Iyer seconded the proposition.

The Vice-Chancellor said that this question might be referred to the Committee of the Senate appointed to consider the feasibility of holding the Intermediate and the B. A. degree examinations twice a year.

Mr. K. Ramanujachari formally moved an amendment to that effect.

Mr. K. O. Desikachari seconded the amendment.

Mr. K. V. Rangasami Iyengar opposed the amendment on the ground that nothing would be served by merely referring the matter to the committee. They ought to have first-hand information on the subject and that could be had from the principals of colleges. When that information was obtained, the committee might consider it. On the other hand if the resolution was referred to the committee they must have sufficient data to act upon. Both Mr. Satyamurthi and himself were in favour of going back to the old system. A circular to the various heads of colleges to express their opinion was enough. Any tenderness for a possible second examination in a year should not stand in the way of obtaining first-hand information regarding the change suggested.

Rev. Macphail said that his feelings were mixed. Personally he preferred the old system very much, but there were also very strong arguments in favour of the present system. He supported the motion to refer the matter to the committee, otherwise they would be throwing too much burden on the Senate.

trary. Very often the Senate wanted information and when the information was obtained, it was thrown aside. The committee might decide in favour of one examination or two examinations a year and before coming to any decision the committee would have all the materials before it. That method would lead to a saving of time in the long run.

Mr. Natesan said that the method suggested in the amendment would be advantageous from every point of view. The Committee could not come to a conclusion without consulting the Principals of Colleges.

Rev. Macphail suggested the Committee might be asked to consult the Principals of Colleges.

Mr. Satyamurthi.—I am quite agreeable.

Mr. S. Srinivasa Iyengar.—The Committee may also be asked to express their opinion.

The Vice-Chancellor.—If you remit this matter to a Committee and ask them to submit a report, they will do it.

The amendment was carried.

• COMPULSORY VERNACULAR.

Mr. Satyamurthi next moved the following resolution:—

"That a second language, i.e., a classical or foreign language or an Indian vernacular be included as a compulsory subject in the courses of study for the Intermediate Examination in Arts and for the Pass Degree of Bachelor of Arts and the Syndicate be directed to place before the October meeting of the Senate the necessary changes in the Regulations in consultation with the Boards of Studies concerned."

He said that the manner in which the Vernaculars were taught in colleges was not satisfactory. The Vernacular classes were wanting in discipline. When optional subjects were introduced, it was said people would take to Vernacular languages more enthusiastically and scholars would be produced. They were all aware of the result. Hundreds of graduates were coming out of colleges without a knowledge of their own vernaculars. An Indian University should make some provision for the compulsory study of Vernaculars. He did not want the same thing for the Honours degree examination, because that examination was intended for special study. It was said there was not enough

literature in the Vernacular languages. Ignorance alone was responsible for such a saying. The University should subserve the highest ends of national culture. So long as students specialized in English and left the vernaculars in the cold, they would know nothing of their own mother tongue; and further unless vernacular was made a subject of compulsory study, it would never become the medium of instruction. Vernacular composition or translation was no substitute for vernacular literature. Rao Sahib Sambandam Mudaliar, Mr. A. Madhaviah and others were scholars in vernacular under the old system. To-day such products were impossible. It was said there were no scientific books in vernacular. Sanskrit study could help in inventing suitable scientific terms.

Mr. S. Kuppusami Sastry seconded the proposition and did not press his amendment.

Mr. G. A. Natesan in opposing the proposition said that they had resolved on the previous day that they should widen the course of study for the Intermediate. Even at present for non-detailed study two books were taught. That would sufficiently equip an ordinary student in Vernacular. A student could not answer a composition paper satisfactorily unless he had studied some sort of modern prose. The stress of economic life required a student to apply all his energy to equip himself to a career where he would be able to learn something to help his parents.

Mr. Hodgson said that the University must provide facilities for those who wished to study vernaculars. If they did not avail themselves of those facilities, they might take up something else. Mr. Natesan's idea was purely a utilitarian one. His idea of education was culture. If they wanted culture, students should be given a wide choice and should not be compelled to study subjects which they did not wish to do.

Mr. Alladi Krishnaswami Ayyar said that every effort ought to be made to stimulate vernacular study in the higher classes. Even politicians had to speak in vernaculars in these days. Education must be brought in touch with the living forces of the society. Could any member pose himself as a product of modern culture without sufficient knowledge of the vernaculars of his own country?

Vernaculars might not satisfy the intellectual appetite of some people. Culture was not merely intended for self-edification but also for the edification of others. Cultured men should impart their culture to other people. If students devoted attention to any other subject except their own vernacular, would it be tolerated in any University in the West? Vernacular composition could not be a substitute for a regular course of instruction in the vernacular. The Senate must lay down a policy to guide those who were going to frame the curricula. They should not assume that the students would be overburdened if the vernacular was made compulsory. There must be a general change in the curriculum of studies for the Intermediate course.

Mr. P. Narayana Murthi in supporting the resolution said that he agreed with the arguments put forward by Mr. A. Krishnaswami Ayyar. It was said that the aptitude of the students was against the study of the vernaculars. He admitted, it was so a few years ago, but during the last two or three years, the inclination of boys and others was in favour of the vernaculars. He, the speaker, was not allowed to address an audience in English on two or three occasions. The country was in favour of the vernaculars.

Mr. S. Srinivasa Aiyengar in supporting the resolution said that it was an irony of fate that the vernacular of a country should be optional, when English was compulsory. It was becoming more and more clear that English knowledge would not be sufficient for persons to get employment hereafter. Once, it was considered a waste of time to turn one's attention to the study of the vernaculars, or Sanskrit. It was not so now. Composition was hardly a substitute for vernacular literature or the literature of any foreign language. It was said students did not desire to learn vernaculars. The Senate should not consult the wishes of students on such a matter as this, and such an objection ought not to be taken as a serious one. When a movement was started for the promotion of the vernacular literature, it was a patriotic movement. Now it had become a business matter. If vernacular was made a compulsory subject, persons who took up science would be able to write books in the vernacular, so that those books

might become text-books at some other time. Under the present system there was no Grammar and the study was simply superficial. The proposition should not be opposed on grounds altogether extraneous to the matter.

Mr. A. C. Pranatharthihara Ayyar in supporting the resolution said that Vernacular composition was introduced only as a compromise. Instruction in vernacular was extremely insufficient. Candidates studied English and other subjects, because they helped them in their career. That did not show they were not inclined to take up vernaculars. The development of any literature was brought about by the closest study of the same.

Rev. Macphail said that when vernacular composition was introduced they were of the opinion that they would help the vernacular. Under the old system pupils learnt very little in the vernacular classes and further they were doing very much over and over the same thing again in the higher classes. He agreed with Mr. Sreenivasa Aiyengar that the Senate ought not to consult the wishes of the students. Students should be enabled to express themselves in good prose style. Their object must be to develop modern literature in vernacular. When a student came out of the Intermediate class he should have a command of his own vernacular. The proper place for the vernacular study was schools. When Telugu was not a compulsory subject in the University course, more people began to take up the study of the subject and Telugu was now going up.

Mr. K. V. Rangaswami Ayyangar said that it was wrong to assume there was sufficient foundation for the vernacular in the High School classes. Reasonable provision ought to be made for the study of the Indian languages in the University course. English and vernaculars ought not to be treated as hostile alternatives. English, science and Indian languages were all necessary. If the proposition was carried, it would not advance their interest. He would therefore move that the whole proposition might be referred to a Committee consisting of the members of the Syndicate and they may be requested to report on the matter. If the Committee desired, they might take the opinions of the Boards of Studies concerned. This was just the time when the ques-

tion should be considered, because they were thinking of the reconstitution of the University.

The motion to refer the proposition to the Syndicate as a Committee was lost.

Mr. P. R. Swaminatha Ayyar then explained how vernacular was taught in the 5th and 6th forms.

Mr. Satyamurthi said that in this country they were not taught in their own language but in a foreign language. Analogies drawn from England or Scotland could be of no help at all. They had all become denationalised by the present system of education. He hoped that that system would not be extended to their sisters at least. For that, provision ought to be made for the sake of national culture, and that should be through compulsory vernacular study.

The proposition was lost, 18 voting for and 36 against.

Mr. Satyamurthi then moved a proposition, the object of which is to make Matriculation the only means of entrance to the University course of study. He did not think that the S.S.L.C. had a strong case behind it. S.S.L.C. was introduced shortly after the reform fever and when Matriculation had become a great scandal. Pointing out the drawbacks of the S.S.L.C. system, he referred to the school average, the Presidency average, the manipulation of marks, the students' choice of selection of subjects at such an early age, the low percentage of passes and Group B which was treated as the Cinderella of the curriculum. In conclusion he said that the system had thoroughly failed and they should go back to the old Matriculation.

Mr. Hodgson in seconding the resolution said that candidates who showed proficiency in a reasonable number of subjects should be considered fit to enter the University course. The present system was very complicated in nature; certain rules were very hard on students. Marks obtained in certain subjects could make up deficiency whereas marks obtained in certain other subjects could not.

The Vice-Chancellor pointed out that they had already recommended that the entrance to the University should be at the Intermediate. Mr. Satyamurthi's resolution would therefore apply only to 1921.

With the consent of Mr. Satyamurthi Mr. Natesan moved that the debate on that question be adjourned to the next October meeting. The motion was seconded by Mr. A. Krishnaswamy Aiyar and carried.

EXAMINERS AND VALUATION OF PAPERS.

Mr. Satyamurthi next moved a proposition for the appointment of a Committee to take evidence from Examiners and Assistant Examiners, to go into the principles governing the appointment of examiners, the manner in which they discharge their functions, etc. He said that in Allahabad and other Universities the percentage of passes was between 40 and 50. In this University it was very low. There was a rule that those engaged in the actual teaching of the subjects must not be examiners. On the other hand such teachers must be examiners. There was something rotten somewhere. He would accept the amendment of Mr. K. V. Rangaswami Aiyangar.

Mr. K. C. Desikachariar seconded the proposition.

Mr. C. Ramalinga Reddi said that if the Senate was not satisfied with the examiners they had a remedy in their hands. No final good would come out of the Committee.

The proposition was put and lost.

REGISTRATION FEE OF GRADUATES.

Mr. Satyamurthi then moved for the reduction of the registration fee of graduates from Rs. 5 to Rs. 3. He said that if that was done there would be a larger electoral roll. Further registration fee was not to be made a legitimate source of income for the University.

Mr. K. V. Rangaswami Aiyangar, in seconding the resolution, said that the fees levied from graduates should be merely nominal.

Mr. S. Srinivasa Aiyangar in supporting the resolution said that the income from that fee was not much of a source of revenue to the Senate but was a great hardship to the graduates.

In answer to the Director of Public Instruction, the Registrar said that the University Office was engaged in the work and establishment charges were not deducted from the income.

Mr. C. P. Ramaswamy Aiyar said that the larger number of graduates applying for registration would compensate for that.

The resolution was carried.

COMPULSORY STUDY OF AN INDIAN LANGUAGE.

Mr. S. Kuppasamy Sastri moved the following resolution:—

"That, in the opinion of this Senate, it is necessary that, in any readjustment to be made in the courses of study for the S.S.L.C., Intermediate and B.A. (Pass) Degree Examinations as a result of the consideration of the Report of the Calcutta University Commission, there should be adequate provision for the compulsory study of one of the languages mentioned under ii in Regulation 6 of Chapter XXI, as second language by every candidate, at his option, whatever his optional group."

He said that the provision made for the study of Indian languages in the S. S. L. C., Intermediate, and B.A. (Pass) courses was utterly inadequate. Non-detailed text-books did not afford ample opportunities for a good study of those languages. It was a disadvantage to study good specimens of English literature without studying good specimens of one's own literature.

Mr. A. Krishnaswamy Aiyar seconded the proposition.

The matter was referred to the Syndicate as a committee to investigate and report.

TESTS IN DRAVIDIAN AND CLASSICAL LANGUAGES.

Mr. Kuppasamy Sastri then moved a proposition with a view to slightly stiffen the existing tests and to render them more efficient as tests for candidates who presented themselves for the M. A. in two languages (a Dravidian language and a classical language.) He introduced composition in the M. A. course and provided for a separate minimum. He had personally no objection to slightly increase the minima to 40 in the case of Indian vernacular and to 35 in other cases.

This was seconded by Mr. R. Swaminatha Aiyar and carried.

UNIVERSITY EDUCATION.

The Senate then proceeded to consider the proposals in the form of resolutions of the Senate Committee for the revision of the University Acts and

Regulations deferred from the adjourned special meeting of the Senate on 22nd January last.

The first item was No. 10. "That the duration of Degree courses (both Pass and Honour) be three years after the Intermediate stage." This item was agreed to be dropped as it had already been long discussed and agreed upon.

GOVERNOR-GENERAL AS VISITOR.

Mr. C. P. Ramaswami Aiyar moved certain resolutions bearing on the two fundamental principles relating to the constitution of the Universities. He said that they were of a far-reaching character. The general business of the University should be under the control of a widely representative Court or Senate in which not only academical interests but also the interests of the public at large should be represented—commercial, literary, teaching, etc. That was the first principle. The second was the division of work now done by the Syndicate into two parts: (1) financial and ordinance making, and (2) academic. This did not differ from the existing state of things except the widening of the range and the scope of the Senate by including democratic element in it and the sub-dividing of the Syndicate into two bodies, academic and financial. He would first move the following recommendation of the Committee:—

"That the suggestion that the Governor-General should assume the office of Visitor be not approved." This was duly seconded and carried.

UNIVERSITY AUTHORITIES.

Mr. C. P. Ramaswami Aiyar next moved that the principal authorities of the University be

(a) the Chancellor;

(b) the Vice-Chancellor;

(c) a widely representative Court, including *ex-officio*, elected and nominated members. The Court should have the power of making Statutes, of approving the financial policy of the University, and of generally reviewing its work, and since so large a body could not meet frequently it should elect a Committee of Reference to represent it in dealing with the Executive Council;

(d) a small Executive Council, with substantial powers of control over finance and the general policy of the University and with power to make ordinances.

(e) an Academic Council including the principal teachers of the University, and having large independent powers in all purely academic questions affecting courses of study, examinations and degrees;

(f) Faculties, Boards of Studies and other Statutory Boards; and that this constitution be adopted subject to such modification as may be necessitated by local conditions.

Note:—Until such time as the mofussil colleges have made considerable development in local centres towards the establishment of teaching Universities, the appointment of a Mofussil Board would serve no useful purpose.

These clauses were taken up one after another for consideration.

Clause (a) was carried unopposed.

With regard to clause (b) Mr. Satyamurthi said that if they were going to have a new constitution the members of the Senate should elect the Vice-Chancellor.

Clause (b) was put and carried.

Clause (c) was then moved and seconded.

Mr. Seshu Aiyar moved and Mr. Swaminatha Aiyar seconded that after the word 'Statutes' the words 'and ratifying ordinances' be added.

Mr. Satyamurthi said that no argument had been advanced to show that the Madras Senate and the Syndicate had proved failures in the past. The Senate in the past had done its duty well. He had never suggested anything else. In the discussion on the previous day he was anxious that the Syndicate should do better. Mr. Justice Oldfield (formerly Vice-Chancellor) and Mr. Dewsbury had written against the new state of things. The Senate ought not to rush through things.

Vice-Chancellor.—We should deal with the amendment before us.

Mr. Seshu Aiyar's amendment was put and lost.

Mr. K. O. Desikachari moved his amendment to substitute "a Senate consisting of *ex-officio*, elected and nominated Fellows" for clause (c) moved by Mr. Ramaswami Aiyar.

Mr. K. V. Rangaswami Aiyangar seconded the amendment.

Mr. Ramaswami Aiyar said that if elsewhere they had adopted one system and one nomenclature

it would be well to adopt the same thing for the sake of uniformity.

Mr. Alladi Krishnaswamy Aiyar in supporting the amendment said that they should not design a machinery for a constitution that did not exist. They should know how the machinery was designed to suit the new state of things. The words in clause (c) were borrowed from the report of the Calcutta University Commission. This University by itself could not become a teaching University and they could not begin devising a machinery for a teaching University. The Calcutta University Commission suggested Academic Council in the place of the Senate and Academic Council applied to the Teaching University. They could not think of one part without thinking of another part.

Mr. Zumbro opposed the amendment. So did Mr. Ramalinga Reddy who said that the distinction between Court and Academic Council obtained in all modern Universities.

Mr. Desikachari's amendment was lost.

Mr. Satyamurthi in opposing clause (c) quoted Dr. Miller "that we must not attempt too early to convert a University into a Teaching University." By adopting the "widely representative Court" they were merely adopting all that came afterwards. They must leave things as they stood at present. The Calcutta University for whose special sake the Commission was appointed had not yet adopted any of the recommendations of the Committee. Sir Ashutosh Mukerjee was very much against it.

Mr. K. V. Rangaswami Aiyangar in supporting clause (c) said that one of the democratic features of the whole resolution was clause (c). He was surprised at Mr. Satyamurthi's opposition.

Clause (c) was put and carried.

Mr. Ramaswami Aiyar then moved clauses (d) and (e) and he was duly seconded.

Mr. K. O. Desikachariar moved the following amendments:

(d) a Syndicate, having the executive government of the University and possessing substantial powers of control over the general policy of the University and with power to make ordinances;

(e) a Financial Standing Committee which in addition to the powers and duties assigned to it under regulations to be framed by the Senate, shall prepare the Budget, see to the utilization of the

Budget grants and advise on the financial policy of the University.

He said his object was to constitute a financial standing committee which would act as an advisory body to the Syndicate in all matters of finance. He saw no necessity for the creation of an Academic Council. He could not understand who the principal teachers were. The Academic Council and the executive committee might conflict in certain matters. He wanted that one batch of the Syndicate should have to control everything except financial matters.

Mr. Satyamurthi seconded the amendment.

Mr. S. Srinivasa Iyengar said that the present constitution must be allowed to continue till the academic and non-academic sections could leave things to experts in education. They must have a Teaching University before they could have an Academic Council. If the resolution was carried practically there would be very little for the representative court to do. He was not satisfied that the atmosphere was congenial for such a step.

Mr. C. P. Ramaswami Aiyar said they were trying to see the nucleus of a teaching University possible. The regulations should be read together. What they would do now would be a step towards the formation of such a nucleus. There should be an Academic Council solely vested with specific work which it was most efficient to perform.

Mr. K. V. Rangaswami Iyengar opposed the amendment of Mr. K. O. Desikachari. He said there should be no inexpert interference in purely academic matters.

Mr. Ramalinga Reddi opposed the amendments and Mr. Zumbro supported them.

Mr. A. Krishnaswami Iyer wanted to know the democratic ideal underlying "the widely representative Court" and said that there was no point in saying that only educationists could take part in the Academic Council. Instead of saying they were investing the Senate with democratic powers, they were really investing it with autocratic powers.

Mr. Satyamurthi in supporting the amendments said that in the existing Senate there were 71 teachers out of 100 Fellows and they did control all academic matters. The ideal of avoiding friction was likely to be accentuated by the new body.

Multiplication of those bodies was likely to emphasize friction. Slavish imitation was the surest way of practical destruction. The amendments really aimed at improving existing things. They should not seek to create new bodies.

Rev. Macphail said they did not follow the Calcutta University Commission's recommendation slavishly. Judging from the recent elections of Fellows by the graduates, if 4/5ths were elected by graduates, the majority of the Fellows would not be educationists.

The amendments were lost.

Clauses (d), (e) and (f) were put to the meeting and carried.

MUSLIM INTERESTS.

The following recommendations of the Committee were also carried:—

That there be adequate representation of Muslim interests upon the governing bodies, Committees and appropriate Boards in the Madras University.

PHYSICAL WELFARE.

That in view of the necessity for paying greater attention to the health and physical welfare of students, a Director of Physical Training, holding the rank and salary of a professor, be appointed, and a Board of Students' Welfare, including Medical representatives, be one of the Standing Boards or Committees of the University, and that responsibility

Motion to pass on to the next item in the agenda was carried.

WOMEN'S EDUCATION.

That the Senate is of opinion that there is no need for the establishment of a special University Board of Women's Education, but there would be adequate representation of women on the Senate and the Boards of Studies of the University.

That amongst the regulations laid down by the University for the affiliation of Colleges for women there be a regulation that affiliation would depend on the staff being almost wholly, if not exclusively, composed of women, and on the provision of ample space for games and physical exercise.

That the interests of higher education of women would be best promoted by an increase in the number of Arts Colleges for women.

That separate Colleges for women in Teaching and Medicine be established as speedily as possible.

CO-OPERATION BETWEEN COLLEGES.

That by a system of co-operation between the Colleges and between the Colleges and the University the teaching resources which exist in the City of Madras be organised in such a way as to create a real teaching University.

At this stage, Mr. A. Krishnaswamy Aiyar moved the adjournment for further consideration of the agenda till the 3rd week of October next.

Mr. P. Narayanamurti seconded the motion.

The motion was lost.

GOVERNMENT MUHAMMADAN COLLEGE.

Mr. C. P. Ramaswamy Aiyar moved and Mr. Natesan seconded

That the Government Muhammadan College attached to the Madras i-Azam should be developed into a first-grade College teaching all subjects but specialising in Islamic studies.

Mr. Ramaswami Aiyar said that a beginning had already been made by Government in this behalf.

The resolution was carried.

AFFILIATING FUNCTIONS SUBSIDIARY.

Mr. C. P. Ramaswamy Aiyar moved:

That the affiliating functions of the University (in regard to mofussil colleges) be regarded as a subsidiary and as of a more or less temporary order and that a mode of organisation be adopted for the mofussil Colleges which will encourage the gradual rise of new University centres by the concentration of resources for higher teaching and research at a few points.

He said that the object of the resolution was not to take away the existing powers but to facilitate the co-ordination of resources in centres where they existed, so that those centres might form the nucleus of separate Universities.

The proposition was seconded by Mr. Meston.

Mr. Satyamurthi opposed the first part of the resolution and supported the second. He said that it would be a disaster to the educational progress if the University should cease, in the near future, to exercise its affiliating functions.

Mr. S. Srinivasa Aiyangar in supporting the resolution said that if rigorous control was not exercised, there would be more of co-operation between the Colleges and new Universities would come into existence.

The resolution was carried.

Mr. Ramaswamy Aiyar moved and Mr. K. V. Rangaswamy Aiyangar seconded:

That if and when the Indian Universities Act is, for any reason, taken up for revision, the opportunity be taken to re-draft the sections relating to affiliation in more general terms, and particularly so as to allow affiliation for a probationary period.

Mr. A. Krishnaswamy Aiyar in opposing it said that it was inconsistent with the terms of the previous resolution.

Mr. S. Srinivasa Aiyangar pleaded for more independence being granted to mofussil Colleges and opposed the resolution.

Rev. Macphail, Mr. Natesan and Mr. K. V. Rangaswamy Aiyangar supported the resolution.

Mr. K. Ramanujachari asked if probationary affiliation was granted on certain conditions and if those conditions were not fulfilled and if a College was disaffiliated, what would become of the students and professors who joined the College.

Mr. K. B. Ramanathan said that time for fulfilling the conditions was fixed and those who entered the College knew the conditions beforehand.

The resolution was carried.

UNIVERSITY DEPARTMENT OF EDUCATION.

Rai Sahib T. V. Sivakumara Sastri moved the proposition: "That there be in the University a department of education under a professor of education assisted by an adequate staff" and accepted Mr. Seshu Aiyar's amendment: "That all the words coming after a department of education be deleted and the words 'and that it be a recommendation to the Government that the Teachers' College, Saidapet, may be brought into conformity with the scheme outlined by the Calcutta University Commission be substituted instead.'"

The proposition as amended was carried.

B. A., L. T.

Mr. Sivakumara Sastri moved:

That the Senate does not favour the idea of students proceeding to the L. T. degree without obtaining a B.A. or B.Sc. degree.

Mr. K. V. Rangaswamy Aiyangar said there ought to be a higher degree in teaching and a lower degree. The resolution should be consistent with the resolution already passed.

MARCH 1921.] UNIVERSITY OF MADRAS—SENATE MEETING.

Mr. Ramalinga Reddy supported the view of Mr. Rangaswamy Aiyangar. He said that teaching might be taken as an optional group or part of an optional group in the Intermediate and B. A. courses. Boys would be able to grasp better the subject in their various stages of learning.

The resolution was carried.

The next resolution that bursaries be provided on a liberal scale for teachers under training was also carried.

ORIENTAL LEARNING.

Mr. S. Kuppusami Sastri moved:

"That the Senate considers that with a view to promote oriental learning and to afford facilities for research in oriental subjects, it is desirable that the University should establish two institutions, one for Sanskrit and Dravidian studies and the other for Islamic studies in Arabic, Persian and Urdu," and accepted Mr. A. Krishnaswami Aiyar's amendments to add after Oriental Learning, 'and the study of Ancient Indian History from original sources' and also after Oriental subjects to add 'Indian History.'

The resolution was carried.

The following recommendations of the Committee moved by Mr. S. Kuppusami Sastri were also carried:—

That the Syndicate be requested to encourage the existing institutions for oriental study, to improve their efficiency and adopt modern methods in their work (a) by making suitable grants-in-aid if possible, and (b) by providing special University lectureships in modern methods of study and research if possible.

That the Syndicate be requested to arrange at an early date to institute a degree in Oriental Learning to be conferred on holders of Certificates of Proficiency in Oriental Learning on their submitting an original thesis in English on some subjects connected with the special subjects to which their Certificates of Proficiency respectively relate.

That the Syndicate be requested to make provision for Certificates of Proficiency in Arabic and Persian on the lines laid down for Sanskrit in Regulation 15, Chapter XXIX.

CERTIFICATES OF PROFICIENCY.

Mr. Kuppasami Sastri moved:

That the Syndicate be requested to add the following to the subjects which candidates for Certificates of Proficiency may, under the existing regulations, offer for their examinations:

(a) Dravidian Philology.

(b) South Indian Languages and Literatures in their bearing on Ancient Indian History and Culture.

(c) Hindu Law and Jurisprudence (meaning Smritis and Dharma Sastras.)

(d) Muhammadan Law and Jurisprudence.

(e) Ayurvedic and Unani Systems of Medicine.

Clauses (a) to (d) were put and carried without much opposition.

Surgeon-General Giffard opposed clause (e). He said there was nobody in the University capable of dealing with those subjects. If people obtained certificates of proficiency in the Dharmasastras, they could not practise in Courts as lawyers and so lawyers were safe, but if certificates of proficiency were given in Ayurvedic and Unani systems of medicine, the certificate holders would show those certificates and begin to practise.

Mr. Satyamurthi in supporting clause (e) said that the object of the clause was not to license a new set of practitioners. It was not a certificate of medicine, but would show that the holder of the certificate had merely studied the books. The danger apprehended by the Surgeon-General was only imaginary. The certificate would enable a man to pass muster as a quack doctor. The certificate of proficiency would have no connection with practice. Quack doctors flourished because they had a reputation in a certain locality. That branch of oriental learning ought not to be neglected for the mere fear.

Mr. C. P. Ramaswamy Aiyar said that the two indigenous systems were as much entitled to State encouragement as other systems of medicine were enjoying.

Mr. S. Srinivasa Aiyangar opposed clause (e) in the interests of the two systems of medicine, Ayurvedic and Unani. There was no use of a mere literary course divorced from its practical application. The indigenous systems must receive large

attention both from the Government and the public. It did not matter very much whether the resolution was accepted or not.

Order (e) was put and lost.

The following resolution of Mr. Keppusami Sastri was also carried:—

That the Syndicate be requested to take early steps to institute Fellowships for advanced research in oriental subjects.

ECONOMICS AND COMMERCE.

The recommendations of the Committee for the creation of a Faculty of Economics and Commerce and a Board of Studies in the same subjects, the institution of a degree in Economics and Commerce, etc., came up for consideration of the Senate.

Mr. K. V. Rangasamy Aiyangar moved that the whole matter be referred to the Board of Studies in History and Economics for consideration and report before the October meeting.

Mr. Satyamurthi seconded the motion.

Mr. Justice Coutts-Trotter asked how they could refer this new matter relating to a new Board of Studies to an existing Board of Studies.

Mr. F. E. Corley protested against the attitude taken up by Mr. Justice Coutts-Trotter and said it was all very well to say Economics and Commerce were entirely new subjects. Hitherto Economics had been very closely allied to History. Only the general principles should be considered.

Mr. Natesan supported the amendment.

Dr. Slater was prepared to accept the reference to the Board of Studies in History and Economics, but the understanding that it would not mean indefinite delay. The subject had been before the Senate in one form or another for a long time. "History" was written in very big letters and Economics was written in very small letters (not so.)

The motion for reference was carried.

The Director of Public Instruction informed the House that the question relating to Agriculture was under correspondence between the Syndicate and the Director of Agriculture. The question of affiliation and creation of a Faculty of Agriculture could be settled in the near future.

UNIVERSITY EXAMINATION AND GOVERNMENT SERVICE.

Rev. Moffat moved and Mr. Swaminatha Aiyar seconded:

"That the Government be requested to appoint a

Committee of both University and Government nominees to consider the relation between the University course of study and examinations and the qualifications required for entering Government service."

The motion was carried.

The business on the agenda being over, the meeting terminated.

Educational Conference of Pandits of Schools and Colleges in the Tamil Districts held at Dindigul under the presidentship of Mr. V. S. Krishna Ayyar Avargal, B.A., B.L., Sub-Judge, Dindigul.

RESOLUTIONS PASSED.

1. That the study of either a classical language like Sanskrit or a Vernacular be made compulsory in the High School and College courses.
2. That the students who take up a classical language like Sanskrit in Group C of the S.S.L.C. Scheme be exempted from the Vernacular Translation and Composition and that in its place, Translation from a classical language into the Vernacular be substituted.
3. That Vernaculars be made the media of instruction in schools.
4. That the study of Sanskrit be commenced in the First Form in Secondary Schools.
5. That in view of their high degree of specialisation, laborious study, and equally heavy responsibilities, Pandits be placed on a par with and given the same salary as L.T.'s as no such differentiation is made between Language and Science masters in the Western countries.
6. That more seats be given to experienced Pandits as members of the Text-Book Committee.
7. That Pandits be given more seats on the Boards of Studies prescribing Text-books for Public and University Examinations and a greater number of them be employed as Examiners and Assistant Examiners.
8. That Pandits also be appointed as Superintendents of Public Examinations.

R. SIVARAMA SASTRI,
Secretary to the Conference.



MR. C. V. RAMAN, D.Sc., M.A.,
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OUR SEATS OF LEARNING: A SURVEY OF PROGRESS.

1920.

By PROFESSOR P. SESHADRI, M.A.

Benares Hindu University.

WHEN the year 1920 fades into the realms of past history and the time comes for the chronicler of the future to take stock of its achievements in the present renaissance in India, it is sure to be set down as a period of educational expansion and reconstruction in the country. And in no sphere is the activity so apparent as in that of University education, thanks to the report of the Calcutta University Commission and the desire all over the country to create and reform great centres of learning which may be expected to radiate their good influences all round. The fact that the year was also attended side by side by keen dissatisfaction in various quarters with the present system of education is probably indicative of the travail which must necessarily accompany all glorious re-birth.

THE NEW UNIVERSITIES.

The coming into existence of a number of new Universities mostly of the unitary residential type is a gratifying feature of the year's activities.

The Moslem community, whose backwardness in education has seriously handicapped it in the race of progress among the Indian peoples, has now been able to realise its long-cherished hope of having a new University for itself, and Aligarh will have the distinction, like Benares, of endeavouring to subserve the special needs of one of the two great races of India, which Providence has brought together in the interests of a wider national evolution. At the beautiful capital of Oudh, in the gardens of its Nawabs, who have passed away leaving traditions of life, lived in pomp and splendour, under the very shadow of the mighty Imambaras and the Chatra Manzil, Sir Harcourt Butler's energy has founded a new University which will be a great land-mark for learning and culture, visible far away from the banks of the Goomtee on which it is proudly rearing its head. Dacca may not be able to win back in entirety, the glory of her ancient past, when her beautiful fabrics clung round the limbs of queens and courtiers in far off St. James and Versailles, but her heart now palpitates with new hope, as a new University has been founded in the city. It will no longer "brood over its

"*sonnet fame*" as the poet said of another city in India, but will come forward to make its own contribution to Indian progress. Far away again, in the land of the palm and the pagoda, the picturesque Burman, who has not had much of a chance of competing with the other parts of India, ever since the occupation of her land by the British, has now the satisfaction of not having to look for a University six hundred miles across a tempestuous and inhospitable bay and has a University of his own which has just intimated by telegram its desire to disassociate itself immediately from the somewhat unwieldy yoke of Calcutta.

SCHEMES UNDER CONSIDERATION.

This is the achievement of a year of which any country may be proud, but this does not exhaust the tale. The scheme of a separate University for the Central Provinces is being re-examined with vigour in the light of the report of the Calcutta University Commission, and its fruition is perhaps only a matter of months. A committee has already examined the scheme of a University for Agra, and an announcement has been made of the desire of Government to found a technological University at Cawnpore, which is already one of the most prosperous centres of commerce and industry in the land. Some of the Indian States are busy adumbrating schemes of their own. Indore has had one before it for the last two years. Only the absence of H. H. the Gaekwar of Baroda has probably prevented the further consideration of the scheme suggested for that State. Travancore has been pressed to expedite its idea in the same direction which has already reached the stage of an interim report. The progressive ruler of Gwalior is already considering a University of quite a new type for his State, and it is not improbable that one or two other States will take up the problem in the very near future. The problem of creating new Universities has engaged the attention of the Madras Presidency also at least to the extent of the

Senate's pronouncing its pious benediction on the ideal of new Universities based on a linguistic basis. Special approval has been accorded to the idea of a separate University for the Andhras, for the realisation of which, the Andhras themselves have however not yet begun to take serious steps of effort and organisation, and have so far relied only on resolutions at Conferences and requests to the Government.

OUR TRADITIONS.

The creation of new Universities is undoubtedly the expression of a desire not only for educational expansion but also for reform, as they are mostly Universities of the newer type bringing all the students within the small radius of a unitary University and laying emphasis on the residential aspect of University education. There has yet to be adequate realisation in this country, at least under the new order of things we have had in recent centuries, of the great value of the comradeship and the intellectual *esprit de corps* created by bringing hundreds of young men together, in the most impressionable period of their lives, for the purpose of intellectual pursuits and the acquirement of real culture. The traditions of glorious Nalanda are unfortunately a mere matter of history, and it is several centuries in India, since groups of thousands of students met under the auspices of a *Kulapathi*, devoting themselves to the pursuit of learning in the sheltered corridors of a University like Nalanda with the marble tanks bespangled with blue water-lilies, or went so far as Takshasila to the great outpost of Hindu culture near the Himalayan snows and the rugged Afghan passes enshrining the illustrious memory of Panini, the greatest grammarian known to the world of speech. Who knows there is not every chance of similar consequences flowing as the result of the unitary, residential Universities whose foundations are being laid before our very eyes? May not the next millennium in Indian history look upon these with the reverence of all the ages and

tradition of such centres of learning as Oxford and Cambridge, which have been handed down to the present from the darkness of the Middle Ages?

RESIDENTIAL UNIVERSITIES.

In one of his numerous academic addresses, the Rt. Hon. Mr. Balfour refers to the good influences of residential life in Universities, in words whose significance deserves to be more widely realised in this country. "For my own part, there is nothing of which I am more clearly convinced than that no University can be described as properly equipped which merely consists of an adequate professoriate, adequate lecture-rooms and adequate scientific apparatus, which only satisfies the needs, exacting though they are, of modern education. Something more than that is required if that University is to do all that it is capable of doing for the education of young men of this country, and that something is provided by the Union. I know—speaking from my own experience—it is our contemporaries who make our most useful critics, it is even our contemporaries who make our most instructive teachers, and a University life which consists only of the relation between the teachers and the taught, between professors and students, is but half a University life. The other half consists of the intercourse between the students themselves, the day-to-day common life, the day-to-day interchange of ideals, of friendships, of commentary upon men and things and of the great problem which the opening world naturally suggests to the young." It is the same point which Cardinal Newman emphasised in his very well-known words in the *Idea of a University*: "If I had to choose between a so-called University which dispensed with residence and tutorial superintendence, and gave its degrees to any person who passed an examination in a wide range of subjects, and a University which had no professors or examinations at all, but merely brought a number of young men together for three or four years

and then sent them away as the University of Oxford is said to have done some sixty years since, if I were asked which of these two methods was the better discipline of the intellect . . . which of the two courses was the more successful in training, moulding, enlarging the mind, which sent out men the more fitted for their secular duties, which produced better public men of the world, men whose names would descend to posterity, I have no hesitation in giving the preference to that University which did nothing over that which exacted from its members an acquaintance with every science under the sun."

The great virtues of common residence are commented upon in a very vivid manner by Prof. Stephen Leacock of the McGill University, Montreal, in an article he contributes to the latest issue received in India, of the *Educational Supplement* of the *London Times*: "The most that the teacher can do for the student is a limited matter. The real thing for the student is the life and environment that surrounds him... Students must live together and eat together. Experience shows that it is how their minds really grow. . . They must eat in a big dining room or hall, with stained glass in the windows, and with a shield or tablet here and there upon the wall to remind them between times, of the men who went before them and left a name worthy of the memory of the college." He has no hesitation in saying that if he were to found a University, he would first found a room where students can meet and talk to each other; then a dining hall; then a decent reading room and library. And if he had any money left over still, he would engage professors and get text-books.

REFORMED CALCUTTA.

Side by side with the evolution to a newer type of University—it is really of a very old type though and takes us back to some of the earliest traditions of ancient India—there has been considerable reform and reconstruction in the older Universities and in those which have come into

existence in the immediately preceding years. Divested of some of its encumbrance by the foundation of the Patna University, the Calcutta University has shown activity in new directions: the introduction of advanced courses in Indian languages, a special course of ancient Indian history and culture, and the new subject of ethnology, the publication of selections from some of the Indian literatures; the medical inspection of students, not to speak of the beginnings of a technological side of the University, thanks to the splendid benefaction of one of the most devoted sons of the University, Sir Rashbehary Ghose. The Hon. Justice Sir Ashutosh Mukherjee, to whom the University owes practically all its activity during the last few decades, continues to work at his post of service at the University though no longer its Vice-Chancellor, ever vigilant in his attention to its multifarious duties, and absorbed in the one idea of its advancement, all the moments of his life.

PATNA AND BENARES.

The University of Patna has made a good start too, in spite of its appendage of affiliated colleges, one of them lying so far as Cuttack, almost on the borders of the Madras Presidency and has attempted something in the nature of advanced teaching at the University centre, by organising courses of valuable readership lectures. The Universities having the similar encumbrance of affiliated colleges, might imitate the Patna scheme of the full-timed Vice-Chancellor holding formal Matriculation ceremonies at the various colleges, admitting the students formally into the University and exhorting them to fulfilment of the onerous responsibilities involved in their promotion from school to college.

Some cynic has called Benares the City of the Dead and the Dying, but it cannot be said at least of the University growing to the south of the city and rearing its mighty edifices, extending in the symbolia form of a crescent, along the bank of the Ganges, almost as far as the eye can reach from

the entrance to the spacious grounds of the University. Ploughs are busy digging into what is to be the Agricultural Farm of the University; the Electric Power Station is receiving its finishing touches, and the ancient city will ere long receive its illumination even in the physical sphere from the University, and the engines of the University Workshop are already whizzing in the very neighbourhood of the ancient temples. The problem of religious education has been attacked with renewed vigour and the under-graduates are seen passing the corridors with beautifully bound copies of the *Bhagavad Gita*, to and from the classes of their spiritual preceptors. Other reforms are in immediate prospect.

ALLAHABAD AND LUCKNOW.

The United Provinces of Agra and Oudh are fairly low on the scale among the Indian provinces at present, in the matter of the literacy of its people, but thanks to the vigorous administration and far-seeing statesmanship of Sir Harcourt Butler, it threatens to soon outstrip the other provinces of India in its facilities for higher education. Reference has already been made to the new University of Lucknow and Aligarh, and to those in prospect at Agra and Cawnpore. The University of Allahabad has itself been busy trying to attain the position of a unitary residential University, though an affiliated branch would seem to be as inevitable in her case also, as in that of Patna. Allahabad has been among the first to take advantage of the light thrown upon the problems of higher education in India by the monumental report of the Calcutta University Commission and there will soon be the separation of the University from the Intermediate classes and the organisation at the centre, of what is really education of the University standard. Other provincial administrations are only too ready to plead want of funds as an excuse for not embarking on schemes of educational expansion and reform, but His Excellency Sir Harcourt Butler has apparently no such difficulty at all and is

able to dole out money for education with all the facility of some magician of the *Arabian Nights* endowed with a bottomless purse with its perennial supply of gold. Several lakhs of rupees have already been set apart for the Lucknow project; liberal grants are being made to all the colleges affiliated to the present University of Allahabad to improve the salaries of their staff; magnificent allotments have been made towards the improvements of the libraries of the Allahabad and the Benares Hindu Universities; the Allahabad University was offered last year, entirely at the expense of the Government, a University Chair of Geography, to take advantage of which the University has already embarked on some steps and at the last Convocation of the University the same Chancellor made the dramatic announcement of another Chair, again as a gift to the University from Government, this time of Civics. In the era of political reconstruction lying before the younger generation in India, there will be a great demand on the responsibilities of citizenship, and it is a matter of gratification that at least one University in India will now have a Chair of Civics. It is necessary to remember that the University has already two highly-paid Chairs of Economics and Indian History.

THE PUNJAB.

The Universities of the Punjab and Bombay have also been awake to the new educational impulses passing over the land, the former, in spite of the troublous times through which it has been the misfortune of the province to pass, and the latter in spite of its great upheaval of commercial activity consequent on post-war reconstruction. The University of the Punjab is an admirable instance of great educational progress within a comparatively short period of life, and Lahore has risen within the last decade or two from the position of a third-rate educational centre to a city of prosperous colleges overflowing with thousands of students. There is now appreciable progress in the intellectual stamping of the people

of the city and when combined with the intensely religious and martial spirit which is already their proud possession, it is bound to lead to a very happy consummation. Among its recent activities is the opening of new facilities for scientific teaching, and the creation of new University Chairs, besides the one for Zoology existing already, in subjects like Botany, Physics, Chemistry and Mathematics, to the last of which, it will interest people in Southern India to know that a native of the Madras Presidency, and a very distinguished graduate of Cambridge has just been appointed.

BOMBAY.

Bombay enjoys admirable facilities for the formation of a centre of commercial education, and in spite of what has been said against the Sydenham College of Commerce we at least wish it had been associated with the name of a better friend of India—there is nothing even like it in the other Universities in India. But it is in another matter that Bombay has stolen a march over the other Universities in India, in its endowment of a Professorship of Sociology, to which the University has appointed during the year Prof. Patrick Geddes, well-known in Southern India, whose wonderful versatility embraces such widely diverse subjects as Biology and Town-Planning and, whose glowing tribute to one of India's greatest living scientists, Sir J. C. Bose, is now being read with considerable appreciation all over the country. The University does not propose being in the position of abject dependence on foreign experts for all time and has wisely sent one of its own graduates for advanced studies of the subject in England.

MADRAS.

It is a matter of somewhat melancholy reflection to this writer that in his own University of Madras there is not much progress to chronicle during the year, though the fault is by no means entirely due to the University, and the Government and the public must probably come in

for a good share of blame for this apathy and indifference. Beyond the lightening of some of the courses, the announcements that have been made of radical recommendations now being hatched by some committee or other and pious resolutions in the Senate approving of the principle of starting new Universities, nothing substantial is visible on the University horizon, though it must be acknowledged that the Professors of Economics and Indian History continue to do good work. The account given of the present state of affairs by the official head of the University executive, the Vice-Chancellor, in the course of his last Convocation Address, is sufficiently depressing, the only silver lining to the cloud being the consciousness of shortcomings it implies, with its consequent hope of progress in the future!

"During the 63 years since the University was organised, it has bestowed its degrees on about 18,300 graduates, of whom 3,700 have passed into the general administrative posts of Government, an equal number have gone into the educational line as teachers, or professors in Government service or in privately-managed institutions. Nearly 6,000 have taken to Law. Medicine, the next highest but a long way behind, claims 765. Commerce has 100 and Science 56. I have not been able to trace the activities of over 4,000. Among this there have been able administrators, able teachers, able lawyers. But you will search in vain, for any solid contribution to the sum of human knowledge among this magnificent number. It is not that the material is not here. It cannot be that, among these numerous students who enter the University there are not some at least; competent and eager to pursue knowledge for knowledge's sake; without any idea of material gain. The name of Ramanujam, whose loss we mourn, readily occurs to one's mind. But our University had no place for him; it could not discover him. There are others who, in congenial surroundings, with freedom to grow, will realise

the University ideal. It was only the other day I received a communication from a young mathematician of acknowledged talent indicating a hypothesis broader than that of Einstein's theory, which if verified, would give you a larger synthesis than science has yet achieved; for which our University has no room. Without provision for research, for the creation of new knowledge, the University is not fulfilling one of its important functions. Without a provision for the best, the most talented of its students to dedicate their life to scholarship, to grow into great teachers, into leaders of thought, the University is no University at all; it is no sacred temple of learning. All this reads like a thrice-told tale. But it bears repetition."

The picture is probably overdrawn and it is possible to correct to some extent, the impressions produced by these remarks, but it does seem a pity that with such fine superiority of intellectual material as is available in the Southern Province, of which this writer is more convinced, the more he sees the rest of India, that so little should be done for intellectual advancement. As far as mere intellectual efficiency is concerned, the educational system of Madras has produced much better results than that of any other province in India, and the opening of superior facilities at the University should be productive of brighter results than elsewhere, and we hope they will soon be coming with all the energy of popular aspiration, the expert guidance of the Senate, and the liberal support of the new Indian Minister of Education and his government.

THE INDIAN STATES.

Of the two Universities in the Indian States, Mysore and Hyderabad, the former has unfortunately been deprived of the driving power and the boldness of initiative of its last Diwan, Sir M. Vishveshvarayya and financial limitations have also hampered its progress considerably. But it is satisfactory to note that the authorities are keenly alive to the need of reform in several

directions, and we trust they will soon have opportunities of taking action in these matters. The Oosmania University of Hyderabad has belied the misgivings entertained about it in some quarters at the time of its inception and has brought forth a series of beautiful translations in Urdu, from English to serve as text-books in the University whose essential idea is the use of the vernacular as the medium of expression. The sumptuous volumes gladden the heart of the student and the experiment of imparting instruction with the help of these books will be watched with the sympathy and interest that it deserves.

UNIVERSITY IDEALS.

In this necessarily brief chronicle of University expansion and reform in India during the year 1920 no space could be found for a discussion of the great principles of education and national advancement involved in the question, nor has it been found possible to utter some of the warnings necessary to insure the Universities being absolutely of national service, but it is hoped that enough has been said to inspire the student of educational affairs in India with hope to point to the great ideal towards which they must evolve themselves in the future. It cannot probably be indicated in any better manner than by the well-known words of Cardinal Newman whose beauty will bear any amount of repetition, and whose underlying truth is as fresh and inspiring to-day as it was when the words were uttered by his eloquent lips, in the middle of the last century:

"A University is a place of concourse whither students come from every quarter, for every kind of knowledge; you cannot have the best of every kind everywhere; you must go to some great city or emporium for it. There you have all the choicest productions of nature and art all together, which you find each in its own separate place elsewhere. All the riches of the land, and of the earth, are carried up thither; there are the best markets, and there the best workmen. It is the centre of

trade, the supreme court of fashion; the umpire of rival talents, and the standard of things rare and precious. It is the place for seeing galleries of first-rate pictures, and for hearing wonderful voices and performers of transcendent skill. It is the place for great preachers, great orators, great nobles, great statesmen. In the nature of things greatness and unity go together, excellence implies a centre. And such, for the third or fourth time is a University; I hope I do not weary out the reader by repeating it. It is a place to which a thousand schools make contributions: in which the intellect may safely range and speculate, sure to find its equal in some antagonist activity, and its judge in the tribunal of truth. It is a place where enquiry is pushed forward and discoveries verified and perfected, and rashness rendered innocuous, and error exposed, by the collision of mind with mind, and knowledge with knowledge. It is the place where the professor becomes eloquent, and is a missionary and a preacher, displaying his science in its most complete and most winning form, pouring it forth with the zeal of enthusiasm, and lighting up his own love of it in the breasts of his hearers. It is the place where the catechist makes good his ground as he goes treading in the truth day by day into the ready memory and wedging and tightening it into the expanding reason. It is a place which wins admiration of the young by its celebrity, kindles the affections of the middle-aged by its beauty and rivets the fidelity of the old by its associations. It is a seat of wisdom, a light of the world, a minister of the faith, an *Alma Mater* of the rising generation. It is this and a great deal more, and demands a somewhat better head and hand than mine to describe it well."—From the *Annual Supplement of the 'Hindu'* for 1920.

AIDED INSTITUTIONS AND EDUCATION IN THE MADRAS PRESIDENCY.

MANY even among the educated people find it difficult to understand how teachers in Aided Institutions can reasonably expect the Government to help them in the matter of the improvement of their salary. This doubt has naturally arisen from the frequent insistence by the head of the department in public utterances, that improvement of any kind in aided institutions, is primarily and exclusively a matter for local effort. It is not our contention that the Government should bear the entire burden of the expenditure on higher education. We are aware that if education should make rapid strides, public subscriptions and endowments should be coming more freely and frequently. We should at the same time, venture to point out that the Government cannot imagine, even for a moment, that its responsibility for higher general education begins and ends with the institutions of which they are themselves the managers.

The part which aided institutions have played all these years in the sphere of higher education should be clearly understood before any general policy regarding the educational machinery is laid down.

The Government of India have, with a clearness of vision born of a spirit to judge facts dispassionately, explained at length in the Seventh Quinquennial Review the history of their policy with regard to aided institutions; "The policy of entrusting much of the educational activity of the country to societies and individuals dates from the Despatch of 1854. The main reason for initiating this policy was the consideration that Government

with its limited resources could not cope with the almost boundless exigencies of the situation. The Commission of 1882 declared the improvement and extension of private institutions to be the principal care of the department. The resolution of 1913 enunciates a policy which may be summarised as the encouragement of privately-managed schools under suitable bodies, maintained in efficiency by Government inspection, recognition and control, and by the aid of Government funds.

Numerous aided institutions have come to stay as the outcome of this policy to which the Government have firmly adhered till now. How far the aided institutions contribute to the educational activity in Madras, is clear from the following figures for colleges and schools. Nearly 81.5% of the pupils among a total of 7064 get their collegiate education in aided colleges. 25 out of 31 institutions are aided colleges. 409 out of 418 schools or 97.8% are aided secondary schools of which 254 are privately-managed. 98% of the pupils get their secondary education in aided schools.

The education which 80 to 90% of the boys get in aided institutions should be a matter of some concern to any one interested in the education of Indian youth. Questions relating to the staff, the salary of teachers, equipment, etc., in aided institutions, on which the efficiency of any institution depends should not be shelved on the plea that they are the look-out of the management. The Government cannot remain indifferent to its share of responsibility with regard to the educational efficiency of 90% of the educational machinery. It goes without saying that the system of grant-in-aid, should be made more elastic so that the aided schools may satisfy the requirements of the present-day conditions. Valuable grants have been given to

the aided institutions for which they feel thankful. But it should be recognised that the present contribution cannot by any means enable the aided bodies to undertake the reorganisation of the educational service.

Many are the representations from individual teachers and from associations of teachers. Representations for immediate relief as well as for the improvement of the scale, have been made to the management, the Government and the department. There is the usual expression of sympathy but it is to be regretted that the department has not begun to move in the matter. In the general cry for reorganisation going on in all the services everywhere, it is impossible to believe that the department has not anticipated this question and tried to tackle it. The most charitable interpretation that can be put on its attitude is that the department seems to have immense faith in the policy of drift, and perhaps the department thought the initiative could not be taken up by the Government.

The salary of a teacher even in a Government institution is low but it is miserable in the aided schools. "A cause which militates against good teaching is the low pay ordinarily enjoyed by the staff. This is particularly apparent in unaided and the poorer sort of aided institutions where the teacher is often only waiting for something better to turn up. Should he qualify as a pleader or should any other form of employment offer, he too often forsakes the profession to which he never meant to stick, with the result that pupils are instructed by a changing series of teachers who have not time to learn their trade and put little heart into their work."

This admission in the Quinquennial Review is significant inasmuch as it implies that our

schools, under the existing circumstances, can never show a tangible educational return so long as the salary of the teacher continues to be low. The low salary which makes the teacher indifferent and inefficient is likely to produce other evils which will perplex the department. This is evident from the apologetic note wherein the Government seeks to explain away what appears to them as a heavy expenditure on inspection. "The large expenditure on inspection is often made a cause of complaint. It is difficult to institute comparisons with other countries. The percentage of direction and inspection in India is 9.5 of the total expenditure while in England and Wales it appears to be 6.6. Special causes which necessitate a strong Inspectorate in India are long distances to be travelled, the lack of unofficial supervision, and the poor quality of many of the teachers who require constant vigilance and advice. Moreover the cost of the establishment is bound to loom large in the general bill for education while the pay of many teachers and consequently the upkeep charges of many schools remain deplorably low." Reading between the lines, we cannot fail to notice that the efficiency of our schools even with regard to book-learning is questioned. How can we then indulge in the hope that our schools and colleges can send out young men with a liberal outlook, a sense of responsibility, and enthusiasm for public work, while the salary of the teacher is not enough for bare existence. It is fair to point out that the Government of India is alive to the gravity of the situation. The report says "We have the host of teachers in private employ. No more important problem confronts the educational administration than the provision of adequate conditions and prospects for the 280,000

teachers. On the solution of this problem depends the solution of many of the pressing difficulties."

It is the earnest request of "the host of teachers in private employ," that their representations with regard to salary, etc., should be examined by the authorities at once, and should be generously treated. It is for the local Government to appreciate the spirit of the sentiments expressed in the report, and to try to find out ways and means whereby it may be possible to establish a satisfactory, efficient and contented body of teachers in private institutions.

Certain points stand out clearly when we examine the figures shown in the different tables in Vol. II of the Report on Public Instruction in Madras 1918: and in Vol II. of the Seventh Quinquennial Review of Progress of Education in India. The first fact is the prominent position which aided institutions occupy in the educational activity of this Presidency. They hold a dominant place in point of number and in the number of pupils and teachers. We may safely say that higher general education for non-European boys is almost in the hands of aided institutions. The progress of the whole Presidency rests on the outlook, equipment and efficiency of these bodies. It is in the interest of the country that any policy of education which the Government may find it convenient to adopt, should aim deliberately at actively encouraging the aided institutions.

The second point is the high proportion which fees bear to the total direct expenditure on higher education. 52.5% of the direct expenditure on collegiate education is met by fees. 69% of the expenditure on secondary education is met in Madras by fees, against

51% in Bombay, 47% in the U. P.; and 53% in the Punjab.

The third fact is the inadequate contribution from Provincial funds to higher education. Provincial funds contribute 13 to 14% of the expenditure on secondary education in Madras, while Bombay contributes 29%, the U.P. 35% and the Punjab 34%. As for collegiate education in Madras, out of a total provincial direct expenditure of Rs. 4,19,903, a sum of Rs. 2,59,483 is spent on Government Colleges and the remainder amounting to only 12% is given as aid to aided colleges. Only 5.5% and 17% out of a total direct expenditure of Rs. 1,72,36,887, are spent on Arts Colleges and Secondary Schools respectively for Indian boys. The amount spent on Secondary Schools from the Provincial funds allotted to Education, is 6% in Madras against 10.3% in Bombay, 13.1% in Bengal, 19.3% in the U.P. and 21% in the Punjab.

The next feature is the disparity in the average cost per pupil in the institutions under the different managements. The average cost per head in aided colleges is Rs. 143-12-0 but it is Rs. 254 in Government colleges. What is remarkable is the average fee per head is higher in aided colleges. These certainly indicate that the aided institutions are under-staffed, and that even the few teachers employed there, are paid very low salaries. These are serious defects which if allowed to continue, should mean the exploitation of the teacher, and should ultimately result in damping the enthusiasm of young men from the University, who, as is mentioned in the Essay on "Teaching Profession" in the book on "Problems of National Education," can lay claim to a higher general educational qualification than persons trained for law, medicine

etc. The figures for the Secondary Schools repeat the same tale. Against the cost per head of Rs. 56-1-0 in a Government school, the cost in an aided school for Indians is Rs. 28 and that for Europeans is Rs. 119-4-0.

A still more glaring fact is the small amount given as grant in Madras. Madras, where the average annual cost per school was Rs. 11,054 gave an average grant of Rs. 1,305 per school. Other provinces where the annual cost is much less, have given more liberal grants.

One word about subscriptions, endowments, etc., forming local effort, will not be out of place. 15 to 16% of the direct expenditure in schools as well as colleges, is covered by local effort. This contribution from local effort is higher than the provincial contribution of 13 to 14%. According to the Seventh Quinquennial Review, the provincial contribution was only 13% while the local effort amounted to 18%. Madras is not far behind Bombay where local effort amounted to 20%.

The last feature which ought to be mentioned, is the large number of poor and middle class pupils that seek higher education and are contributing at tremendous sacrifice, the high fee-income of schools. Out of 7,776 in colleges 6,832 are in the middle class and only 408 are rich. Out of 1,43,277 boys in schools, only 5,749 are classed as rich, while 94,780 belong to the middle class and 42,748 are poor. The interest which the poor and middle classes evince in the matter of higher education, and the readiness with which they have continued to pay the high fees, are facts which ought to be borne in mind in any scheme of general education that aims at producing a large number of "social efficiencies." When attempts are made in England to

pay a compensation amount to the parents for allowing their sons to continue their education in secondary schools, it may not be too much if we expect the Government to contribute more liberally towards sound secondary education which lies at the root of all progress.

Aided institutions have tried to do their best for higher education, and they have flourished remarkably in Madras. They have relieved the local Government of their burden to an appreciable extent. We admit that the purse of the Government is not inexhaustible. That is the very reason why we are anxious that help should be freely given to these aided institutions at the present time when they feel themselves unable to meet the legitimate and fair demands of their teachers. If the aided institutions are not given the help they have deserved, they may have to stop their activity and it will be very hard to replace them. Local bodies, as may be gathered from the tables, are not enthusiastic with regard to higher education, and just now the burden of elementary education has been rightly placed on their shoulders. It will be found more economical to help the aided school and fit it for the work that is expected of it, than to starve it and start new institutions under new agents. Necessity and prudence alike demand that substantial help should be given to the aided institutions when reforms of a far-reaching importance are under contemplation in connection with educational reconstruction.

The additional cost which the reorganisation of the educational services in aided private institutions will involve, will be about 22 lakhs of rupees. Teachers cannot be expected to suggest the ways and means of raising this sum. How this sum is to be

apportioned among the Government, management and the school-going population, is a matter beyond the sphere of teachers, considering that as the provincial funds do not contribute to higher education in Madras even as much as is obtaining in other provinces, it may be fair to expect the Government to bear at least 2/3 of the total additional cost.

M. S. SATHESAN.

Intermediate Examination, 1922.

MACAULAY ESSAY ON CLIVE

EDITED WITH

INTRODUCTION AND NOTES

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NATIONAL EDUCATION: LITERARY OR TECHNICAL?

It cannot be claimed that the public mind has been sufficiently impressed by the vital significance of this problem (of National Education) for national salvation. Except the vague idea that it is intended to be a substitute for the defective education provided by the Government, so as to prepare the country's youth in a better way for national service, the layman has no clear conception of its fundamental principles, practical schemes and ultimate goal.

[The 'Hindu': 21-8-1920.]

The average Madras student spends all his time, energies and attention before his examinations in discovering what questions have leaked out; but does not at all pause to consider if his preparation for the coming ordeal did really end with hunting after 'possible' questions, and if it does not form part of his profitable duty that he should devote at least as much of his interest and attention to finding out solutions for at least those questions that he toiled so hard to get as he did in going about from place to place in his search for questions.

In the student's case, at any rate, his youthful thoughtlessness is a reasonable excuse.

What we have now to do is just to diagnose the evils of the present defective 'education provided by the Government'; examine the remedies that have been advocated and applied repeatedly 'so as to prepare the country's youth in a better way for national service'; thence infer how all those

remedies have been 'defective' in one way or another; and find out what other improvements can and must be introduced urgently into the existing state of things to nationalise the education that is imparted in schools and colleges to-day.

Addressing ourselves first to the investigation of the several defects in the present system of education provided by the Government, it behoves us to turn our attention for a moment to the rather forgotten pages of the history of Education, and the attitude of the Government towards education in this unlucky country.

It has to be stated at the outset that the Government in India have been so utterly callous to the intellectual advancement of the people of India that after more than a century and a half of the benign British rule in India, literacy is so poor, illiteracy so appalling, and the amount spent on education yet so low that India even to-day cannot stand comparison with the worst governed countries of the world.*

While the expenditure on education per head of the population in Ceylon is over 2 as., in Mauritius, it is 10 as., in Natal, 1s 3d., in British Guiana, it is 1s. 11d., and even in Russia it is 3½d., in India, it is only 7 pies. In Great Britain and Ireland, it is 3s. 11½d.; in the United States, 10s. 5½d.; in New Zealand, 13s. 1½d.; Comment is needless.†

*Principal Zumbro quoted in my article on Universities in India and their Ideals, April, 1918, *Educational Review*, Madras.

† Sir Surendranath Banerjee: Congress Presidential Address, 1895.

The 'Labour Leader' of the 12th of August 1920 contains the following significant statement in its editorial columns:—"What is needed is not less expenditure on Education, but more...The imperial grant for education this year is about £50,000,000 out of a total expenditure of £1,200,000,000. This is about half the sum which has been spent this year in trying to force British rule on the unwilling people of Mesopotamia. *We are still, to use the witty expression of the Scotchman, spending ten times more to blow brains out than to put brains in.*"

If the 'Labour Leader' can say this of the British Government in Great Britain, what are we to say of the benign British Rule in India? Facts are more eloquent than words.

	(In crores)		
Imperial Expenditure.	1892-93	1895-96	Increase.
Army Expenditure.	17-100	25-4-00	8-36
Provincial Expenditure,			
Law and Justice	8-255	4-0-47	7-72
Police	2-4-42	4-0-10	1-3-33
Education	1-1-45	1-5-36	3-51
Medical Relief	6-9-2	1-0-00	3-88
Total	7-7-84	10-6-58	2-9-19

Is it in any way anything unnatural then that we have to-day this appallingly low level of literacy in India?

Even among the few educated persons in India what actually obtains at present has been tersely expressed by Dadabhai Naoroji: "The English rulers boast, and justly so, that they have introduced education and Western civilisation into India, but, on the other hand, they act as if no such thing had taken place, and as if all this boast was pure moonshine. Either they have educated, or have not. If they deserve the boast, it is a strange self-contradiction that after half a

century or more of such efforts, they have not yet prepared a sufficient number of men fit for the service of their own country. Take even the Education Department itself. We are made B. A.'s and M. A.'s and M. D.'s &c., with the strange result that we are not yet considered fit to teach our countrymen. We must yet have forced upon us even in this department, as in every other, every European that can be squeezed in.....as matters are at present, all boast of education is exhibited as so much sham and delusion"*

And yet there are so many that knock at the doors of our Universities year after year! Senators, too, are not found wanting in sympathy to admit these large numbers to the University degrees, after years of effort and toil, as is the case now in a large majority of cases; during which period all their youthful enthusiasm, vigour and brains are sapped out of these aspirants after the sham of a University Diploma; and after finishing their course of studies, they find that they have to rest content with less than half the wage which a chauffeur can command (besides food and clothing.)†

Though they thus, sooner or later, accommodate themselves to these (unchanging and unchangeable) circumstances, they do so often with an exceedingly bad grace and with a strong sense of injury.‡ "So long as the great mass of the nation's intelligent manhood is driven, in ever increasing numbers, along the same, often unfruitful course of study, which creates expectations that cannot be fulfilled and actually unfits those who pursue it from undertaking many useful occupations necessary for the welfare of the community § any Government, however constituted,

* Pp. 210-11, Poverty and Un-British Rule in India.

† P. 109 Vol. I, Part I, Cal. Univ. Commission Report.

‡ Pp. 13, 14, Bengal Administration Report, 1914.

§ My article on Universities in India and their Ideals.

whether it be bureaucratic or popular, must find its work hampered by an unceasing stream of criticism, and of natural demands for relief which cannot possibly be met." [p.23 Vol. I, Part I, Cal. Univ. Com. Report.]

Analogies from what obtains in foreign countries are very often resorted to by our educational reformers to prove that large numbers of students and larger too, should be admitted into the College classes, and *ipso facto*, by virtue of their having had their names on the class rolls of a college for some years,—and in many cases for no other reason, should be awarded the diplomas of the University. It would be well, therefore, if, before we proceed further, we pause for a moment to examine those analogies and see how far they can be soundly applied to the state of things here in India.

Comparing Bengal, for instance, with the United Kingdom, the populations of both of which are almost the same,—about 45,000,000, we find that "by a curious coincidence the number of students preparing for University degrees is almost the same—about 26,000.* But since in Bengal only about one in ten of the population can read and write, the proportion of the educated classes of Bengal who are taking full time University courses is almost ten times as great as in the United Kingdom....." "While an enormously higher proportion of the educated male population of Bengal (Madras?) proceeds to University studies than is the case in the United Kingdom, a very much smaller pro-

* The number of students in Bengal was in 1917-18 just under 26,000; the number of 'full-time' students in the United Kingdom in the year before the war was 26,710. The 'full time' students included many who were not preparing for degrees. In Bengal all students are preparing for degrees. In the United Kingdom there were also a number of students (women also) taking one or two courses, but not giving their whole time to University work. There is no parallel to this class in Bengal, pp. 1820, Vol. I, Part I, Cal. Univ. Com. Report.

portion goes to the University for what is ordinarily described as vocational training. The great majority—over 22,000 out of 26,000—pursue purely literary courses which do not fit them for any but administrative, clerical, teaching, and (indirectly) legal careers. In the United Kingdom (if the training of teachers be regarded as vocational training) it is possible that these proportions would be nearly reversed.

"A comparison with any other and populous state would yield similar results." †

There is, however, nothing unnatural in the fact that so high a proportion of the educated classes in India set before them a University degree as the legitimate goal of ambition, and seek to reach this goal through courses of studies 'which are almost purely literary in character, and which, therefore provide scarcely any direct professional training.' In spite of a clear recognition by the educated Indian of the dictum that 'a University must not be considered a golden gateway to office so much as a temple where men go for refreshment and guidance and equipment for living', to pass an examination has always been, and is no less to-day, considered to be the tangible proof of success, the open sesame to life. *To sit but fail has become in course of time a distinction in itself; e.g., a 'failed Intermediate'; a 'failed B. A.'* Examinations were, and are, multiplied. They have always been the events which won the chaplets. Subjects are taken up 'not because they interest the student, but because they are necessary for marks (not by any means an exclusively Indian fault), and when the examination is over, memory throws off its impressions or they are covered up. That

† P. 177. 'The Government of India'; J. Ramsay MacDonald.

is true in all countries, but it is tragically true in India.*

"Speaking in the Calcutta University Senate, Dr. Fermor, of the Geological Survey, gave his experience as a member of a certain committee to examine candidates as to their educational fitness for an appointment. Most of these were Calcutta B.A.'s or B.Sc.'s. "All those who sat failed to satisfy a single test in their own subject, although they had obtained degrees but a year before. The physicists had forgotten their physics, the geometers their geometry, the mathematicians their mathematics and failed in simple addition, and ultimately the candidate selected was one who had not gone through a course of University Education."*

But, then, who is to blame for this sorry state of things in the world of education in India to-day? A reference once again to the early history of Education in India furnishes us with an answer to this question. "The danger of utilitarianism beset Indian culture at the very outset and the policy of the Government has increased it. There is something like an Indian tradition that the ruler provides for the scholar, and when the Company first and the Crown afterwards educated men for public service in one or other of the many departments of Indian Government, they encouraged the college youth to look to Government service as his future career†. This, as well as the rushing tide of revolt from Indian tradition,‡ determined the issues of the contest between Orientalists and Anglicists in Macaulay's day. Obviously this expectation could be fulfilled only whilst the colleges

turned year after year a comparatively small number of men. When the number exceeded the Government's powers of absorption men with academic degrees and training were like the landless man after the Black Death in England."*

So then it is no exaggeration to say that the Indian student has ceased to pursue University education for the sake of its utility for the best of all reasons, namely, that *there is no utility whatever to pursue education for*. The question then, naturally arises, why then should such large numbers of students flock to the Universities year after year? Is it because they, unlike their predecessors, have come to realise the value of the pursuit of knowledge for its own sake? I wish it were so. Unhappily, however, Dr. Fermor's statements are truer to-day than at any time before. One thing, however, must be said in favour of the boys of these days. They do not forget what they learn! Why! They have learnt nothing worth the name during their career at school or college that they may forget later. This may sound a very extravagant statement. I beg to submit, all the same, that it is absolute truth, and in no way an exaggeration†. My opinions and judgment in this matter may be misleading. Dr. Fermor's statement, however, deals the final deathblow at any claims to the contrary that may be advanced on behalf of the students of these days.

So then, with Mr. Ramsay MacDonald we have to confess that whatever monetary value University education and degrees once had has practically vanished, at any rate, to the majority of the ever-increasing numbers of University students. And Dr. Fermor's statement made of the Bengali students in

1916 is no less applicable here to the Madrassi students, and compels acceptance from us, however unwilling we be; because specialisation has, of recent years, been making our students take their studies as lightly as imaginable; so much so that even while at school they put forth the least possible effort, and get thereby the minimum possible knowledge available to them. One thing, however, necessarily results from this extraordinary solicitude of the Senators of our Universities for the helpless boys of the several colleges and schools in India. And that is this: a correspondingly extraordinary love of ease bred in the minds of our boys as a result of the meaningless specialisation and the meaningful compartment system of passing examinations in their special and non-special subjects alike.

What remains, then, after the cultural and the monetary values of education have vanished is but little: that little, too, is fast following suit; and we find to-day that there is no status worth the name that attaches yet to a degree-holder of these Universities in India. Such a statement needs but to be stated before it is universally accepted.

The question, then, naturally results:—How are we to provide openings for the large numbers of boys who cannot successfully, and therefore ought not really to, enter upon a University course? Instead of admitting large numbers of boys year after year into our colleges, and declaring them after years of effort that they are unfit for a pass in the University Examinations, would it not be better to tell them, the moment they seek admission into a college class, what chances exactly they have of passing University Examinations and what little of cultural, monetary or status values awaits such of them as are lucky enough to pass their examinations; and let them choose for them-

selves which they prefer:—a University education that is growing more and more valueless as days go by, or any one of the other technical, industrial or commercial pursuits which are, not one of them, less dignified or valuable than the University education of recent years.

How many of these University students who have failed in their examinations after several repeated attempts that had cost them a good deal of precious time, money and energies in their earlier years of life,—those that have passed, no less, ask of themselves and of others that ought to know better, "Why on earth was I made to undergo this unprofitable, long and tedious course of study?" It is but natural that they should do so because they have eyes and ears, and perceive that those whom they left behind in their onward career at school, are much better off and more comfortably settled in life than themselves. They feel they have a dignity and status that cannot allow them to accept service as a chauffeur, whose salary is in many cases more than double of what they can hope to get as salary and other emoluments of the posts which are fast becoming more and more difficult to get: in fact, it is natural that the larger the number of men turned out of the Universities year after year, the fewer become the chances of their getting the few posts that are available for degree-holders in Government service and elsewhere.

The problem, then, of providing openings for the large number of the youths of our country that, with or without a University degree, find it difficult to get on in these days of ever-increasing prices of food-stuffs and the more than correspondingly decreasing purchasing power of money—this problem becomes more urgent now than ever; and the sooner the attention of the Educational Reformers of to-day is diverted from the man-

* P. 10, *Indian Review*, January 1916, quoted as a footnote by J. Ramsay MacDonald, p. 177, in his Book 'The Government of India.'

† My article on 'Universities in India and their Ideals'

‡ My article on 'Non-ditail,' August 1920.

* P. 177, J. R. MacDonald.

† Ref. My articles on the Intermediate Examination in Arts, Universities in India, and 'Non-ditail.'

facture of mediocrities to the provision of openings for all young men, passed and unpassed alike, the better will it be for our country and the Government, whichever it be, bureaucratic or popular.*

That the careers now open to them are too few has been made more than abundantly clear by what has been written above. What the other careers are that ought to attract our men must needs be considered next. India is getting poorer and poorer. Everybody knows that this appalling poverty of India cannot be remedied by increasing the number of University degree-holders; nor does the capital of a country, as Mr. Fisher says, consist in cash or paper, but in the brains and bodies of the people who inhabit it. "The highest value in the world's markets will be obtained by that nation which has been at most pains to cultivate the intelligence of its people generally, and afterwards to give each the highest education and training in this special calling (Systematic Technical Education). In other words, the value of the nation's work will vary with the excellence of the national system of technical education." What Mr. J. Scott Russell, the author of "Systematic Technical Education for the English People" says of his country is literally true of India to-day. Only, Mr. Russell's book was published in 1869, by which time 'they had established schools in every metropolis, large town, or centre of industry, for educating professional men and masters, for training foremen and skilled workmen, and for educating apprentices.' And with a system of national education made compulsory, and supplemented with art and industrial education, within twenty years, as Mr. Mundella says, England came to possess the most intelligent and inventive artisans in the world.†

* P. 23, chap. II, Part I, Vol. I. Cal. Univ. Com. Report.
† Pp. 324-325, Indian Industrial Commission Report, 1916-18.

But where did the required money come from? Money must have come from somewhere, and it did in abundance from India.* Not money alone but everything else that was necessary for the growth of English Industry and Commerce. Mr. Digby says in his "Prosperous British India":—"England's industrial supremacy owes its origin to the vast hoards of Bengal and the Karnatik being made available for her use..... Before Plassey was fought and won, and before the stream of treasure began to flow to England, the industries of our country were at a very low ebb. Lancashire spinning and weaving were on a par with the corresponding industry in India so far as machinery was concerned; but the skill which had made Indian cottons a marvel of manufacture was wholly wanting in any of the Western nations. As with cotton, so with iron; industry in Britain was at a very low ebb, alike in mining and in manufacture." [pages 30-31] "English industries would not have advanced so rapidly without protection, but the system, once established led to perpetual wrangling on the part of rival industries, and sacrificed India and the Colonies to our great manufactures."†

What is needed, then, for the industrial regeneration of our nation and for the weaning away of our youths from the profitless University education of to-day is but a whole-hearted attempt made by the Government in India on the one hand, and the nation as a whole, and our youths on the other hand, namely, an attempt to rise at once, without the least delay to the level of the foremost of the commercial nations of the world that have devoted the greatest attention to commercial education for over sixty years. The people of India expect and demand of their

* P. 202, *Ibid.*

† P. 56, The Industrial Revolution of the Eighteenth Century in England, by Arnold Toynbee.

Government the design, organisation and execution of systematic technical education; and there is urgent need for it to bestir itself, for other nations have already a sixty years' start of us, and have produced several generations of educated workmen. Even if we begin to-morrow the technical education of all the youths of twelve years of age who have received sound elementary education, it will take seven years before these young men can commence the practical business of life, and then they will form but an insignificant minority in an uneducated mass. It will take fifteen years before those children who had not yet begun to receive an elementary education shall have passed from the age of 7 to 21 and represent a completely trained generation; and even then they will find less than half their comrades educated. In the race of nations, therefore, we shall find it hard to overtake the sixty years we have lost. To-morrow, then, let us undertake with all energy our neglected task; the urgency is twofold,—a small proportion of our youth has received elementary, but no technical education; for that portion let us organise technical schools in every small town, technical colleges in every large town, and a technical University in the metropolis. The rest of the rising generation has received no education at all, and for them let us at once organise elementary education, even if compulsory.**

And the British Government in the United Kingdom knows full well that it was only after 1860 that England came to make a great deal of provision for imparting technical and scientific education in her schools, colleges and Universities, and it is that provision made

* Mr. Samuelson on Technical Education quoted with the necessary modifications by the Hon. Pandit Madan Mohan Malaviya; p. 327, Ind. Indus. Com. Report, 1916-18.

then, and since, that has enabled England to maintain her high position and to keep up her industrial eminence: and to fight the splendid fight she has fought in this War: so much so that it is more than enough for the cause of industrial evolution in India if the British Government in India follow the lesson and inspiration that the state of things in England to-day has got to give to all those whom it may interest. If yet the benign British Government in India fails to do so even now, the less said of the benevolence of the Bureaucracy in India, the better. Speaking at the Industrial Conference convened by the Government in 1907, Sir John Hewett, the then Lieutenant-Governor of the United Provinces said: "The question of technical and industrial education has been before the Government and the public for over twenty years. There is probably no subject on which more has been written or said, while less has been accomplished."

So much for the attitude of the Government here towards the industrial regeneration of the Indian nation. Addressing ourselves next to the position of the youths of the country, who are the most affected by whatever decision we arrive at, "in every land the typical and average boy," say the Calcutta University Commissioners, "compares favourably with his contemporaries of other nations in regard to some characteristic qualities of mind and disposition, unfavourably in regard to others..... If a general inventory be taken of his powers and disabilities the Indian boy living in Bengal (Madras?) will be found to come up to a good average, when he is compared with his like in other countries. But he has some strongly marked gifts and sensibilities which give him distinction and are accompanied by certain compensatory

defects.* "Given, then, the necessary changes in methods of education, a large number of the boys would probably disclose an aptitude for constructive work, and nothing would be better for the economic interests of Bengal (of India) than that the boys of the educated classes should feel less averse to callings which involve work with the hands."† "A writ of 'Mandamus' is necessary to overcome the *non possumus* of our 'pure culture men.'"

Though the natural tendency, as detailed above, of the young men in India is undoubtedly, and naturally too, as seen from the history of the development of education here, towards a purely literary education, of recent years, "they have had such bitter experience of the difficulty of obtaining remunerative employment without technical training of some kind, that no natural dislike of manual labour will now deter them from undergoing that training.....At present there are no opportunities open to them, and I am confident," says Mr. C. F. Payne, Chairman of the Municipal Corporation of Calcutta, "that it is this lack of opportunity rather than the disinclination to manual labour which stands in the way of the economic progress of Bengal (of India)."

We have got next to consider why progress in technical education is so slow, and how far the writ of 'Mandamus' can overcome the *non possumus* of our 'pure culture men' and can solve the difficulties we are now confronted with. In this connection it is a great consolation and encouragement for us to be told that Englishmen themselves did not believe in the value of technical education

till about the middle of the last century. What, therefore, Mr. J. Scott Russell wrote of them in 1869 has to be slightly verbally modified to be applied literally to the state of things here in India in the Year of Grace, 1920: "All I have said above seems axiomatic. To me it is so, but I trust the reader will not be offended if I am obliged to treat it quite otherwise. The Indian people do not believe in the value of technical education. Still less do they believe in the value of a national system of education, and still less in the duty of the Government, the legislature and the educated part of the community, to undertake the education of the whole people. I am therefore compelled to prove as mere matters of fact that which the accomplished scholar, or observant traveller takes as an axiom on which argument is wasted. It is the object of this article to prove that technical education has brought good of a national and commercial kind to those who possess it; that the want of it is attended with pecuniary loss, and that there is social danger to the community in our continued neglect of it."

And my appeal goes forth especially to the educated part of the community who with or without the power and purpose to do what the nation needs, ought to bring about among their less-gifted countrymen the requisite 'revaluation of standards and readjustment of objectives in life so as to adequately answer the changed conditions of the modern world.'*

May I suggest in the course of this rather lengthy article that, in these days of Conferences and Congresses, a conference of the parents and guardians of boys that

attend schools and colleges in the city of Madras should be summoned at an early date, where a beginning, at any rate, may be made to discuss such vital questions as I have attempted to deal with in my own slipshod way?

The President of the last Special Congress at Calcutta has published a valuable book on 'The Problem of National Education in India' and dealt with the several aspects of the problem at length. If at the close of the Special Congress at Calcutta the other day when parents had to make up their minds to remove their boys and girls from Government and Aided Schools and Colleges in the country to National Educational institutions, Lala Lajapat Rai should say, with the indisputable authority due to his eminence in the public life of India to-day, that "he was himself opposed to the withdrawal of boys from the existing schools because they could not construct a national system of education without national government and also because their conception of national education was defective, what are we to think of the several so-called educational reformers and their zeal for the education of the youths of our country?"

And this, after years of Congress agitation, and generations of degree-holders of the several Universities in India! True, we have several great and successful institutions which have owed their existence to the idealistic fervour and self-sacrificing labours of pronounced advocates of "national education" and bitter opponents of the prevailing system.But it will be admitted that except, as regards the general cult of patriotism, each of these institutions has an atmosphere of its own, mostly embodying the particular ideals of their individual founders. Most of them

are also, more or less, of a sectarian or denominational character.*

Not only that, the moment the name 'national institution' is given to a school or college, its title for a share in the scanty allotment made in the Government Budget, it loses, and has to live and maintain itself on public charity. Why should the scanty provision made for education in the annual Budget be spent all on institutions that do not in many cases deserve even the name of a school or college for more reasons than one, the staffing, the accommodation, the library, the sports, and the hostel arrangement being all of them totally deficient? Why should we not insist on that money being spent equally on all institutions, national and 'non-national'? Would it not be better for this purpose if instead of starting new national educational institutions, we set about nationalising the existing institutions that are all maintained solely by fees paid by our boys and the grants paid from out of the State revenues? What objection there can be to such a process of nationalisation of the existing schools and colleges I cannot see: anyway, I do not think that the difficulties in our way of doing so will be insuperable. Even supposing there are real difficulties, is it not our bounden duty to overcome them and see that the fee-income of schools and colleges and the Government grants are all spent on really national education which is worth paying for in preference to everything else? I know what the answer will be: "Yours is all impossible talk. This Government will not do what we desire. So we must go our way, and leave the Government to have its own."

* The 'Hindu,' 21st August 1920.

* P. 106, Part I, Vol. I, Cal. Univ. Com. Report.

† P. 108, *Ibid.* and Ref. My article on Universities in India and their Ideals.

‡ General Memoranda, p. 302, Cal. Univ. Com. Report.

* The 'Hindu,' 21st August 1920.

With due deference to the large majority of my countrymen, I beg to differ from their pessimistic view of things in this direction. The Government of India have been told by the Commissioners that were appointed sometime back to inquire into and report upon Indian Industries that "there is a strongly expressed desire for Colleges like the Sydenham College of Commerce in Bombay in other parts of India as well, and we think that the other Indian Universities might well consider the possibility of satisfying this demand."

Whatever has been the attitude of the Government in India till now, the outbreak of the war drew their forcible attention to the extent of India's dependence upon countries outside the British Empire, particularly upon Germany and Austria, for the supply of the necessities of life for the people; and, in examining the question of policy which the Government should pursue towards the industrial advancement of the nation in the altered state of things in India, Lord Hardinge's Government put the case for a change of policy in a very clear and forceful language: "It is becoming increasingly clear that a definite and self-conscious policy of improving the industrial capabilities of India will have to be pursued after the war unless she is to become more and more a dumping ground for the manufactures of foreign nations who will be competing more keenly for markets, the more it becomes apparent that the political future of the larger nations depends on their economic position. The attitude of the Indian public towards this important question is unanimous and cannot be left out of account. Manufacturers, politicians and the literate public have for long been pressing their demands for a definite and accepted policy of State aid to Indian industries: and the demand is one

which evokes the sympathy of all classes of Indians whose position or intelligence leads them to take any degree of interest in such matters." The despatch further emphasised "the need for an industrial policy which will enable technical education in India to produce its best results, and which will lighten the pressure on purely literary courses and reduce the excessive demand for employment in the services and callings to which these courses lead up"

"On all grounds," say the present Viceroy and the Secretary of State, "a forward policy in industrial development is urgently called for, not merely to give India economic stability: but in order to satisfy the aspirations of her people who desire to see her stand before the world as a well-poised, up-to-date country; in order to provide an outlet for the energies of her young men who are otherwise drawn exclusively to Government service or a few overstocked professions; in order that money now lying unproductive may be applied to the benefit of the whole community; and in order that the too speculative and literary tendencies of Indian thought may be bent to more practical ends, and the people may be better qualified to shoulder the new responsibilities which the new constitution will lay upon them....."

"These are political considerations peculiar to India itself. But both on economic and military grounds imperial interests also demand that the natural resources of India should henceforth be better utilised. We cannot measure the access of strength which an industrialised India will bring to the power of the Empire."*

So much for the professions of genuineness of interest, and the urgent reasons for the carrying into effect of all these reforms on

* P. 212, Montagu-Chelmsford Report on Indian Constitutional Reforms.

the part of the Government in India. The Universities in India again are told by the Calcutta University Commissioners: "We are of opinion that a modern University, especially one situated in a great industrial and commercial city, should include applied science and technology in its courses and should recognise their systematic and practical study by degrees and diplomas." They continue to say later on: "It is desirable therefore on many grounds that the Universities should give their sanction and support to technological education;.... In India such sanction and support are of special value," because, as was said in 1866 by Sir Henry Maine, in his address to the Convocation of the Calcutta University, it is highly doubtful if anything founded by the British Government in India excites so much practical interest in households of the better class, the middle class more than of any other, as the examinations of the University whose importance in Maine's day has considerably diminished during these forty-five years. "Social traditions are still strong against callings which, in their earlier stages at all events, involve work with the hands. The influence of the University may be powerful in helping to remove this obstacle to progress." There are again very many good reasons for thinking that scientific industry will open an increasing number of careers; in these, capable and well-trained young men will be able to find employment with better ultimate prospects than those offered in the more congested occupations to which they now throng in numbers disproportionately large, and which, therefore, as was stated above, has made them overcome whatever strong prejudices they may otherwise have for manual work.* By providing systematic and practical courses of training for scientific and other posts in industry, the University will confer a benefit upon the community and not

least upon that large part of the educated classes which is in need of a wider range of well-remunerated occupations.†

The Government and the Universities have thus pledged themselves to forward the cause of industrial education in India: the educated classes realise the urgency of such a reform; the youths of the country, too, have largely overcome their aversion to manual occupations, that have now become absolutely indispensable for their living and also as a means of livelihood.

Whose fault is it then, that our educational system has not been reformed on the necessary lines all these days? I say deliberately that the educational reformers are to blame, and none else. The sooner they give up their solicitude for manufacturing passes in the University examinations, which give our youths neither the training for life nor the necessary equipment as a means of livelihood, and turn their attention and energies to this problem of national salvation, which is only another name for national education,†† and not only that, the sooner the national educationists, if I may call them so, realise the importance and urgency of these technical courses of instruction in preference to the literary pursuits that have already produced more than enough of discontents amongst us, and utilise the resources available for national education in industrialising the existing Universities and thus solving the ever-increasingly urgent problem of national salvation, the better would it be for the country; the loss of whose proud position in the scale of nations in the past, we deplore so much, and the Government too have to deplore with us in the interests of the Empire, if not solely in the interests of the Indian nation, as such.

If the educated classes in India organise

† Ibid. and pp. 192, 193. Vol. V, Part I, Cal. Univ. Com. Report.

†† The 'Hindu' 21-8-'20.

* My article on Universities in India and their Ideals.

themselves into an association with the avowed object of nationalising the education now imparted in schools and colleges on the lines indicated above, and not form new centres of learning which manufacture degree-holders that compete in vain in many cases with the other University men for the few Government and other posts, that are becoming more and more difficult to get, the solution of the problem of national education in India can be easily arrived at.

The State must be made to bow down to the nation's will in educational matters, if not in all others: and from what we have stated above, the Government and the Universities will be eager to co-operate with us in inaugurating these welcome reforms in the education of our country. If after trying the Government's genuineness of interest for this urgent reform, we find that like all their other professions, this too is mere moonshine, then is indeed the time come to declare with Mahatma Gandhi that we cannot co-operate with this Government and must proclaim 'Non-Co-operation' as a principle to be put in practice without a moment's delay.

Government's grants, being all spent on the present educational institutions, which are all 'defective' in one way or another, and the contributions of the people, spent on the so-called National Education of to-day, it is no wonder that Lala Lajpat Rai should say that our very conception of National Education is defective. Make the Universities, and Government and Aided institutions national in the sense that they serve the pressing needs of the country more than anything else; and supplement their efforts in that direction by the establishment of National institutions maintained by voluntary contributions of the people; then, and not till then, will come the day when the complaint is not heard among Indians that they are excluded from the more lucrative activities in their own country: and the Government too realise that the discontented intellectual proletariat whose rise has been so disturbing a feature of recent years has begun to decrease in large numbers.

S. SUBRAHMANYAM.

LECTURES IN LOGIC

FOR THE USE OF THE INTERMEDIATE CLASSES

PREPARED IN ACCORDANCE WITH THE UNIVERSITY SYLLABUS

BY

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PRACTICAL REFORMS IN MODERN EDUCATION.*

EVERY new European Educational officer who visits our Indian Secondary Schools for the first time, is struck with the size of our classes and the strength of our schools, and during the course of his talk with the Headmaster remarks: "Headmaster, how do you manage such a big school as this?" It is no wonder, for the thirty and odd chief public schools in England including Eton and Rugby do not contain generally more than 350 pupils in each, whereas our chief High Schools boast of a strength of 800 to 1200 pupils on their rolls. There may be several social and economic reasons for the numerical strength of our High Schools, but I do not propose to consider them in detail here, nor to give my sympathetic pleading for the same. My purpose now is to show that a diminution in the strength of our High Schools is a matter of absolute necessity, convenience, and progressive evolution, in the interests of secondary and higher education as well as in the interests of the country in general—especially of the development of the economical and industrial concerns of the people.

The first practical reform that I, therefore, advocate is the reduction in the strength of our High Schools. If necessary, have more High or Secondary Schools; there may be one for each Taluk centre, two or three for big towns, and one or two for a prescribed rural area, if necessary. But never multiply the strength of a secondary school; for what is our object in maintaining a secondary school? The avowed object or aim of a secondary school is to prepare young men for a University course, or for higher education. I suppose I am not wrong in saying that educational authorities at least consider it so, although people in general and parents especially may

have very funny ideas regarding it. It is to disillusion people that the Department of Education some time ago made a clear demarcation of schools into secondary and elementary. But the distinction has not been understood in practice either by ignorance or by wilfulness. If only our people understand the true aim of secondary education, there will not be such a rush of incompetent material into our High Schools to bother the Headmaster and the Assistants and to try the patience of the S. S. L. C. Board of Examiners.

So long as parents, and even the so-called educated men are also parents, continue in their ignorance not to study the natural aptitudes and capacities of their boys, so long as they do not understand the individuality of their children, so long will there be this bother. Not that the teachers do not enlighten them on this point; very often the conversation takes this form at the time of the annual promotions, Headmaster: "Sir, your son is not fit for a higher or general education. I cannot promote him. No doubt, he has a fine artistic taste. Send him to the Arts School at Madras." The parent replies, "Sir, be kind only this time. Detain him a second year in the sixth form, if you like. There is a prospective marriage for him this year. If only you promote him, I may be sure of the marriage at least." Such silly considerations as are placed before the Headmasters by the vagaries of parents clearly prove to us that people do not yet understand the nature of secondary school education.

Not only are parents ignorant in the matter but the management very often in its own interests to secure a fat revenue bring other considerations of a business-like nature to bear upon the poor Headmaster, to whom there is nothing but misery, if he happens to be weak-minded. There is yet another funny thing in the matter, which has become more or less a scandal now-a-days especially after the introduction of the S. S. L. C.

* A paper read by Mr. T. Rajam Aiyangar, B.A., L.T., Govt. High School, Tiruvalur, at the Third Anniversary of the Old Boys' Association, Secondary School, Umayalpuram (Tanjore) on 31-5-20.

Scheme, and that is the private tuitions which the teachers engage in. There are many reasons why teachers undertake private tuitions, the chief of which is the poor salary they are paid by the management. Even Cesar's wife cannot convince self-control, if there are temptations in the way; and to keep poor teachers above suspicion, it is absolutely necessary to pay them amply. But I fear that even the recommendations of the Salaries Committee regarding the subordinate service may not be adopted in the near future, leaving the hard fate of teachers in the same miserable condition as it was before. To come to the point: Poor teachers always find it necessary for them to recommend to the Headmaster the promotion of the pupils who receive the advantage, or shall I say the disadvantage of their tuition; and here then is another trouble for the Headmaster.

Considerations like these sway the minds of the Headmasters of High Schools, and the result is an extremely bad system of annual promotions. By this illogical and pernicious system of promotions, the strength of the High Schools is kept up artificially at a high figure, much to the detriment of a good and sound education. The annual S. S. L. C. Examination results bear out the truth of this statement. It is really curious to see that year after year only about 20 or 22% of the pupils presented at the public examination come out successful. My friends would argue that our High Schools, whose numerical strength I wish to reduce, have always maintained such a high strength on their rolls from at least the last three decades of the last century. I know that some High Schools have always maintained such a high strength from 1880 onwards. But it is interesting to notice how there is a clear deterioration in the annual results obtained now as compared with the results obtained then. I believe that our Honourable President of to-day belongs to a time when there were high percentages of passes at the public examinations. If 55

pupils were presented at an examination in those days, there was every chance of more than 50 pupils coming out successful, and that too with great credit, with numerous first class passes. If we stop to consider the reasons of such a tangible deterioration in the results, many reasons may be forthcoming, and exaggerated notions regarding the merit of the present day teachers, the defects of the present system of education with its dreadful curricula of studies, its godlessness, its irreverence for the past traditions of the country, its unpatriotic nature, its unpracticalness, etc., etc., may be freely ventilated to the chagrin of the poor educationists of the modern day. I grant there are defects and that the defects pointed out by the advocates of a system of National education are real, and should be attended to as early as possible. But I have no time to devote to the consideration of these defects and of the reforms that should be effected in these directions, although I should much wish to speak about them some other time. What I contend at present is that the chief reasons for the clear deterioration in the results are what I have just before pointed out—the craze of our parents to rush their children through the secondary course of education which is unsuitable to them, the desire of managers and teachers to secure money, and the bad system of promotions which Headmasters are forced to adopt in spite of themselves.

High Schools are for children who have a tendency to read, who take a pleasure in reading literature and high classics, and who could bear the strain of a high intellectual culture and feel not the worse for it. They are not intended for mere athletes or professional men, for men whose temperament is the pursuit of business, whose qualities are of the Vaishya or the Kshatriya. For men of the latter temperament, technical schools are most fit. To them they should be sent and the High School or the Secondary School should be clearly earmarked and appropriated for the study of the intellectual classes or castes.

There is no use of huddling up all classes of pupils in the High School and thus confusing our aims in education.

It is for this reason that I wish the High Schools to be reduced in strength. If the aim is understood by the people, the reform will come in no time, the Headmaster will adopt a better system of promotions, the management will become more reasonable, and the teachers will become more self-controlled.

This reform is not only a matter of convenience for the Headmaster, but it is also absolutely necessary in the interests of higher collegiate education. There will be greater efficiency in the secondary schools, first because of the good material chosen for admission and secondly because of the good management and discipline that might be surely enforced by the Headmaster in that case. I should say that it is also absolutely necessary for the progressive evolution of our country's economical and industrial interests. Technical schools and vocational seminaries do not grow up on all the sides, chiefly because people do not yet feel a necessity for them. Let the people but understand that most of the children who are at present vainly sent up to secondary schools will form very suitable material for technical schools, then the problem of why many technical schools do not grow up will be solved in no time.

A criticism is very often levelled at the system of secondary education as if it were meant only for its practical utility. They say that High Schools are unpractical, meaning thereby that their products could not secure a market value, that the young men who come out into the world after the completion of their secondary course are unable at once to secure the means of their livelihood. In that sense certainly a secondary school cannot be so very practical as a technical one. But it is very often forgotten that a secondary school has for its chief use the preparation of young men for a collegiate course, and so I take

the liberty to suggest whether these secondary schools could not be left alone to do their own business and whether the people could not think of starting technical schools or special vocational schools with the sole object of preparing young men for business of any kind to which they may be adapted or fit.

If then the High Schools or Secondary Schools be limited to their legitimate scope, a large number of technical schools of all kinds,—agricultural, engineering, mechanical, etc., will have to be started in all convenient and necessary localities, where such kinds of knowledge may be demanded by the needs of the people. The more such technical schools, the more the relief to the congested High Schools that suffer from the present conditions of unnatural growth.

So then my second suggestion in practical reform is to start technical schools in plenty, either independently of High Schools or as was fondly contemplated by the S. S. L. C., Scheme at its inception, as a concurrent institution attached to the High Schools. There can be no objection to run technical sections in the V and the VI Forms of High Schools preparing pupils for life and sending them up for technical examinations to qualify them for business. But better they are started independently by capitalists who alone can develop the productive powers either in agriculture or in the industries of the country. A few industrial or technical schools started here and there without aim, without reference to the needs of the locality or the demands of the people, and without adequate provision for the employment of such skilled labour as may be produced by such schools are almost next to useless. For instance, if the munificent charity of our Moopanars could be diverted in the direction of a technical school, I would suggest the starting of a weaving school in the Kaikkilar quarters of Melakapistalam or in Karuppur where there are so many weavers languishing for work. Let a few thousands of rupees be appropriated for the

purpose, then a useful institution would come into existence, fifty or sixty Kaikkilar children would be learning their trade usefully, add to the productive powers of their country in their own humble way, and bless you for the work you provide them with. But instead of any such useful institution being started in that place, I find that a new elementary school has been started and recognised by the authorities, perpetuating the old system, the old studies, and providing for no useful manual labour for the children of the locality.

Gentlemen, I do not propose to say much about primary education on this occasion, except to state that all primary schools started hereafter at least should have their own individuality or originality. Primary schools should be constructed on different patterns. A primary school started to benefit an agricultural community should be entirely different from one rising up in an industrial centre. No uniformity either in syllabuses or curricula of studies or in management or in methods of teaching ought to be imposed upon such institutions from outside or from a controlling central authority, except it be a local educational council as the one that is contemplated by the New Reform Rules. The methods and the curricula of studies for each primary school ought to be suggested by the needs and demands of the locality, and they could be framed only by a local council. In such primary schools more attention should be paid to the training of the manual powers of man and only less to the culture of his linguistic ability. The study of the Three R's should be made compulsory for all the children of school-going age, whether males or females, and such education should be made as free and cheap as possible. Nothing except the Three R's should be enforced as studies in such a school, except that those studies are of elementary science applicable to the trade or industry that is taught in such a school.

The third practical reform that I would suggest

is the free use of the vernacular both in the elementary and in secondary schools, not only as a medium of instruction but also as an end in itself. A nation that does not develop its vernacular becomes weak in power, and ability and ultimately perhaps dies as a nation. It slowly denationalises, and lines of cleavage are formed among its classes bringing about a loose cohesion among them. If there should be a feeling of solidarity in the community, a passionate longing to cultivate the mother tongue should seize the hearts of the people. But if our young men are not taught their own vernaculars, in course of time they get ashamed of their language and begin to show feelings of irreverence to the master-minds that have produced a Ramayanam or a Tolkappiyam or a Karal. First then for the sake of our mother-tongue, and secondly for a simple psychological reason that we possess a greater facility for expression in our mother-tongue than in a foreign language, we must study and use our own mother-tongue. What an amount of labour and energy is spent in learning a foreign language to the extent of freely thinking in it and of freely expressing our ideas in the same is familiar to every one of us. We also know what an amount of time we lose in the same acquisition. The ideas are common to all, and if we could only transfer our ideas through the medium of our vernacular without the interposition of a foreign language, how much of time and energy we could save! True that our language is a little bit defective at present in its use as a medium of instruction, especially in the scientific subjects of study, but nobody ever says or ever has said that our language is incapable of being developed into a flexible language able to express fine shades of thought of any kind. A systematic use of it for such purposes for a few years will make it full and perfect. The vernacular should be made the first compulsory language in Primary Schools with or without English as a second language, and it should still be con-

tinued in the Secondary School as a compulsory language along with English, to which due attention should be paid for securing a high standard of efficiency. All non-language subjects, History, Geography, Science, and even Mathematics, should be taught in the High Schools through the medium of the vernacular. The notion that English would suffer thereby may act as a warning to us that we should maintain a high standard of proficiency in that subject also.

Now, let me come back to the consideration of reforms that are immediately needed in a secondary school, with which I am primarily concerned. First, I said that the High School should be reduced to a manageable strength by the adoption of such good expedients as an equitable system of promotions. Secondly, I said that a large number of technical schools should be started in all convenient and necessary centres on right economic lines in order to relieve the congestion in High Schools and also in order to develop the economical and industrial interests of the country. Thirdly, I said that the vernacular should be attended to, respected, and cultivated both as a language in itself and as a means of instruction in schools, primary and secondary. The fourth reform that I suggest is one that will affect the pockets of the managers in the first place and demand larger and larger financial contributions from the State in the second place; but unless that reform is speedily brought about there is no hope for secondary education for some time to come. Our leaders and patriot orators very often speak of the second-rate or third-rate capacity of the men who are employed as teachers in secondary schools, but when the discussion turns upon the subject of improving the lot of the secondary school teachers or of improving their quality, they become dumb-founded. How could you expect a poorly-paid teacher to be free from family worries of all sorts, if he is not decently paid? If the poor

teacher could not employ a servant, how could he be free from family obligations? If he has to go to the market every day, if he has to be worried about this matter and that, if the problem of starvation faces him constantly, how could you expect him to have leisure hours for sweet study, for the cultivation of his intellectual powers, and for general culture which you want from him? Give him a decent pay, enough to free him from family worries, and then expect him to be what you wish him to be. I could not really understand that argument that would deny a High School teacher—say a graduate of good attainments—equal pay with members of the Subordinate Service in the other departments of State. If the Salaries Committee's recommendations could not be carried out without State-aid, why not call for more educational grants. If our leaders could only do this, our Madras Government would lend a very sympathetic ear, I believe. It was only the other day that it protested against the decision of the Financial Relations Committee on the score that so many reforms were needed in our own province.

Now, whether the State does it or not, it is the imperative duty of the people to agitate for this. They should honour their teachers, by feeding them properly and by keeping them above all wants and temptations. If a manager could not do this, let him at least feel it in his heart of hearts and wish the poor teacher well. If all this could be done, the right kind of teachers will come forward, the talented men will be attracted to the profession, and the success of secondary education will be ensured.

Gentlemen, there is one comical aspect of secondary education which I wish to expose. The Department of Education looks upon secondary education from its own view point and like Robinson Crusoe in his desert inland, goes on improving it, feeling much self-congratulation in its achievements. The periodical syllabuses of studies that are issued for use in Secondary Schools show a vast amount of erudition on the

part of the framers of those syllabuses, who are as various as the subjects are various. Each is a specialist in his own subject and has studied that subject threadbare from all points of view. When he is set to prepare a syllabus on his subject, he does it excellently well. That syllabus which is all comprehensive and gives excellent satisfaction to the specialist as containing the whole subject in a nutshell is however a sorry remembrancer of his own imperfections and limitations to the teacher who has to teach the subject and is a regular soul-killer to the pupil in the school. Very often these syllabuses are prepared by college-professors who show what they expect from every scholar after his post-graduate study. It is not one such syllabus that is thus thrust upon the poor teacher and the poor pupil in a way once in the year, but it is a regular string of such syllabuses bearing on all subjects of study that are heaped upon him all on a sudden at one time. But truth has to be told, however unpalatable it may be. There should be some moderation in the specialisation of subjects in High Schools, and the lightening of the curriculum is a matter of absolute necessity in the interests of the young pupils who feel frightened by the enormous courses of studies that they are asked to go through.

A sixth point of reform that I should wish to place before you is the demand of a more sympathetic system of Examinations. The S. S. L. C. Examination seems to be an improvement upon the old Matriculation system in several respects, but I should wish the examiners to feel that they should not kick the steps of the ladder up which they climbed in their youth. The object of an examination is to test what a pupil knows and how well he applies that knowledge in his further study and disquisition, but not to test what he does not know with a view to plough him. I think that the evil of the present system will vanish, if one half of the Examiners

at least, both Chief and Assistant Examiners, are recruited from the staff of secondary schools.

Gentlemen, I shall not occupy your time more. We hear a sweet echo of a voice proceeding from distant places. It is the sentiment of Brotherhood. Why should not the whole of the Teaching Profession feel a sort of *esprit de corps*, a feeling of oneness or solidarity? Yes; co-operation among teachers of all grades working in all kinds of schools has become, or will become in course of time, a matter of absolute necessity. There should be no distance of feeling between teachers of Primary Schools, teachers of Secondary Schools, and professors of Colleges, and I shall add administrative officers of the Department also. We should all feel a sense of corporate existence not only for the sake of self-protection, which after all is only a sordid consideration. But to gain respect in the eyes of the world, and to beget a sense of mutual trust and confidence, it has become necessary in these days of stress and rapid evolution to think of the "The Unification of the Teaching Profession." How sweet is the expression, but how sweeter will be the consummation of it, if effected! It is towards that happy consummation of union and fellow-feeling, of joy of common devotion and service in the Temple of Wisdom, that we should aim at, and the sooner we sense the ideal, the greater the joy for us!

CLOUD MESSENGER.

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SYLLABUS VERSUS TEXT-BOOK.

THE relative importance of a syllabus and a text-book for purposes of teaching is still a matter of controversy and much difference of opinion prevails among members of the teaching body. There are many, among them, who seem to be quite satisfied with the mere topical outline furnished by the syllabus and who therefore wish to make it the chief basis of instruction to their pupils. There are others, on the other hand, who regard the syllabus as not quite satisfying all the requirements of the teacher and who accordingly feel the necessity of a text-book as a sure and safe guide for purposes of instruction. Each has, no doubt, its own advantages and disadvantages and the question of the superiority of the one over the other cannot be decided absolutely without any reference to the individual capacity and taste of the teacher and the standard of pupils for whom it is recommended.

A syllabus is undoubtedly of great value, provided it is framed in the manner in which it ought to be done. It broadens the outlook of the teacher. It creates for him opportunities for reading and increasing his knowledge. It makes him more resourceful and accordingly better equipped for purposes of teaching. It also gives him certain amount of discretion in selecting what is good and eliminating what is bad from the books which he happens to study and also more latitude in choosing and adopting what he considers to be the best method of imparting instruction on particular topics or lessons. He has thus more opportunities of exercising his powers of discrimination and judgment and is better able to proceed with the work of teaching on more up-to-date and rational lines.

But all this is conditional and depends to a

large extent, on the nature or quality of the syllabus put into the hands of the teacher, his own individual capacity and taste and the facilities afforded to him for imparting instruction on the lines indicated by the syllabus. In the first place, the syllabus framed should be one suited to the standard both in respect of the quality and quantity of matter which has to be taught to the pupils. Secondly, the syllabus should not be so vague and indefinite as not to give the teacher any clear idea as to the nature and scope of the topic to be dealt with by him. Thirdly, the teacher should himself be a man of some taste for study, and should show a readiness to put forth the energy necessary to get a thorough knowledge of the subject he has to teach, without being satisfied with the mere skeleton furnished by the syllabus or his own imperfect ideas of the same. Fourthly, the school authorities should provide him with every facility, such as ample leisure, a good library, a good laboratory and whatever that may be necessary for study and preparation of the subject.

In the absence of one or other of these conditions the syllabus, far from being of any advantage to the pupils, is likely to cause much harm. A syllabus which is too difficult for the standard, while involving much waste of time and energy on the part of the teacher, will cause needless mental strain to the pupil in attempting to take in matter which he cannot digest. An over-loaded syllabus will leave the teacher little time to enable him to dwell at sufficient length, on any topic so to make his pupil understand it properly. A familiar example of a defective syllabus of this kind is the B. Group History Syllabus, prescribed by the School Final Board. There is much in it which is difficult of comprehension.

sion by the pupils and much more which can be covered by the teacher within the length of time allotted to it. A vague and indefinite syllabus will perplex the teacher at almost every step in the course of his teaching and will also misguide the framers of questions at the time of the examination. There is also the danger of an over-zealous teacher doing more than what is required and trying to stuff the pupil's brain with much of unnecessary if not irrelevant matter and an indifferent teacher not doing what is necessary. Lack of facilities, such as ample leisure for study, will make the teacher rely on his own meagre knowledge of the subject and the teaching will grow less efficient and consequently, less useful to the pupils.

However carefully the syllabus may be prepared and whatever may be the facilities afforded for following it, it is, at best useful only to the teacher. It is of no use whatever to the pupil. The pupil cannot read all the books on which the syllabus is based nor can he remember all that the teacher tells him in the course of his teaching. The few books that are recommended for his use do not always contain all that is necessary. Under these circumstances the teacher feels compelled to resort to the practice of dictating notes which has to be highly condemned. The pupil too, getting accustomed to the practice of writing notes, gradually finds a distaste for books and never cares to touch the book at all. He begins to rely on his notes for his pass in the examination. The notes too are very often carelessly written and the notes, especially those of the boys of the lower forms, often bristle with mistakes of one kind or other. No attempt is made to understand intelligently what is said in the

notes and the boy merely goes through them mechanically over and over again and feels satisfied with his preparation when he can recite each and every line of the notes *verbatim*. The knowledge of the subject gained in this manner is likely to be of very little use to him either as a basis for an advanced study of the same or even for the practical purposes of life. It does not help him much even to pass his examination, for the boy finds himself quite unable to answer questions which do not directly bear upon his notes and very often not couched in the language with which he is familiar. The only faculty of the pupil which receives any training by a serious study of this kind is the faculty of memory. His powers of reasoning and judgment are never touched at all. In addition to a growing distaste for books, a habit of indolence and ease is engendered in him and he is ever on the look-out for the simplest means and the shortest cuts to get through the ordeal of the examination.

Much of these evils can be avoided if a suitable text-book be substituted in the place of the syllabus. It is no doubt true that the text-book will fetter the discretion of the teacher to some extent. But this will be more than compensated by the many advantages that would otherwise be gained from it. In the first place, it will not leave both the teacher and the pupil, much in doubt,—the first as to what he has to teach and the second as to what he has to learn. Secondly, no elaborate preparation will be necessary on the part of teacher and every one, whatever may be his qualifications, may with a reasonable amount of preparation, hope to teach successfully what is found in the book. Thirdly, more co-ordination can be secured in the progress and

method of treatment among those handling the same subject. Fourthly, there will be no room for anxiety on the part of the teacher whether what he teaches will be retained by his pupil while the pupil will have always at his command a ready means by which he can refresh his memory, whenever necessary. It may, perhaps, be said that the introduction of text-books will encourage boys to resort to the evil practice of cramming. But, if cramming is something inevitable under any circumstances, cramming what is found in carefully-prepared text-books is better than cramming what is found in the ill-written, incorrect notes of the pupils themselves. Text-books are, however, written by men of sound knowledge and experience and the matter which they contain and the language in which it is clothed are generally such as are suited to the capacity of the pupils for whom they are intended. Provided, therefore, the teacher sees that his boys fully understand whatever he teaches of the book, the evils of cramming can be far too much minimised.

Of late an undue importance came to be attached to the syllabus and this undue importance, causing an undue hatred of text-books, a regular boycott of the same began. Text-books were not for a time prescribed even for the most important subject of English and the boys who sat for the Matriculation examination which formerly took the place of the present School Final Test, had to study no text-books at all. The prejudice against text-books continues even at the present day and important subjects, such as Grammar, History, Geography and Science, are taught chiefly with the aid of the syllabus. Syllabuses are used by teachers of all forms in all schools and they are also found in the hands of the teachers of the lower standards of the Ele-

mentary School. The effect of this is to encourage a tendency on the part of the teacher to resort to the practice of dictating notes followed in its turn, by a like tendency on the part of the pupil to resort to the practice of cramming. So long as the notes are dictated in Tamil, the resulting harm is not great. But in schools where even the non-language subjects are taught in English, the notes that are dictated in English cause the worst of evils. Syllabuses may, perhaps, do well in Colleges and High Schools where those handling the various subjects are men of comparatively higher qualifications and attainments and where the boys are better able to express their ideas in their own language. But in Lower Secondary Schools where boys are taught by under-graduates and men of lower qualifications, text-books are quite necessary both for the guidance of the teachers and the pupils. These teachers have to possess a fair working knowledge on a variety of subjects and their knowledge cannot be expected to be that of a specialist which alone is necessary for handling a syllabus. A good text-book will supplement whatever knowledge they may already possess on the subject and will give them greater confidence in the good result of their teaching. The absence of good text-books may perhaps be urged as a reason for not prescribing text-books in some schools. A text-book is, after all, only the amplification of a syllabus with explanations and suitable illustrations and where a good text-book cannot be had on any particular subject, every endeavour should be made to write one which follows the lines of the syllabus. Till then, the best book available on the subject should be prescribed as the text and it cannot be said that such books cannot be had now that the market is so full

and ever-growing. Text-books are now prescribed for English (both detailed and non-detailed) and other language subjects. The necessity and importance of text-books even for the non-language subjects should receive early recognition and the introduction of the same at least in the lower forms of High Schools, will go a long way to remedy the evils resulting from a too rigid adherence to the syllabus.

S. NATESA AIYAR.

Lower Secondary Arithmetic

BY S. RADHAKRISHNA AIYAR B.A.,
Late Principal, Maharajah's College, Pudukotah

AND

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Retired Headmaster, Board High School, Tiruvalur.

19th Edition—In the Press.

OPINIONS ON THE PREVIOUS EDITIONS.

THE MADRAS MAIL says:—"This book should attain the popularity of Mr. Radhakrishna Aiyar's other well-known mathematical publications."

THE HINDU says:—"We have made a close and critical study of the book, and have no hesitation in pronouncing it to be just the Text-book suited to the pupils of the Lower Secondary forms.....The fame already acquired by Mr. Radhakrishna Aiyar, as the author of the well-known F.A. Algebra and Matriculation Arithmetic, is fully sustained by the work under review: and his masterly style of treatment, coupled with the ripe experience and practical wisdom, discernible on every page of the book, of his collaborator, Mr. K. Vaidyanathaswami Aiyar,.....renders it deserving of a very high rank among text-books of Arithmetic, English or Indian.....If only Arithmetic is taught with such a Text-book, it will, we feel sure, soon cease to be the dry and repulsive subject which it, at present, is to a large majority of pupils."

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THE TEACHING PROFESSION AND SOME OF ITS PECULIARITIES.

THIS profession—its work and efficiency—has always engaged, is engaging and will continue to engage the attention and anxious thought of the best intellects and loftiest patriots in every country. And no wonder, as it admits of infinite variety in aim, scope and method of work, and results—infinite only as the human mind and demands can be. To reduce it to a system and evolve, out of this infiniteness almost a chaos, a spirit of unity and uniformity have been the aims of anxious reformers, the latest instance being the unselfish labours of the Calcutta University Commission. But thus far, there has been no starting the hare. What is worse, conflicting ideas and interests in a variety of matters, political, economic, social, &c., lord it over and confusion becomes worse confounded; so much so, one rightly begins to wonder whether any organisation or only disorganisation it is that prevails in the profession. A correct grasp of the situation becomes a *sine qua non* for any thoughtful person, inside or outside the profession to effect any reforms that may endure for a time and spread the halo of rest and infuse single-minded devotion.

2. The big leap in expenditure with consequent upsettlement and struggle in life and tendencies to class-formations based on professional interests leading perhaps to a re-adjustment of society, are all only matters of common interest. Organisation of teachers is only next to impossible on account of conflicting interests. Love of pupils is cultivated more to secure private tuitions; love of knowledge, more to pass higher examina-

tions and living in advance of times is true only with regard to borrowing on the surety of emoluments to come.

3. *Organisation.* The profession consists of the educated working for educating others. The torch of learning is kept on by the pupil becoming in his turn the master, who to promote his marketability, continues to be a pupil more for higher examinations. Again, the methods of work are ideally supposed to be of a personal nature, allowing sufficient initiative and freedom in drawing up syllabuses and experimenting,—though it is all a fiction of the trade. Still again, demands on education entitle any person to manage and direct its course. Even the fact of a large number of "trained teachers" is not strong enough (for reasons, needless to mention here) to counteract these influences. Thus, the aspect of any "technicality" lies hidden far away and barring the part of it in Government employ, it does not command the status of a recognised profession in the scale of public services. Even that part of the Medical, Sanitary or Engineering which is not actually under Government employ, enjoys the status and solidarity of a profession; perhaps because their numbers are smaller and surely because their "technicality" is admitted. Whereas the disorganisation and competitive struggle, even in one and the same school (healthy only to the extent of the moral calibre manifested in the profession), which are inseparable from such varieties, rob the profession of any sense of unity inherent on account of commonness of professional pursuits.

Financially, salaries are good at start as if in compensation for the assured stagnation later. The range of promotion is short and progress through scales successively rising

is out of question. Whereas the style of living first accustomed to asserts itself through life (inertia) and this coupled with the demands of the profession for decency, neatness, and smartness, and alertness of mind and body result in a sense of poverty and humiliation. The feeling of helpless dependence, engendered by the circumstances of the present organisation, at every stage is simply fatal to the glories of the profession. This is tyranny, not the worse for not being recognised, exercised unconsciously and acquiesced in helplessly.

Departmental control, which is the only factor (outside Examining Boards) that lends the colour of unity is neither organised well enough nor sufficiently tangible. It is also rightly or wrongly, no less subject to the various influences at work which reduce its usefulness to a minimum. Its position is rendered only more awkward between the teacher, the manager and the Government, reducing it to a soulless mechanism,—neither believing nor believed in—touching narrowly the profession with which however (thanks to Sir Henry Stone and his successors for recognising it) its destinies are bound and the glory or shame is shared. But can it be otherwise so long as education is the problem for spare time and for financial savings, at the hands of even the Government, along with others? Public policy even in the interests of civic well being should command a better foresight.

4. *Working.* It is an irony of progress, that where individual attention is most needed, work is done collectively, with vengeance. Every other learned profession, dealing largely with aberrations of mind, body or nature, enjoys the facility (never mind the failures, despite) of treatment by the indivi-

dual whereas the training of character and discipline, mental and moral, is achieved collectively, and *ipso facto* mechanically! Again in the profession that demands the most progressive outlook and environment, mental and moral, prevails the system of a common public examination on a staggeringly huge scale and a system of stereotyped methods (Examination method!) believed in neither by the teacher, nor by the pupil,—not to speak of the people. What is worse for the profession is that while the demand of its ideal is “pursuit for its own sake,” it is made the field of exploitation for bread-winning purposes. No blame! The conditions of life warrant it and expansion perhaps needs such recruitment. But the picture of mutual recrimination presented among the various grades in the profession is amusing! From the University Professor and outside Examiners down to the Elementary Schoolmaster! This unbroken chain only argues a confession of failure of education, at least recently, and helplessness or inability to fight it out. The fact is that a defect anywhere is almost irreparable. The struggle between theories of efficiency and facilities for passing is worth a careful thought. Syllabuses are like husk in a boiling pot. The relation introduced between performances at school and the public examination stands criticised a failure, ‘Prestige’ keeping it on still. Parents, again, however discriminating in respect of other investments, are generally in wasteful hurry about their children; no doubt, only along with enthusiasts that plead for ambitious syllabuses, multiple subjects and undue specialisation in Secondary Education. The world whirls on! And the helpless teacher is to adjust himself to meet all the wishes of all! Surely a conscientious teacher finds the profession chosen in

his innocence, for the nobility of it, very trying.

Ideals: the least said the best, as at any rate, only too well-known. Suffice it, briefly, that any kind of human failure anywhere in life is fathered on the teacher! very complimentary indeed!

5. *Respectability*:—Along with the rest of the world, the teacher also suffers (one view of matters) on account of the disintegrating forces at work and the feeling, however shallow, of demerit. Reverence cannot be withheld where it is due. Failures and unemployment, new channels of thought and work and an unhinged society partly account for the seeming irreverence. Have a firm faith in self and your influence on learning, character and earning capacities of pupils and then with self-reliance comes self-respect and with self-respect, reverence from others. Respect through fear, however it may be in other professions that admit of perversibility in the discharge of duties, is neither possible nor worth while. It is opposed to principles of wholesome discipline and training. Examinations exercise it intellectually and education is none the better for fear of them.

6. *Lucre*! Distressing indeed! Ideals in life and outlooks and measures and values in the world have changed. Society and social demands have changed. Other professions have adjusted themselves. But this (a profession?) has remained stationary. None to blame. Man, particularly in these days of hurry and stress, is prone to determine values by the immediate and the tangible, whereas the results of the teacher's work is neither, nor at its best, admits of being valued out in Rs., as. and ps. Further under the present system, the pupil goes through a number of hands and of schools which makes it difficult to fix on the person or set of persons responsible for any good results. The exercise of the professional duties neither ad-

mits perversibility nor involves adjustment of moneys. It is again a profession largely on the expenditure side of accounts. It is demanded of it to present not only in theory but in practice, the supremacy of virtues, soulless if deprived of suffering; and to illustrate “Poverty is neither vice nor sin.” It carries with it practices that do not keep the mind on the alert for money-making. Even ‘famine allowances’ do not disturb the evenness of his career. The profession and its ideals are opposed to “Strikes” and even if degenerate enough for such practices however remote, the teacher, living long ahead of his current emoluments, cannot afford it; nor is there unity, the teacher being, if only possible, more diffused than the Doctor in the story of the beggar, pretending a boil, allowed by the king to extract a pie from every doctor of medicine. The battle has to be fought out against respectability-through-money.

It is happily accepted on all hands that there can be no good schools without better salaries. How more satisfactory would it have been, if however the Education cess had been the first charge collected on any kind of income or the first kind of tax levied were reserved for Education! Now, the question of funds comes in as though funds collected were ear-marked for other purposes or the employees in other walks dictated the means for enhanced funds! Well Education, to say it over, is the problem for spare time and financial savings, though the first to be called upon for various requisitions.

It was also said once and recently reiterated that ‘Better salaries do not necessarily create better schools’

It must be stated at once (“create” meaning “make”) that better salaries promote

contentment and self-respect and thus serve to bring out the better in the teacher to bear on his work. Surely, better salaries will not spoil the teacher particularly. Man—and no less the teacher—is capable, by grace of God, of infinite progress and energy for good. The question is like that of the Seed and Plant “to make education worth paying more for” or “to pay more to make education worth while.” Whatever is worth doing is worth doing well or it is a penny-wise-and-pound-foolish policy. The duty to Education, chiefly at the hands of the Government—at once the richest and largest employer and the general patron—has long been owing. Let it be paid off even now with enhanced scales standardised on lines clearly understood and grants and subsidies regulated on more liberal lines.

The policy of starting new schools on net cost lines and allowing the old ones even under the same management to drift for themselves is not healthy. It is on the whole like the case of the dog that gave up the piece of flesh in the mouth to get at that under water; strikingly so in these days of demand for standardised scales. Will the teachers, fed hitherto on tantalisation, simply have to look on for ‘transference’ with prospects of nationalisation, being effected? Will ever the charms of ‘one's own’ come within the reach of the teacher or is he to glory over the complete disappearance of the egoistic in him, on its materialistic side?

The teacher is often said to be, so often as to make him also say, that he is a tenth-rate man. Pray, what is the criterion? Is not almost every man that started life as a teacher the better for it when he has kicked it off for want of opportunity and encouragement? Education is a sacred matter and instinctively so with the Indian and it is fervently hoped that both the State and the people will rise equal to the demands of it!

N.B.—In other professions, professional qualifications and service count for promotions whereas in the teaching profession, the general educational qualifications determine the prospects.

D. V. JAGANNADHAM.

I.

THE NECESSITY FOR THE FORMATION OF AN ASSOCIATION OF PARENTS AND GUARDIANS OF PUPILS.*

Introduction.—This subject has engaged my attention for several years past. It was discussed last October by the Masters' Association of this school when Mr. G. Ratnam Pillai, recently the Headmaster of the Madras Progressive Union School and now the Headmaster of the Govindappa Naick School, was present and expressed himself equally with me in favour of such Associations. The full text of the paper read at that meeting by one of my Assistants is contained in the *Madras Educational Review* for January 1920, to which I invite your attention for certain powerful pleas put forward therein for the nationalisation of education in these days of self-determination.

A Headmaster's Survey.—My experience as a Headmaster for over twelve years tells me that, in the absence of special organisations of special bodies of men with varied interests and different points of view, any intelligent understanding of educational needs or any co-ordination of independent efforts is rendered impossible. Of the four kinds of people a Headmaster has to do with, viz., the officials of the Department of Public Instruction, the members of the school management, the Assistant-masters of the school and the parents or guardians of the pupils—only the first kind have an organisation almost perfect in its ramifications, and no wonder, as it is the machinery of Government itself. Knowing only one Board of Management as I do, and therefore not wishing to generalise upon the nature or constitution of such Boards, I desist from saying much here on the second class of persons. The third, the teachers, are just learning to unite for

* The address of the late Mr. P. Venkataswala Iyengar, B.A., L.T., Headmaster, Hindu Theological High School, Madras.

their common interests not only as employees of the schools they serve, but also as members of a self-respecting and learned profession whose importance to the country is growing day by day. Bodies like the numerous Masters' Associations attached to their respective schools, the Madras Teachers' Guild, and the South India Teachers' Union have just begun to secure a partial measure of recognition at the hands of school managers and of the Government. But even this tardy and inadequate articulation or countenance is not enjoyed by the fourth class of people, namely, *yourselves*, because you have no convenient vehicle for expressing your views, even though you contribute the bulk of a school's income in the shape of pupils' fees and are affected by and interested in the education of your children more than either the agencies running educational institutions in the land or the Government Department controlling those institutions can ever pretend to be. You will thus see that the Headmaster moves in a sort of quadrangular world one of whose corners (the Government) is rigid and almost impregnable, a second (the management) which, if I may say so, is rather inert and not to be easily moved, a third (the teachers) just forming and but dimly felt as a power, and the fourth (the parents) nowhere because practically non-existent as a body. Though the general public is no doubt discussing education in the press and on the platform, its voice is like a cry in the wilderness. Government has too tight a grip on the public schools, and expends too little money on Secondary education to admit of any easy or speedy changes in educational policy and methods. Managing Boards of private schools often have on them, of course with honourable exceptions, men whose sole 'business' is not education. The teachers are not a power in the land. They have neither effective organisations, nor great social influence nor any spare money for propaganda outside of themselves, and now-a-days they lack even the

time for any cultured leisure or intensively patriotic endeavour. Therefore, unless and until the parent class steps boldly into the field and takes up the problems of Indian Education in its own hands in right earnest, and moulds and determines the future educational aims and practice of the country with the active co-operation of school-masters, the results of school instruction are bound to be inadequate, disappointing, and unpromising. The situation is in the hands of the general public to mend as they can, and the key to that situation is in the hands of the parent-class to use if they will.

Problems of Indian Education.—Some of the problems confronting public Secondary education in our country and demanding urgent solution are the following, among others:—

1. The fearfully high and almost prohibitive cost of education due to a number of factors like growing educational needs, increasing prices of aids and appliances to study as, for example, books, stationery, Science materials, sporting requisites, buildings, etc.

2. The miserably low pay and prospects of teachers in these days of enhanced emoluments to all other workers all round both in and outside Government.

3. The impractical nature of school instruction resulting from the literary and non-vocational quality of the teaching, the multiplicity of books and note-books, overburdened curricula, etc.

4. The growth in youngsters of undesirable tastes and tendencies born of the contact of East and West and old and new as, for example, irreligion and irreverence, restlessness, and love of excitement, dandyism in dress and manners, addiction to luxurious and injurious habits of smoking and chewing, frequenting of restaurants and cinema theatres, etc.

5. Insufficiency of schools and colleges, overcrowding, want of play-grounds, meagre teaching grants, evils of examinations, the migration of pupils, etc.

6. Unsuitable school hours, inconvenient or unnecessary school holidays, the problem of school-dress for pupils, late-coming, frequent absences without leave, grave moral defects, etc.

In short, the evils and shortcomings of public education are too numerous to be detailed and catalogued, but the above are sufficiently grave to be appalling. If my experience as a teacher and Headmaster for over 18 years is worth anything I cheerfully and unreservedly place it at your disposal. My place has never been a bed of roses. The nature of the work is one of incessant struggle with an over-exacting and not very liberal Government Department, with a highly conservative and slow-responding management, with an under-paid and over-worked staff of Assistant-masters, and with sometimes angry or unreasonable parents. One and all have been very sympathetic and indulgent to me personally, hence the measure, though little, of success that has attended my efforts towards establishing this once, shaky institution upon a firm and sure foundation.

Conclusion.—We need your co-operation in everything, now, more than ever, because of the wave of Non-Co-operation passing over the whole land. You want national education, but without you to define it and give it practical shape, we can do nothing, for you are ultimately the nation in whose homes, as our King-Emperor has truly said, 'are laid the foundations of national glory.' With the coming of the Reforms we shall have our own Minister of Education who will naturally look to you to tell him of your needs. Therefore organise yourselves in time as our powerful auxiliaries for the betterment of our children, and between us, as parents and teachers, separately organised but mutually helpful and co-operating, we shall yet raise a generation of young people who will be the hope of the future greatness of our dear motherland.

II

NATIONAL FEDERATIONS OF PARENTS AND GUARDIANS OF SCHOOL-PUPILS.*

Exactly ten years ago, in October 1910, was published in England the first edition of a remarkable and epoch-making book called 'Essays on Duty and Discipline,' being a symposium under that name of a variety of related subjects from forty different pens. Among their authors are several eminent Divines and Justices, Legislators and Administrators, Generals and Admirals, Principals and Professors, Authors and Publicists, and Founders and Heads of Institutions. Some of the subjects treated of in relation to Duty and Discipline are Education, Parental Responsibility, Home Discipline, Moral and Religious Training, The Prevention of Nervous Diseases, and the Increase of Crime. This collection of forty Essays which went through five editions within thirteen months has an exhaustive appendix containing the expressions of opinion on the papers in the series and on the movement in general by nearly two hundred men and women in and outside England, eminent in their respective spheres of activity. Such persons are ever the cream of a country and their views always reflect the sturdy commonsense in the collective consciousness of a nation.

It now looks as though God had willed that through the agency of this great forward movement a wave of general reformation should pass over the entire British Empire reminding its youth of both sexes of certain excellent old-time virtues which were in danger of being swept away by the prevailing love of ease and relaxed discipline both in the home and in the school. It now

* A paper read by Mr. N. A. Doraiswami Iyengar, Assistant-Master, The Hindu Theological High School, Madras, before the first meeting of the Association of Parents and Guardians of pupils of the School.

looks like a God-send because, within four years of the initiation of this great moral and spiritual upheaval, England and her Colonies, her great Dependency not excepted, had to brace themselves up for a mighty struggle with one of the most unscrupulous of foes for over four years, and come out successful at the end. God grant that the lessons of chivalry and patriotism, duty and discipline, self-sacrifice and endurance of hardship which the Great War emphasised will not be soon forgotten in the pride of victory or the reaction of peace!

Conditions in India to-day are in no way better than they were in England or America a decade ago. The same evils that threatened to sap the vitality of the Christian nations of the near West and the far West now lurk in our land as a subtle danger eating into the heart of Indian society in manifold unseen ways. The multiplication of comforts, lying advertisements, artificial prices and a bloated currency have deteriorated the standard of national morality with the result that the pursuit of pleasure and the avoidance of pain are considered to be the one aim of existence and any means calculated to compass that end are thought to be right. This moral disease has afflicted the adults no less than the youngsters, the women as much as the men, and the school children perhaps more than the street urchins.

Such a deplorable state of affairs, due to the fast changing times with their clashing ideals born of the contact of two different civilisations can only be remedied by taking the rising generation well in hand before it is too late. Only two sets of people can do it, and they are the parents on the one hand, and the teachers on the other. Till the youths pass out of their teens, and often till even later, they naturally are, or are supposed to be, under the influence of the parent or guardian at home and the school teacher or college professor. If during this period a youth should get out of hand through keeping evil company unnoticed by any responsible elder it must be due

to the criminal neglect of either the parent or the teacher or possibly both. Time should be made, trouble taken, and ways and means devised to bring the parent and the teacher together occasionally either in their own persons or through their Associations. In these days of hurry, want of leisure, and many distractions, individual meetings of persons are not always possible. The struggle for existence presses equally on both; and, each contenting himself with the pious hope that the other is doing his best for a lad, the problem of the uncared for and irresponsible youth will very soon come to the forefront of the nation's affairs for consideration. Will teachers in the whole of India form a great National Federation of themselves with membership in their local unions; and, closely parallel to these, will all parents and guardians of pupils, that is, that section of the public which really and mostly counts in the matter, also mobilise their forces and resources on a truly gigantic and national scale? To realise the magnitude of the evils growing around us, let me quote the Right Hon'ble the Earl of Cromer, P. O., G. C. M., O. M., K. C. S. I., on the dangers of a super-imposed foreign civilisation and education. After pointing out that the subject of the moral training and discipline of children is not merely insular but far-reaching, he continues: "The greatest of all Eastern problems is to discover some means by which Western civilisation and education can be introduced into countries such as India and Egypt, without undermining the moral basis on which the whole fabric of society rests. For obvious reasons, the difficulties of finding any solution to this problem, if, indeed, it can be solved at all, are enormous; but there is one thing we can do, and that is to spare no efforts in order to strengthen the moral fibre of our own children, some of whom will be destined in the future to exercise, both by precept and example, an abiding influence on the characters of those large Eastern communities whose interests are, to a greater or less extent committed to our care and whose in-

stitutions and habits of thought are now in a state of flux and transition, which renders them highly impressionable and receptive." These are surely prophetic words, for none can describe the terrible social confusion in the India of to-day.

It would perhaps be instructive if a rapid survey of the British Empire is made in order to show, in the words of the great men of their respective countries, what Western civilisation has done for their own people. To begin with England, says Sir Dyce Duckworth, M. D., LL. D., Consulting Physician, St. Bartholomew's Hospital; Senior Physician, Seamen's Hospital, Greenwich: "Apparently, the days for Solomon's rod and adequate punishment for offences have not passed by. We have an unwhipped generation around us, and a sad spectacle it is. Universal service is the great remedy to meet the evils that have come with it—the one thing to enforce discipline, obedience, self-respect and patriotic responsibility, and the sooner it comes the better. The loafing, idleness, gambling, irreverence and religious indifference of this twentieth century are clearly leading to the rapid decay in morals of masses of our countrymen..."

Here is a terrible American indictment of public education in the United States. Speaking of excessive criminality, the Very Rev. Martyn Hart, D. D., Dean of Denver, Colorado, says: "This condition of declining morality must continue till children are taught to be moral in the home and in the school." Again, "It must be confessed that the public education is a failure. It fails to do that very thing for which education is undertaken; it fails to train our youth to the yoke of discipline and obedience; it fails to create in them a principle of energy which enables them to resist temptation; it fails to induce them of their own will to accept the law of labour and duty." And concluding, "Of course it is patent to everybody that the first stimulant to any movement of reform is information as to its necessity; and in this country

where the education is entirely secular, as a rule, crime has steadily and consistently increased, and it will necessarily do so until children are supplied with some incentive to keep them moral."

Passing on to Australia, we find the Hon'ble J. Mildred Creed, Member of the Legislative Council of New South Wales, painting a picture of juvenile misdemeanour which it is impossible to contemplate with equanimity. He says: "I am of the opinion that the neglect to exercise parental control in New South Wales—as is also the case elsewhere—has an important influence on the birth-rate of the State. The conduct of children under sixteen years of age, as is obvious to every observant person, in the streets, in public resorts, on steamers, in trams and other public vehicles, is such as to render the prospect of a family repugnant to thoughtful men and women. They realise that, even if they themselves do not omit to carry out their duty as parents when the children are in their homes, they cannot avoid their intimate association in the schools and play-grounds with others whose guardians entirely neglect their parental duties and that therefore their efforts to bring up their off-spring properly will oftentimes be defeated. Enquiry will show that a considerable proportion of the ill-behaved boys and girls are pupils of the schools under the Department of Public Instruction and that the control of these children, even if fittingly exercised during the hours of instruction, entirely ceases on their leaving the precincts of the schools. When remonstrated with on their misconduct by a bystander, they are almost invariably insolent, as no physical coercion can be exercised by such a person, however gross the occasion, except at the risk of police court proceedings initiated by a foolish parent on the probably untruthful statement of the child. Few men care to run the risk of such annoyance; therefore disorder and misconduct continue entirely unchecked."

The painful survey may be brought to a close with quoting the mild and constructive criticism of a distinguished officer in South Africa. Says the Hon'ble R. C. Russell, I. S. O., B. C. L., Agent-General for Natal, late Superintendent of Education, etc.: "In these days when so many false doctrines, having their origin in self-satisfaction, are in the air, I think too much cannot be done to inculcate in the rising generation ideas and ideals of self-sacrifice and patriotism. Chivalry as personified by Sir Philip Sidney at the battle of Zutphen, patriotism as typified in Wolfe on the Heights of Abraham, these are the models our children should be taught to follow. Respect for their elders, sympathy with the sick and infirm, and above all kindness to dumb and helpless animals, should be preached in every school in the land. All that the little ones want is sound and firm guidance."

The foregoing extracts have been given at some length because the experience of the West may help us to avoid in India any repetition of social ills of the kind described. It has of course been said that History repeats itself; but it need not repeat itself with the same intensity everywhere, if it can be possibly avoided, so that another nation's experience may best teach us the course to be followed. We may not be able altogether to prevent things from happening, and yet nothing ought to prevent us from learning the remedy for any grave situation that may arise or has already arisen, and the method of applying that remedy. Western diseases require only Western treatment, and the way of the West to meet danger ahead is to organise to overcome it. Let us therefore organise as teachers and parents and learn to co-operate for our children's good. Let us also learn not to look to the Government for everything. After all self-help is the best help, and the most natural and the best kind of help to be found is the mutual co-operation of parent and teacher. It would be fitting to conclude with the exhortation of Lord Sander-

son, K. C. B., K. C. M. G., I. S. O., etc., late Permanent Under-Secretary of State for Foreign Affairs and Chairman of the Council of the Charity Organisation Society:—"Nothing is easier or more pleasant than to be eloquent in praise of the civic virtues. To practise them requires a certain amount of austerity and of steady adherence to principles at the cost, not infrequently, of going contrary to sentiment and the promptings of easy philanthropy. There seems to me to be a strange inconsistency in constantly affirming that the strength and

the welfare of the nation depend on the cultivation of the idea of the family.....if, at the same time, we in practice, encourage a disposition to look to the State or the Municipality for assistance in all cases of difficulty, and to make recourse to such assistance pleasant and easy, to the detriment of individual effort, self-denial, and mutual help between relatives. It is only by the promotion of a healthy public opinion that this insidious process can be checked."

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(Prepared in accordance with the recommendations of the University of Madras)

BY

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ROBERT BURNS.

CARLYLE in his justly celebrated essay on Robert Burns, has most truly remarked that 'the character of Burns indeed is a theme that cannot easily become either trite or exhausted and will probably gain rather than lose in its dimension.' This great verdict pronounced by the Sage of Chelsea on his countryman contains, perhaps, the essence of his sympathetic consideration of the poet in his 'Essay on Robert Burns.' It almost appears that Carlyle in spite of his most eloquent praises has not done full justice to the object of his worship in the fact that only the better side has been delineated and the other side scrupulously neglected. Full justice could be done to such a great personage as Burns, only when his genius and his splendid poetic gifts are viewed in the light of his shortcomings. Nor should we go to the other extreme and consider criticism as 'a cold business,' weighing out every one of his qualities in the balance of absolute standard of merit and virtue. Undoubtedly there ought to be a great deal of sympathy, if one desires to enter into the spirit of Burns's poetry and realise their beauties in perfection.

The life of no other poet, perhaps with the singular exception of Byron, presents to us such a thrilling note of tragedy as that of Robert Burns. It was a sad irony of fate that this great man should combine in his character so many contradictory features, that like 'witches and warlocks in a dance' ever troubled his poor soul and made his journey of life a painful tragedy. It is undoubtedly the greatest freak of fortune that Burns has left behind him more than three-hundred letters, written to several of his friends, wherein he has given vent to his thoughts and feelings, his headlong passions and fleeting emotions in a most remarkably candid and sincere way. In addition to these

he has left behind him, his invaluable private diary, wherein are found writings of a marvellous nature, that lead us far more into the manner in which he led his life, how he viewed society and what effect society had on him, than his letters and songs put together.

Despite the poverty of his father and the miserable circumstances of the family, it ought to be remembered that Burns had everything congenial to the remarkable development of his poetic genius. His father, William Burns, subsequently glorified by the illustrious son as 'the saint, the father and the husband,' was a farmer of the old type, 'who had after several years' wanderings and sojournings picked up a large quantity of observation and experience.' The elder Burns possessed several obstinate qualities and an irascible temperament, which features were inherited in full by the great poet. Robert's mother, Agnes Brown, possessed several delicate traits of character amongst which a deep devotion to the Almighty and kindness to fellow-creatures occupied a pre-eminent part. Skilled in legendary lore of songs and ballads, she was instilled with a lyrical gift and an unfailing wit and humour. It was at her feet that Burns heard of the famous acts of his countryman, William Wallace, and learned a history of ideas concerning ghosts and witches.

Born on the twenty-fifth of January 1759 in a mud-walled cottage not far from Ayr, Burns had full scope during the early years of his life to spend all his hours in the country. When he was about seven, the family took a small farm near Mount Oliphant, where after a few years the household was much troubled by a tyrannising factor. Subsequently the father moved to another farm Lochlea, where he died of consumption after a long struggle with scanty means, barren soil and bad weather and was carried away in the words of his son, 'to where the wicked coast

from troubling and where the weary are at rest.'

William Burns was considerate with respect to the education of his children and employed one Mr. Murdoch as a tutor to them. Subsequently when he became too poor to engage a tutor, he himself spent most of his leisure hours in educating them, so much so, that Burns by his eleventh year, was a 'critic in substantives, verbs and participles.' Perhaps the first book he studied, was a pocket copy of the History of Sir William Wallace, which infused into him the strongest love for his country and a Scotch prejudice which saturated the blood in his veins. The few hours he could spare from the farms in which he worked, he devoted to the study of the works of Shakespeare and Milton, Addison and Pope. But the greatest respect, love and admiration was evinced by Burns to the works of two of the famous Scotch writers who preceded him, Fergusson and Sir Allan Ramsay, the author of 'The Gentle Shepherd.' Carlyle in his ardour to elevate the literary merit of Burns, scarcely does due justice to them. He remarks: "With no furtherance but such knowledge as dwells in a poor man's hut and the rhymes of Fergusson or Ramsay for his standard of beauty, he sinks not under all these impediments." Destitute as Burns was of a University career, he had a remarkable family altar, around which he imbibed lessons of untold value. Are not these salutary influences to the growth of one's genius? Genius, as Carlyle himself admits somewhere, is not made but kindled; and if such ennobling virtues and heavenly qualities do not 'kindle' the latent genius, will a University career do the same? Burns himself remarks of his great indebtedness 'particularly to the excellent Ramsay and the still more excellent Fergusson,' but it undoubtedly appears that though they served him as the best models in form, to them were not given that remarkable insight into the

humblest walks of life, the ever-flowing stream of genial wit and humour and that marvellous observation of the unfoldings of nature—qualities that have endeared Burns to the very heart of the world.

With Burns, love and Poetry began together, his earliest verse being perhaps the fragmentary one, "Handsome Nell," a 'puerile and silly' song composed on a 'bewitching creature,' who had robbed his heart. This was about the summer of 1773 when he was hardly fifteen. From that year up to about 1784, he wrote several songs and poems, amongst which are included his splendid love-lyrics, 'Mary Morison,' 'O Mary at thy window be' and 'Bonnie Peggy Alison.' When his father died in 1784, he set to work vigorously to improve his farm; but as fortune would have it, the lands yielded no produce due to several unforeseen circumstances. It was this wreck of his ambitions as a farmer that for once settled his life as a poet.

It is with considerable reluctance that we have to turn to this tormenting period of his life, when 'his mind is at variance with itself' and 'Wild Desires and Wild Repentance alternately oppress him.' We shall not enter into the details of the ignoble controversy in which Burns launched himself with the members of the Auld Lights. Suffice it to say that this collision induced him to write several satires, levelled against the clergy of his time in the most daring and licentious terms.

Besides these satires, Burns wrote several exquisite poems and songs, which were subsequently collected and published as his first collection at Kilmarnock on the 31st of July, 1786. The edition thus sent forth into the world in this humble fashion aroused considerable interest; and the news of the tremendous powers of the peasant-poet spread like wild-fire throughout Scotland. Letters poured in from all directions, from the age

knowledgeable celebrities of the day, appreciating his splendid poetic gifts and talents. The formidable success attained by the first edition inspired in Burns the idea of publishing a second edition. With this idea, Burns set forth to the Scottish capital, 'with a heart but ill at ease,' as Principal Shairp remarks, 'bearing dark secrets he could tell to no one'—an incident which has often reminded us of a similar journey to the English Metropolis by the great Dr. Johnson, just forty-nine years ago. But quite different from the author of *Rasselas*, was the reception that awaited the young poet of Ayrshire in Edinburgh. The greatest celebrities of the day including the great historian Robertson, Dr. Blair, Professor Dugald Stewart, the blind poet Dr. Blacklock and Lord Monboddo, were eager to have Robert Burns at their tables. It was also at this time that he secured the friendship of the noble Earl of Glencairn, whose death was subsequently mourned by him in verses, that, for sincerity and pathos, have remained perhaps the best in the region of English elegiacs.

After several tours throughout the country, Burns at last settled at Ellisland Farm in March 1788 and married Jean Armour whom he had been loving for the last four years and on whose account he had to pass through several ordeals and difficulties. During the rest of his life, his chief contribution to literature was his inimitable piece 'Tam O'Shanter.' Besides this ingenious piece, he contributed several songs to Johnson's *Scots Musical Museum* and Thomson's *Collection of Scottish Melodies*. In 1792, Burns removed to Dumfries, where he lived till his death in July 1796. During the latter part of his life, he was employed by the Government as an Exciseman, which profession greatly handicapped the exercise of his developed powers of poetic composition. It is an irony of fate that Burns, who was entertained during his

first visit to Edinburgh with an enviable splendour, should have fallen low in the estimation of his countrymen at the point of his death. As Carlyle eloquently says, 'Burns first came upon the world as a prodigy; and was in that character entertained by it in the usual fashion, with loud, vague, tumultuous wonder speedily subsiding into censure and neglect.' When Burns died, he was no longer the lion of the metropolitan tables. This censure and neglect contributed much to increase his melancholy and drove him to an early grave. But as soon as his body was laid low, all the Scotchmen saw that they had missed their greatest national poet, that a void was created by his demise which no writer could hope to occupy. Posthumous retribution is one of the common occurrences in the history of the literature of any country and hence it is no wonder that Burns also received the same.

The Kilmarnock edition of Burns contains his best poems and songs, with the rare exception of 'Tam O'Shanter.' The most popular and favourite poem in this volume is 'The Cotter's Saturday Night,' the exclusion of which from his works would have greatly marred his character as a man. In that exquisite poem, Burns gives a charm to the life of Scotch peasantry, delineating the joys and sorrows of the rustic fireside with a wonderful power and grace. The humblest peasant is instilled with the idea that within the narrow seclusion of his thatched hut, could be realised pleasures unknown to the wealthy owners of palaces. More striking and more intense is the calm religious note that pervades the poem. Following the serious and dignified description of the god-fearing nature of the humble cotter's family, there is a fierce attack on the modern refined modes of worship in the following eloquent lines:—

Compared with this, how poor Religion's pride,
In all the pomp of method and of art,
When men display to congregations wide
Devotion's every grace except the heart.

The Scotch peasantry again are infused with the greatest contentment in these splendid lines:—

From scenes like these old Scotia's grandeur
springs,
That makes her lov'd at home, revered abroad;
Princes and lords are but the breath of kings,
'An Honest man's the noblest work of God';
And Certes, in fair virtue's heavenly road,
The cottage leaves the palace far behind;
What is a lordling's pomp? a cumbrous load,
Disguising oft the wretch of human kind,
Studied in arts of hell, in wickedness refin'd.

Then follows a solemn prayer for old Scotia:—

Long may thy hardy sons of rustic toil,
Be blest with health, and peace and sweet
content.

Space does not permit us to consider all his other important poems; but due importance ought to be attached to his 'Twa Dogs,' wherein a striking contrast has been brought out between the peasants' lives and the lairds' in the most humorous manner. Equally impressive is that famous cantata: 'The Jolly Beggars' wherein the coarsest materials and the grossest sentiments are set forth in an exquisite dramatic vein. Burns's indignation against the wealthy classes and his opinions with respect to liberty break forth in verses like the following:—

A fig for those by law protected,
Liberty's a glorious feast!
Courts for cowards were erected,
Churches built to please the priest.

Burns's famous poem 'Tam O'Shanter' was written according to his wife during one of his most inspired days in Ellisland. Despite Carlyle's criticism that the poem is only 'a brilliant piece of rhetoric' and that 'the heart of the story lies cold and dead,' this

famous piece is admired universally to be perhaps the best of the poet's works. The scenes follow each other in a wondrously fine manner; and the description of the Alloway Kirk with its fearful witches and warlocks with the flight of Tammie, 'glow'd, amaz'd, and curious' is most forcible and humorous.

The poems and songs of Burns are noteworthy, when considered both from the point of view of matter as well as of treatment. The great merit of the peasant-poet lies perhaps in the fact that the humblest walks of life, the most uninspiring observations that hardly strike the notice of even interested observers and the rude beliefs of the Scotch peasantry, are taken up and handled in a remarkably fine and dignified manner. Who would think of warbling a note on the poor mountain daisy on being turned down with the plough or on the hare wounded by the 'barbarous art' of 'an inhuman man'? Likewise the rude scenes and places endeared to the heart of Scotland became the subject of much immortal consideration. These noteworthy qualities of Burns served very much to make him loved amongst his countrymen. As Principal Shairp has pointed out, the Scotch people were then at such a stage in the history of their progress that they were ashamed of themselves and the English looked down upon them with contempt. Johnson's peculiar prejudices towards Scotland at the very time when Burns was leading an insignificant life in Ayrshire, are proverbial. But the great peasant-poet revealed the marvellous virtues of their humble life and by his notes instilled into their minds the glorious ideals of contentment and liberty. His famous saying was Pope's splendid line,

'An honest man's the noblest work of God.'

No wonder, then, that Burns was loved by his countrymen in a way perhaps that no poet has been in the literature of any country.

Of the peculiar qualities of Burns, sincerity and truth form the governing features. There is no elaborate tissue of romance or any fabricated plot borrowed from Greece or Rome; there is none of the gilded sentiments or painted figures so common to the poets of England. Carlyle's words in this connection are remarkably forcible. He says: "The passion that is traced before us has glowed in a living heart, the opinion he utters has risen in his own understanding and been a light to his own steps. He does not write from hearsay, but from sight and experience; it is the scenes that he has lived and laboured amidst, that he describes: those scenes, rude and humble as they are, have kindled beautiful emotions in his soul, noble thoughts and definite resolves, and he speaks forth what is in him, not from any outward call of vanity or interest, but because his heart is too full to be silent."

Burns drew his inspiration mostly from nature, and his poems and songs abound with apt illustrations and comparisons, all drawn from that Sacred Inspirer. Undoubtedly he was one of the greatest nature-poets of the world. Many including Carlyle have suggested that his poetry had no historical connection and that it stands apart as a unique phenomenon entirely unconnected with the main course of English Literature. Backed by a strong argument, Minto has advanced that Burns, with his industrious pursuits in literature was only the literary descendant of Fergusson and Ramsay, who had already introduced the note of pastoral poetry. And Minto is but just when he remarks that it does a great injustice to Burns as a poetic artist to

say that 'Nature and nothing but nature was his schoolmaster.'

The genius of Burns reveals itself especially in his lyrical poems. With him, poetry was but a pure passion, the giving vent to the deepest moods of his mind. He wrote because he could not contain the ardour of his heart. His immortal poems on 'Lament' and 'The Ode to Despondency', to mention only two, are typical examples of his splendid lyrical talents. Now and then he broke into a sigh and wrung out his heart to the trees and the flowers of his solitude in lines at once tender and pathetic. As an example, take the lines that end his "Lament":—

Oh! Scenes in strong remembrance set!
Scenes, never, never to return!
Scenes, if in stupor I forget,
Again I feel, again I burn!
From ev'ry joy and pleasure torn,
Life's weary vale I'll wander thro'
And hopeless, comfortless, I'll mourn
A faithless woman's broken vow.

Among his several poems, Burns has left several elegies, wherein the noblest sentiments are given expression to in a language remarkably simple and pure. There are no forced tears, no grotesque sentiments, but the thoughts run forth as smoothly and quickly as his tears. The best and the most exquisite of his elegies is his lament on the noble Earl of Glencairn, who had been for some years his patron and protector. How forcible are the pathetic lines, which end the poem?

The bridegroom may forget the bride
Was made his wedded wife yestreen;
The Monarch may forget the crown,
That on his head an hour has been;
The mother may forget the child,
That smiles so sweetly on her knee;
But I'll remember thee, Glencairn,
And a' that thou hast done for me!

Burns has written also several other elegies in a comical strain amongst which the most humorous is Tam Samson's Elegy.

When Burns was but eleven, his uncle put into his hands a copy of "The Collection of Letters by the Wits of Queen Anne's Reign," which instilled in him a love of letter-writing. His letters were mostly written to his lovers and friends. Though he never attained any high degree of mastery in letter-writing, most of his letters, especially when written to his bosom friends, are natural and possess an elegant simplicity. The letters he wrote to Mrs. M' Lohoe, his Clarinda, have been preserved not very much to his credit. They contain his most passionate sentiments and feelings, all expressed in a remarkably candid and sincere way. To Clarinda herself, the letters of her Sylvander were 'precious memorials of an acquaintance, the recollection of which would influence me, were I to live till fourscore.' Another correspondent to whom Burns had the greatest respect and to whom he wrote the largest number of 'uniformly excellent' letters was Mrs. Dunlop of Dunlop.

The character of Burns as a man has been apparent throughout the above lines but what is of importance is the strange contrast between his ideals and his practice. Taking for example his conception of love, no one could have better ideals than Burns. His letters to Miss Edision Bagbie evince the stern purity and grace of these ideals but how different was the life he actually lived? It was perhaps this contrast between theory and practice that made his life a painful tragedy. Of his other qualities, he had a strong, passionate and fiery temperament and an almost effeminate sensibility. His humanitarian principles are evinced by such poems as

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that on "A wounded Hare limping by my side;" while his notions on liberty were deep and well-founded. He possessed a peculiar prejudice towards the wealthy classes, partly fostered by jealousy and partly by the sufferings the peasantry received at their hands. His intense patriotism and the pride he had in "Old Scotia's grandeur," are apparent from his various letters, poems and songs. But most forcible is his address to Edinburgh, wherein he hails her palaces and towers —

"Where once beneath a monarch's feet
Sat legislation's sov'reign powers."

Whatever may be the notion entertained by critics as to what rank Burns occupies in the history of English literature, no one can deny that he exercised a very great influence on that literature. Born as he was in an age which was essentially prosaic, he paved the way to a certain extent to the impending Romantic movement. And his poems and songs will long continue to give delight to mankind. As Carlyle most eloquently closes his Essay on Burns, we too may say, "This little Valclusa Fountain will also arrest our eye: for this also is of Nature's own and most cunning workmanship; burst from the depths of the earth, with a full gushing current, into the light of day; and often will the traveller turn aside to drink of its clear waters, and muse among its rocks and pines."

And this is the greatest glory of Burns to which any poet could aspire during the short span of seven-and-thirty years in this world.

S. RAMACHANDRA RAO.

THE ECONOMIC ASPECT OF COMPULSORY PRIMARY EDUCATION.

NOW that the Madras Elementary Education Bill has passed into law, it is the duty of every reflecting citizen to suggest the necessary precautions in order to make it a workable success. It is by no means implied that the proposed measure is not without drawbacks. The weakest part of the chain consists in the provision for the starting of a new school in cases of protest from honest burghers to send their sons to an institution where a different faith is taught compulsorily.

The interdependence of economic and educational activities, the necessary overlapping of all these schemes at certain critical times, are only a few of the many interesting, interacting tendencies. The new Educational Cess, to collect which the Local Boards have been empowered is the crux of the whole fabric. The proposed District Educational Council is another important innovation. Its composition and the duty of the Board members to elect non-members who are eminent educationists are to be very well understood by every member.

Apart from the historic cry of men to resist taxation, the debatable question as to the form which this tax ought to take, unhappily did not have a sound threshing in the Council. The question, whether land has been overtaxed in South India, has always driven a wedge of difference between even the sober non-officials and those in power. Perhaps a *Damnosa hereditas*! Prof. Bastable defines a tax as a "compulsory levy." If this cess were to prove a success, initial education of the Municipal Electorate in the vernacular is quite essential. Proper and timely insistence is to be made on the offer

of the Government to contribute an equal if not a greater sum.

A more important though indirect economic issue consists in the form which this education ought to take. Already, shrewd villagers have begun to question the efficacy of five years of education in the Three R's in a primary school. Further, when the rainy season sets in, the villagers do not send their sons regularly to the school. The obvious occupation of the plough, and the practical necessity of guarding the corn-fields against encroaching birds, only look essential for their existence. It is an open secret to state that all rural schools have poor attendance during the sowing season.

What is the economic truth underneath these unvarnished statements of villagers? It is a seemingly artless, nevertheless shrewd iteration of the need for *agricultural education*. It is a moot question, whether specialisation on the local needs, is not to be begun in the fifth standard itself.

Costly establishments like the Coimbatore College are out of the question. Further, in the beginning a radical change has to be made. The theory of the course treating about scientific manuring and chemical analysis of different soils is to be inferred from regular training in the village fields. In other words, from the fields to the books, should be the underlying scheme. It is no discredit to the Western elaborate chemical analyses and capitalistic methods, if one were to state here that the Indian farmer has learnt many a relevant consideration in the field of hard experience, which our agricultural college students take years to take cognisance of. Effective beginning on a small scale, gradual demonstration to the peasants of the increasing utility of up-to-date but not too costly

implements, the exceedingly sociable habits of the agricultural demonstrators who are to be progressively recruited from the villagers themselves,—all these amidst other relevant considerations can alone make the agricultural demonstration a success in rural parts.

When compulsory education is to be brought into force, it is expected that those in power will inaugurate the epoch by a thorough, intelligible revolution in the courses of study suited to the genius of the particular tracts. On identical grounds, weaving classes will have to be started in centres of weaving industry. If this cardinal point were to be neglected, and the old Three R's alone were to be harped on these villagers, surely, unexpected violent evasions of well-meant regulations may take place.

Further, the besetting error with Indian Education has been the significant fact of increasing educational discontent despite the increasing statistics of schools and colleges. The one-sided literary groove ought not to find its replica in the rural schools. This discontent is mainly economical. While in the West, the young who have won the war, are "winning the peace," the best educated young men of India find themselves face to face with clerk-dom, schoolmaster-dom, or Vakildom. A fair reading of the past here apportions the blame no less on the people, who

have grievously failed in the necessary initiation of measures from below, on lines, only so gloriously pictured to a swallowing folk.

If the past were to serve as a safe corrective for the immediate present and the impending future, specialisation on indigenous lines ought to be begun in the 5th standard itself. Nature-study, museums, seed-laying, drawing, and other kindred occupations do not seem to have a lasting attraction with the rural parts. Rather, lessons on the proper seasons for sowing different kinds of paddy and the practical demonstration of an improved plough will run direct into their minds. A forced line of education is neither encouraging nor economical. Here lies a rich field of obvious progress, which if only neglected, is very likely to cut through the proposed Elementary Education Act.

Necessary and well-timed insistence does not seem to have been made on this vital economic basis, which alone can ensure the working success of the New Act. If only the mis-directed energy of leaders were to be turned towards this line, if only ill-timed counsels of despair were to be utilised in this humanitarian path, one of the vital causes of the poverty of the land will have been successfully encountered.

K. R. RAMABHADRA SASTRY

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AN INFANT SCHOOL : ITS ORGANISATION, EQUIPMENT AND WORKING.

INTRODUCTION.

IN modern times there has always been a cry of systematising education on a rational basis. The demand for educational reform is being felt everywhere. The modern educational theory rests upon the principle of freedom, thus placing the teacher and the taught on an equal footing. As such the position of the teacher is that of the child itself in so long as the former tries to teach the child imagining himself to be its brother, moving with it as a playmate, watching the natural bent and desires of each individual child and thus adapting his scanty means to the growth of the child. Self-activity, self-expression, and creativeness which are the watchwords of Froebel's Kindergarten system are merely the outcome of the single factor, namely freedom.

*The influence of home-training :—*The child is born full of ideas in itself; it possesses natural talents bestowed upon it; it has an intuitive power born within itself. If such an intuition grows rapidly and attains a remarkable degree of achievement, then we put it as an intuitive genius. Even otherwise, it takes to Nature as its chief educator. Moreover 'the child comes into life with the inheritance of the preceding members of the race; and this inheritance is modified by adaptation to the environment.' It is then the duty of the parents to look to the child's education during its earliest years. Ellen Key observes: 'The strongest constructive factor in the education of a human being is the settled, quiet order of the home, its place and its duty. Open-heartedness,

industry, straightforwardness at home develop goodness, desire to work and simplicity in the child.' In an article on the early training of the child it has been pointed out how and in what ways this education of the child at home may be effected. [See 'Educational Review,' April 1920].

An Experimental Infant School.—Now it is proposed to give an account of how a school for infants may be organised, equipped and worked on rational lines.

Building—As for a building, the following points deserve our careful consideration. For this purpose we could have any building spacious enough for the children's spontaneous activity—play, games and sleep and for including the necessary furniture and appliances and also the visitors. It would be preferable to have a round thatched shed in the midst of a spacious garden or some building. The ideal, however, will be a spacious round building with flat top. On one side of the building should be constructed a permanent ladder for children to go up and enjoy the fresh air and the natural beauty of the surroundings, while on the other side is fitted a slide, quite smooth and clean, which also provides for the children's free games. Great care should of course be taken in guarding against children receiving any injury when they use the slide. The lower wall space inside is to be neatly coated with black to serve as suitable blackboards for the children's free-drawing. The upper wall space is reserved for hanging pictures which are to be selected after a careful examination.

The following pictures may be found to be of value :—

(1) Pictures of children doing several occupations or photographs of children in their various activities.

THE STAFF.

1. *The teacher.*—The duties and responsibilities of the teacher of this baby class are manifold. His qualifications need no repetition in an elaborate form. He should be patient, kind, cheerful, sympathetic, watchful and energetic and above all keen and enthusiastic. Women teachers are naturally endowed with the above qualities and therefore are to be preferred to men teachers. However this may be, the teacher should certainly move with the parents of the children in the school in a very friendly manner and should on more occasions than one, talk to them as to the several points connected with the instruction of children, for example, cleanliness, attendance, diet, sleep, physical conditions, and the natural tendencies strongly exhibited by the child.

2. *An attendant* (preferably a female) is essential. The duties of such an attendant will have to be :—

(a) looking after the children's cleanliness; she can comb their hair, wash their hands, feet and nails;

(b) attending to their needs in going out of the school-room and coming back; also taking them to and from their homes;

(c) attending to the cleanliness of the class-room and the compound; she can arrange the materials and pictures and dust them as often as possible;

(d) keeping of pets and looking after the garden.

Notwithstanding all these arrangements, it should be remembered that we should cultivate in children the habit of helping themselves on more occasions than one.

3. *A medical man.*—If in case a Doctor pays occasional visits to the school for the

(2) Large size pictures of common animals.
(3) Pictures of Sarasvathi, Lakshmi, Krishna, Sita and the Golden Deer, and Damayanthi.

(4) Pictures of garden and gardening, farm-yard and farming, a railway train, a potter at work, etc.

(5) The paintings of Their Majesties the King and Queen.

(6) A big size calendar.

The furniture in the room is to consist of small cupboards, chairs for children, seats for the teacher and the visitors and a few mats. The children's chairs need not at all be of the same size; they may vary from very small ones to fairly big chairs. They should be so light that children may carry them with great ease in and out of the class-room. The room in general should be attractive to the children.

A nice-looking garden and an equally spacious play-ground with a lavatory not far distant from the class room are exceedingly necessary. Flower-pots should be arranged round the verandah. Birds should be reared and kept in cages. The teacher in charge should possess a small library containing useful, practical and up-to-date books on educational theory, more particularly dealing with the education and training of the children in various schools under various systems. This library should also contain a good number of picture-books that may be handled by children now and then. Picture-books in the vernacular are preferable and some others in English may also be used. Our aim is only to make children express in speech what they see depicted in drawing and painting. [Dean and Son, Ltd., London, supply a good number of these books; may also be had of Higginbothams, Ltd., Madras.]

medical inspection of children, he may also be counted upon as one of the members of the staff belonging to the school.

The children.—The children that are admitted should be of ages from 3½ to 5 and in exceptional cases to six. To start with, provision may be made for admitting a certain fixed number of children, say twelve. Children will ordinarily be admitted only after their personal inspection by the teacher and after talking to their parents personally in the school. In this case, even children below five who show great aptitude for the learning of the Three R's have to be rejected and they are to seek admission in an ordinary school.

The Time-table.—Having thus far equipped the new school, let us turn to the question of instruction in the school. By instruction is not meant the regular teaching of lessons in a formal and arbitrary manner confined to some methods. The following time-table will show on what lines the training of children should proceed. The time of the day during which such instruction should go on, the keeping up of the work strictly according to the time-table, all these depend upon various circumstances. The time-table is only suggestive and tentative; but shows the natural lines on which baby classes may be conducted.

First-half of the day.—

1. Assembly in the verandah, hall, or school compound; prayer, exercises, roll-call, and march to the class.
2. Class arrangement, inspection of children, Nature-study, watering in garden, feeding pets.
3. Sense-training and free play with toys.
4. Conversation, picture, free-talk.
5. Free games; a walk outside.
6. Stories and dramatisation.

Lunch and Rest.

Second-half of the day.—

1. Drawing, writing, and colouring.
2. Singing and exercises.
3. Free occupations with building materials; clay, sand and paper-work.
4. Orderliness and arrangement of class-room.
5. Watering pots, and feeding pets a second time.
6. Dismissal, march, etc.

Language and Number are respectively connected with conversation, picture and free-talk on the one hand and sense-training, building and occupations on the other. Mention is not made of sleep in the table of lessons as children should be allowed to sleep whenever they are tired of working and consequently feel sleepy.

With the time-table before us, we shall now study each item in its details and sketch out in rough outline a plan of work and determine the several materials that seem necessary for the equipment of such a school.

1. *Assembly, prayer, exercises, roll-call, and march to the class.*—The children all assemble in the play-ground, or verandah at the appointed time and stand still in a line while the teacher in charge sings a prayer. Then a few short and quick exercises follow. As for instance, the children can do free-arm exercises. [Hands up, stretch sideways, fold hands sideways, hands down.] The teacher then takes the attendance and the children march in order to their class-room keeping time to the organ.

2. *Class-room arrangement, inspection of children, Nature-study, watering the garden plots, feeding pets.*

As soon as the children enter their room

they take their usual places. The teacher along with the attendant comes to the class-room when all the children stand and wish the teacher 'good morning' who in turn returns them the same greeting. They sit down and the teacher goes round the class finding out if the children are clean in their body and dress. It is the duty of the attendant to look to any defect in this respect. For purposes of washing and rubbing there should be a storage of fresh water in two or three tubs and a supply of some clean towels. Nature-study comes next. Under this heading we can include the following:—

A. *Gardening and watering of garden-plots.*—Children may be supplied with small and handy buckets and be encouraged to water the plots from water filled in the garden tank. Provision should be made in the garden to seat children under a shade. A bower may be put up at the entrance or in the centre of the garden. The major portion of the time on any cool day may be spent under the shade devoting the time of course to the lessons in the time-table.

B. *Pet animals.*—Children could feed some birds and animals, such as parrots, rabbits and puppies. Otherwise they can also feed the animals grazing in or near the compound such as cows, sheep, etc., on their morning excursions for Nature-study. Once, while the infants were sitting under a shady-tree after an examination of their garden, two of the youngest children began to gather grass. On being asked as to why they did that, they remarked that they were for the bullocks on the other side of the tree.

C. *Excursions.*—Children also like a free ramble amidst topes and gardens and near rivers or hills. There are many points that are taught to them by nature herself. Once

the infants were going out to collect some seeds of குத்துமணி and on their way they had to cross a small pit and in that pit there were some thorny shrubs (கொரிஞ்சிமுள்). A few of the children went first and were caught in the thorns. When the others saw this they chose the right way which was a little farther off. Naturally all of them turned that side and saw a bridge to cross the pit. Then, the children in the pit were rescued by the teacher and fortunately none of the thorns stuck into their heels. Such a case was an experience not only to children that suffered, but more to the children that saw their classmates suffering.

Rousseau would allow his child to catch cold if the child should keep longer in the chill air; but others would prevent such an action on the part of the child by telling him clearly the consequences of such an action.

The same day the abovementioned incident took place, some children broke open the various seeds to look into the inside and the teacher had to warn them not to eat them.

The following lessons in Nature-study may be given to the children of the infant school:—

(i) Recognise and name the trees in or near the compound, the vegetables in the garden, the animals, birds and insects that may be seen on a short walk from the school. Imitate the cry of birds—collect some of their feathers.

(ii) Follow a bird to a certain distance—note its habits, its home, its food—draw attention to the impression of its feet made in sand, take for instance a majna—let children note the impression of their own feet in sand, and of their fingers on slates.

(iii) Transplant a young plant found on the way, for example, a mango, margosa.

tamarind or an asoka plant, in a pot and water it. In such a case children can realise a good deal of pleasure.

(iv) Collect leaves, flowers, fruits and seeds; break open seeds; get some bunches of flowers for the class-room and keep in bottles half full of water—notice the smell of leaves.

(v) Notice by scent what trees are in flower (of course in their particular seasons). Examples may be quoted: mango, divi-divi, நான்னை, இவப்பை etc. Children are able to appreciate even the beauty of fresh green leaves in the trees.

(vi) To the river-side, tanks, or lakes. Notice water-lily, ducks, fishes, frogs; suck in water through the water-lily stem—note the shadows in water; float paper-boats and watch.

Once some children were taught a short boat-song in Tamil. A few days after that, when they had been to the river-side, they wanted the teacher to make them some paper boats. As soon as he made them float, they all began to sing their boat-song with more cheerfulness than in their class-room. They also enjoyed the sight of their paper-boats moving rapidly along the current. It will thus be found that if the children's activity finds a healthy means of expression, they will be prevented from making mischief.

(vii) The sun; the sunlight; clouds; rain. Let them move about and see their shadows also moving: let them play their own 'shadow game.'

(viii) Blowing bubbles and watching them.

(ix) Feed ants, watch spiders in their webs, butterflies, snails, caterpillars and earth-worms; watch the bees in the bee-hive.

(x) Collect different kinds of stones; break them and see how they look.

3. *Sense-training and free-play with toys.*—

This necessitates the school to be equipped with different sets of materials for the respective lessons under the training of the senses. A set of Montessori's 'Didactic Materials' would really be useful. [Vide Lessons for Infants: *Educational Review* for July 1920]. Some other building blocks, coloured balls, paper and beads, bells and china cups of different sizes will also be necessary. The following further exercises may also be given:—

Sense of sight.—

1. *Colour.*—Note the different shades in each colour. This exercise is reserved for advanced children.

2. *Size.*—Note size of bricks. Draw bricks of different sizes.

3. *Form.*—Notice the different forms  and reproduce them on the black-board.

Sense of touch.

1. Rough and smooth. Sand, clay; wall, floor.

2. Light and heavy.

(a) Same material—different size.

(b) Same size—different material.

(c) Different material—different size.

In the last, it may be seen that even a small piece of iron is heavier than a big piece of wood. Difficult exercises may be given to children of 5 or 6.

3. Recognise a person by touch when blind-folded.

4. Use the solid insets of Montessori when blind-folded.

5. Name a vessel by the sense of touch when blind-folded.

In this manner all ideas that are learnt with our eyes open by the sense of sight and touch may also be learnt with our eyes blind-folded by the sense of feeling.

Sense of hearing.—A few games may be played in order to develop this sense in children.

(i) Blindfold a child—let the rest sit in a circle and pass round a coin among themselves. Let one of them have it and strike it on the ground and let the blindfolded child say who struck the coin by listening to the noise and noting from where it proceeded.

(ii) Let one of the children in the circle ring a bell and let the blindfolded child go straight to him and get the bell, and also name him by the sense of touch.

(iii) Blindfold all the children except one who can keep ringing a bell sitting at a distance. Let the other children find him out. Whoever comes first is the winner.

(iv) Put different materials in boxes, say, nibs, sand, stones, seeds, etc., and by shaking them let children say the contents of the box.

(v) Learn to discriminate sounds in the organ.

(vi) By listening to them learn to reproduce the notes of the organ.

(vii) Make different sounds from the lowest to the highest pitch of the voice.

viii. Practise silence in the class and adapt the 'Silence Game' of the Montessori School. Many more exercises of this type may be chosen by the teacher.

Sense of smell.—

Provide in the school small bottles of different oils, light-scented cards and some medicine bottles emitting different odours. Preliminary exercises may be given with different flowers and leaves of different fragrance. The sense of smell also aids the sense of taste.

All this may seem very simple; but really children learn a great deal; what is more

their power of using correct expressions is increased.

Playing with toys.—

Children enjoy turning wheels, beating drums, blowing whistles and soap-bubbles, and pressing dolls that make noise, etc. Other children consider dolls as their own children and fondle them just as a kind mother would treat her own baby. For all these games there ought to be a large number of toys in the school. The following may be found to be a suitable list:—

(i) *Wheels and carts.*—Set the wheel in motion and let it turn round and round. If something is placed on the way when it is turning, the wheel leaps over it and keeps on turning till it comes to a state of rest. Load and unload the toy carts with blocks or sand.

(ii) *Whistles*—Blow them. Learn to make noises sharply, quickly, slowly, at regular intervals, loudly, at quick intervals, etc.

(iii) Clay-pipes for blowing soap-bubbles. Children in the villages blow bubbles with a hollow straw tube and the milky juice of a கரட்டாமணிக்கு plant.

(iv) Animals fixed on wheels. The children could drag them with a tape tied round the leg or the neck of the animal.

(v) Small card-board houses and toy furniture made of wood, cardboard or match-boxes. With these children play in sand.

(vi) Some balls. Children could throw them and catch them, strike them on the ground and watch them bump up.

(vii) Some toys with springs and screws, e.g., a railway train; a motor or a steamer. By winding and leaving them on the floor children could see the toys moving as though they moved of their own accord. When these stand still, they could come to the teacher

and request him to do the same for themselves and by degrees learn to wind them and set them in motion.

(viii) Some mirrors. By looking into a series of mirrors a child can see his own image repeated and thus understand something and enjoy the fun. But, if in the middle of the series, we place a plane wooden piece and if the same child should look at it, the child would turn round and put on a look of disappointment for not finding his image there.

(ix) Drum. Learn to beat the drum to time. The children should be made to be unselfish in their play. Let the selfish child be asked to distribute the toys and if he has none left, let him be made to realise his position. After playing with them for some time they can exchange the toys one with another and in turns. Now and then when it is over-noisy they must be made to remain silent for a while and thus learn self-control.

4. Conversation, picture and free-talk :—

A. The following is the list of words they can easily learn :—

Chair	Ink	Tin	Pillow
Bench	Slate	Copper	Cover
Board	Clay	Lamp	Cradle
Picture	Sand	Oil	Umbrella
Chalk	Wood	Wick	Shoes
Paper	Silver	Mat	Stick
Book	Gold	Bed	Vessel
Blotter	Iron	Cotton	
Pencil	Lead		

The names of the several parts of the body may also be thus learnt.

B. *Picture-reading* may be conducted by selecting pictures from walls and distributing picture-books from the library. The sympathetic teacher has to sit along with each child and devote a few minutes' time in talking over the pictures in the book. These

books may be exchanged and in course of time it should be seen that every child is given a chance of looking at all the picture-books in the library.

C. *Free-talk* may be based upon such suitable topics as the following :—

(i) Household festivities, important ceremonies, pujas, and visits of near relatives.

(ii) Temples, festivals, dramas, circus, new shops in the bazaar and other local activities.

(iii) School activities such as matches, sports, prize-giving, visitors, etc.

(iv) The postman, the policeman, the Principal or the Headmaster, the important buildings or offices near the school.

Other topics as are suggested by children now and then may be dealt with. Some other topics discussed during excursions may again be gone through in the class-room and this will be a small test of the children's memory.

5. *Free games*.—These may include such games as could be played by the children in the school in the presence of the teacher.

The twig game is a favourite among our children. Children sit in pairs opposite to one another. One of the two hides a small twig in the sand between them, and the other has to find it out. Only one opportunity is given to the latter to mark the place where the twig may be found. If in such a place the twig is not found, the other child takes a handful of sand and puts it by him saying that he has gained 'one mark.'

Then the first child gives the twig to the other along with a handful of sand and then blindfolds him. He then leads him on to a place somewhat distant and asks him to leave the sand and the twig on the ground. Now again he brings the same boy back to his original place and unties the cloth tied round

the eyes of the latter. The latter has to find out the sand and the twig. A careful remembrance of the path taken and a keen observation of the sand and the twig in the grass or near a tree is necessary in finding out the twig.

In such free games, children can use the ladder and the slide. A swing may be hung from any tree and children can enjoy the fun. Provision may be made in the school for such a swing to be tied to a tree very near the school. They could ride on toy-horses, or draw toy-carts round the verandah. Some can be jumping and running in the playground or playing free in the sand, for e.g., புட்டு சமைத்தல், கிரிக்கெட் மண் மலை, etc.

Flying kites, playing at marbles and tops in the open air may be encouraged. The cruel practice of children of knocking against the fist of the defeated with the marble should be avoided and such an act of cruelty should not find a place in the children's society. These may apply to children over five.

Other suitable games.

1. Musical chairs. 2. Hide and seek. 3. Puss in the corner. 4. Blindman's buff. 5. Older children can be taught May-pole dance (பின்னற்கோலாட்டம்). The children can form two batches and take two sides and play any game they like with balls. They can pass the ball to one another, throw it in the air and catch it again. In connection with these games may be taught some funny nursery-rhymes prevalent in Indian homes.

In these games and in other occupations, let older children exhibit kindness to younger ones and thus help and train them. How often have we seen in our homes older children out of their own free-will giving away their dolls to the younger ones, playing with them

and guiding them in suitable ways? Even in school there have been many cases where some of the children offer seats to new and young visitors and give them various kinds of presents, such as pictures, toys, etc.

6. *Stories*.—In story-telling the children sit down in a semi-circle with the teacher in the centre. Pictures are always welcome as illustrations; but sometimes the teacher can also draw rough sketches on the black-board to make them understand things. As for the stories to be selected, they should be short and simple so as to create interest in the children. They may be about an animal, a boy or a girl, a father and a mother and their children, etc. But stories that depict cunning may be safely avoided as these are too subtle to be understood by children. No moral need be drawn at the end. The effect of a story depends upon the teacher mainly.

A list of suitable stories is given :—

(i) Rama crying for the moon.

(ii) Sita and the golden deer.

(iii) Krishna—his boyhood.

(iv) The faithful dog.

(v) The monkey and the bell (a tale from the Hitopadesa tales to be adapted to the children).

(vi) The monkey and the drum (quite a favourite with the children).

(vii) The chicken that went to the wood (an English nursery story to be adapted to Indian conditions).

(viii) The three bears (also an English fairy tale to be adapted and shortened).

Dramatisation.—After the story is told, the whole story or some incidents in it can be dramatised by the older children taking part at first and the younger ones afterwards. Even if the initiative for dramatisation proceeds from the little ones, that opportunity

may be seized and utilised. Such a dramatisation creates more interest in the story and keeps them attentive for a while. Once the infants had a story lesson about Sita's capture by Ravana and the search of Sita by Rama and Lakshmana. During the course of the story, the teacher mentioned that the two brothers saw Jatayu and asked him 'where is Sita?' The children remembered this incident and while another day they happened to see a sacred kite hovering about the sky, one began to ask 'Oh bird! Where is Sita?' and naturally all the children were attracted to the bird and every one of them cried out, 'Oh bird! Where is Sita?'.

Lunch and rest.—After the above lessons, the first part of the school-day ceases and the children are dismissed for lunch and rest, which may extend to two hours and more. During this interval those children whose homes are very near the school may go home, while others may usually bring their lunch in the morning itself. Or the attendant can so arrange as to take some of the children home and back to school during the interval. If this school is attached to an advanced school, the matter becomes easier as the elder brothers of the children studying in the advanced classes would help their younger brothers. This would make it convenient for the younger ones to remain in the school during the interval, take their food, and come back to the school premises to play in the interval.

If the school could afford, it can arrange for lunches previously obtaining the sanction of the parents, firstly as to their religious faiths and secondly as to the system of diet followed at home. Though a lunch is not feasible every day, occasional treats to children may be arranged. Children that bring their

own provisions may be allowed to have their lunch whenever they like to have it.

7. *Drawing, writing and colouring.*—With this lesson the afternoon session of the school-day commences.

A. *Drawing.*—Children can be supplied with chalk and be asked to draw whatever they like on the wall black-board, or in case this does not exist in the school, on big slates that may be bought and kept in the school itself. Free-arm drawing exercises come first. The tendency in some of the children to bend close to their slates should be avoided. Then comes the free-drawing of objects with the objects before the children. Coloured chalks may be given them for similar drawing exercises. Apart from such systematic drawing they can be allowed to draw from memory whatever interests them during Nature-study lessons and excursions, each child making his own selection.

In this lesson and in other lessons, whenever it is possible, a real attempt at correlation of work can be effectively undertaken.

B. *Writing.*—In a similar manner they can also learn to write small words composed of easy letters, after learning to read them as whole words. This requires sound training in speech and in clear pronunciation of words and the analysing of words into syllables. The order of procedure in language-teaching and the suitable selection of words may be left to the teacher. [*Vide Lessons for Infants, Educational Review*: July 1920; also, *Teaching of Language to Beginners*, March 1918]. This again necessitates suitable picture-books in the vernacular so that the children could see words and letters in print written against pictures.

C. *Colouring.*—One form of colouring

prevailing in the Montessorian schools is the colouring of outlines prepared by the teacher. The colours too, if they be water-colours, have to be prepared by the teacher. In the beginning, children can learn to handle the brushes and the outlines may be coloured afterwards, using only one colour at first. Coloured crayons too may be used in filling outlines. The training they need here is not to smear the whole paper with the colour, but to fill in the outline only. The objects that may be given in outline should be chosen from objects seen by the children, such as fruits, leaves, pots, slates, etc.

8. *Singing and Exercises.*—Free scope should be given to the teacher in the selection of suitable songs for the children. Just to prepare them in the beginning of songs they can be asked to do short and simple physical exercises keeping time to the piano. Head exercises and arm exercises may also be chosen; but only a short time should be devoted to them. They can also be taught some songs during such exercises.

‘தலை குனிந்து, தலை நிமிர்ந்து, தலை வளைந்து, தலை ஆட்டம் ஆடுவோம்.’

‘கை நீட்டி, கை மடக்கி, கை தூக்கி, கை சுற்றி, கை குலுக்கி, கை ஆட்டம் ஆடுவோம்.’ Children could also have some marching songs.

9. *Free occupations with building materials.*

A. Apart from the blocks and pieces of wood referred to under the training of the senses, the school may have a supply of more blocks for building purposes. Blocks of the following size may be recommended:—

Size 1" x 2" x 2"

3" x 2" x 1"

8" x 3" x 1"

3" x 1" x 1" (serve as rafters for buildings).

Blocks one inch thick, in shapes triangular,

circular and semi-circular, may also be used. Cylindrical pieces of wood 3" high and 1" in diameter may serve as pillars for buildings.

B. *Some points of interest in block-building.*—First of all children construct buildings using all the blocks in the school-room. Secondly some children join together and aim at constructing one single building of enormous size. In this respect various suggestions proceed from the children. Once a child suggested the planting of croton plants opposite to the verandah while another receiving this suggestion and feeling this to be a laudable idea got some young plants and sand from the play-ground and replanted the same opposite to the verandah.

C. *Other occupations.*—Clay-modelling, sand-modelling or playing in sand with toy-houses and toys, paper tearing, free paper-cutting and a free use of scissors and lastly paper-folding may be mentioned as other occupations for children. Cutting out pictures from journals and forming a picture-book may be set apart for older children. The other common occupations as bead-threading, stick-laying or seed-laying may also be followed.

10. *Orderliness, and arrangement of class-room.*—After the lesson on occupations is over, cleaning the class-room, tidying up the floor, and the proper arrangement of the several materials in the several cup-boards take place. This should be one of the important items in the school course and should be gone through most carefully and systematically in the children's daily work. The blocks should be kept in the proper tray or cup-board and the clay-modelling plates or trays should be carefully arranged in a place reserved

for it specially. The models should be left in a shelf kept for exhibits and the remaining clay or sand should be kept in their proper places. 'A place for everything and everything in its place' should be the keynote of this lesson. Bits of paper should be removed and thrown carefully inside a basket also kept there for the purpose. After the cleaning is over they should be taught to wash their hands off the dust and even during occupations they should learn not to dirty their clothes as far as possible.

11. *Watering of pots in the verandah and feeding of pets.*—These two items take place a second time in the day.

12. *Assembly in the hall and march out.*—Just before the children are dismissed from the school for the day they again assemble in the hall, do some exercises and march home.

Other points for consideration:

A. *Discipline*—

A word on discipline. Children of this school should be allowed full amount of freedom in talking to children, to the teacher and in choosing the materials for play or occupations. This will give us an opportunity to understand the natural ways of thinking of the children and on what lines they develop their subject of conversation or talk. There is certainly no room for the use of the dreaded cane.

Ellen Key remarks that 'the greatest skill in the educator is to be silent for the moment' when they commit a fault, 'and then so reprove the fault indirectly, that the child is brought to correct himself.' How we can reprove his fault is again brought out in the following words of the same author: 'This can be done by the instructor telling some-

thing that causes the child to compare his own conduct with the hateful or admirable types of behaviour about which he hears information. On many occasions a forceful display of indignation on the part of the elder person is an excellent punishment if the indignation is reserved for the right moment."

B. *Children's health*—

Symptoms of illness in any of the children, when noted by the teacher, should be reported at once to the Medical officer in charge of the school and thence to the parent or the guardian of the children. The school too should provide itself with a miniature medicine-chest wherein medicines for itches, sore-eyes, bruises, etc., may be kept and used in times of necessity. Children showing symptoms of fatigue may be allowed to sleep if they like or otherwise left to do what they like best. If the cause of fatigue is due to the child being under-fed, it is also the business of the school to attend to the child's wants at that time. The immediate attention of the teacher should be drawn towards the children who show signs of dissuading from work either due to fatigue, want of interest or slackness in the children, and the defects should be remedied as far as it is possible in his power to do. Some other minor cases of accidents as injuring hands or feet by falling down, a slight bleeding therefrom, etc., may be treated by the teacher himself. These require great presence of mind in the teacher and some knowledge of first aid. Children should be led to see the value of cleanliness in anything and everything, and how cleanliness, though void of grandeur or splendour, is in itself a real beauty.

C. *Visitors*—

Visitors to the school including parents

SCHEME OF WORK IN EDUCATIONAL WOOD-WORK.

THE scheme of work that is set forth in the following pages is meant to cover a course of work in wood. It is not necessary that there should be a rigid course of work consisting of exercises and models which should be followed very closely: but it is only attempted here to give some suggestions for the teachers in schools where wood-work is to be introduced as a subject in different grades. In every school or locality pupils differ greatly in manual skill, ingenuity and resourcefulness and their instruction should also differ accordingly. In general the work should invariably be based on a sequence of tool operations. The pupils should be thrown on their own resources wherever possible. Though it is difficult to do so in the earlier stages some attempt should be made in that direction there too.

D. *Conclusion*.—

1. A remark may however be made here as to the management of similar schools. Montessorian schools in Italy are managed by a society known as the Humanitarian Society. In other places as in England and America, such schools are under the management of similar societies and child-welfare committees.

2. My main object in sketching this is to create a suitable atmosphere in which the children can most easily learn things. These arrangements can be better had in a school rather than at home. Such schools have sprung forth in many parts of England and America where these serve as fields for experimental work by keen enthusiasts in child-welfare and child-study and practical child-psychology. But in many respects the above scheme may be carried out in all homes and in classes I and II in all schools. The spirit more than the ideal in such a scheme should be kept in view by all the teachers of young children.

S. JAGANNADHAN.

The course is also made to include the construction and use of simple joints, timber, its structure, in addition to mechanical drawing.

That drawing plays an important part in a scheme of work is not lost sight of; and so it is the duty of every teacher in charge, to see that pupils get a good knowledge of this, *i.e.*, to make scale drawing and dimensioned sketches and to work from the same.

In most cases, the course set forth for the lower standards may be a little too high; the teacher if he thinks so may omit some portions. For pupils of grades I and II, tools of considerably smaller sizes are always recommended. In no case, a systematic course of work in wood is advisable for pupils below the age of 10. In a school where no hand-work of any kind is taught in the lower standards—the early stages of school life—wood-

work may be put off till the pupils reach the age of 12. Great care should be taken in introducing big tools to children below that age; and for this reason only, a course of light-wood work with simple tools has been proposed in the 1st and the 2nd grades here. The scheme may be better followed from the 6th standard except in *technical schools* with advantage. In this case the course will be completed in the 5th Form; a special course may be framed if necessary for the 6th Form.

Practical demonstration should always precede any new bench operation of the pupils. The instructor besides drawing the Black-Board sketches of the models should prepare the models themselves beforehand. These may be hung up in any convenient place in the class-room. Some lessons followed by practical demonstration on the handling of tools, correct posture of the body, etc., may also be found necessary.

Equipment for a class of 20 pupils has been furnished at the end of the scheme and the kind of timber, etc., suitable for wood-work, for the guidance of the managers.

Models given to be made in each grade are only suggestive. The same may be varied or altered to suit different localities and the capacity of the pupils. Principle of strict economy should be observed in every wood-work class. Accuracy and high finish should not be aimed at in the earlier stage though this is absolutely necessary in the higher grades.

The natural desire of every pupil is to possess his own model. So, at the end of each course, the models may be returned to pupils whenever it is possible to do so.

List of reference books for teachers has

been given to enable teachers to prepare their notes, etc., in accordance with the scheme, so that the same may be followed successfully.

The time-table that is appended may be adopted wherever possible allotting two single periods for each of the I and II grades; and 2 double periods for each of the grades III, IV & V. If the standards contain more than 20 pupils the same may be divided into 2 batches allowing similar periods for each.

TIME-TABLE.

Days.	Morning				Evening.	
	1	2	3	4	5	6
Monday	...	III	III	...	I	II
Tuesday	...	IV	IV	...	III	III
Wednesday	...	IV	IV	...	I	II
Thursday	...	...	...	...	V	V
Friday.	...	V	V	...	Preparation work	

SCHEME OF WORK IN WOOD.

A course of work in what is called "Light Wood-work" may be framed for this standard, if necessary, having the following for guidance. In this grade as well as in the 2nd rectilinear work of different kinds should predominate, curved work and simple joints being introduced gradually in other grades.

(1ST GRADE.)

1. As few tools as possible should be used in this standard, say, a tenon saw, a sloyd knife, screw driver, hammer and bradawl may be used if necessary. Sawing board, bench-hook, etc., may be invariably, used.

2. Strips of wood measuring 6' to 8' and 1" to $\frac{1}{4}$ " thick should be used. These may be prepared by the pupils of the higher grades.

3. Early exercises should be of free nature; models requiring simple tool manipulation should be selected.

4. A ground-plan or a pictorial drawing

of the model should be drawn by the pupils before they begin to make the same.

5. Use of foot-rule—Drawing of lines: Straight and curved. Ruling and measuring, measurement, length. Construction of a square; use of right-angle template.

6. Thick card-board may be used as alternative to strips of wood or both.

7. Suggestive models:—

1. Photo frame.
2. Key-rack.
3. Foot-rule, marked inches only.
4. Toy-ladder
5. Name-plate.
6. Card case.
7. Date plate (Calendar)
8. Foot-board.
9. Simple balance.
10. Toy-cart or letter file (hook)

(2ND GRADE.)

1. Use of Jack-plane and tenon-saw in addition to tools already used; marking gauge, and tri-square may also be taken up.

2. Strips of wood 6' to 8' and $\frac{1}{2}$ " to $\frac{3}{4}$ " and $1\frac{1}{2}$ " at first may be used. The students may be asked to plane small pieces to the line marked by the teacher. The use of tri-square may be taught. For this the teacher may plane one side for the pupils and the pupils made to plane the other side and make both sides square with the each other.

3. Exercises set should be of graduated difficulty; the use of a new tool or the use of a familiar tool in a new way to be explained.

4. The ground plan of the models together with the pictorial drawing of the models should be drawn up beforehand.

5. Use of set-square. Drawing of parallel lines and horizontal ones; construction of a square and rectangle and of an angle. Construction of a circle. Use of compasses.

XXVII—9

6. Suggestive models:—

1. Foot-ruler marked inches and half inches only.
2. Yard measure.
3. T. Square.
4. Picture Frame (half-lap joint).
5. Time-table frame.
6. Seed-box.
7. Plant-stick (for garden). Other simple farm implements.
8. Map pointer.
9. Simple bookshelf, (with nail point)
10. Penholder (the teacher may bore hole for the pupils and insert.)

(3RD GRADE.)

1. Pieces of wood should be selected and prepared as far as possible by the pupils themselves for each model.

2. Drawing of models in plan and elevations besides pictorial drawing of the same should be done.

3. Use of set foot-rule, drawing of lines—straight, parallel and horizontal to measurement. Use of set-square, construction of angles and measuring the same. Use of T-square and drawing board; use of protractor.

4. Tools:—All tools excepting chisel may be used in this grade. The use of chisels may be allowed in the case of grown-up pupils. Here individual attention is necessary. *This is necessary* whenever pupils take new tools.

5. Suggestive models:—

1. Foot-ruler marked inches $\frac{1}{2}$ ", $\frac{1}{4}$ " & $\frac{1}{8}$ " with bevelled edge.
2. Paper knife.
3. Photo frame (half lap joint bevelled edge).
4. Spoon-hanger (uses of brace and bits).
5. Coat stand (for pegs ordinary hooks sold in shops to be used).

6. Round ruler (use of half round wood work file).
7. Simple ink-tray (with planks).
8. Lamp stand (mortise and tenon point).
9. Milk-churner (use of tenon saw and file or simple household objects).
10. Yard measure or simple door bolt.
8. Inkstand with rack for pen (dovetail and mortise).
9. Pair of sandals (red cedar or jack wood).
10. Letter rack.
11. Slate frame (open mortise and tenon).
12. Newspaper rack.

(5TH GRADE).

(4TH GRADE).

1. Pupils should prepare pieces of wood for their models under the guidance of the instructor who may help them every now and then, care being taken that least wastage is allowed.

2. Free hand drawing of all the tools used in the wood work class.

3. Parts of tools and the materials of which they are made to be studied.

4. Drawing of plan, elevations—front and side—to measurement and to scale.

Construction of circles, angles—different kinds—straight lines, division of the same; use of divider and parallel rulers. Area of regular figures. Volume of solids.

5. Use of chisel, mallet—cutting and paring; horizontal cutting, oblique cutting, etc. Kinds of chisel and their uses—when and how.

6. Wood—its structure, fibre; saving and cutting along and against the grain.

7. Suggestive models:—

1. Bench hook (to be used by the pupils of all grades. The teacher may help the pupils in the fitting of the pieces).
2. Door bolt—different kinds of hooks, hinges, etc.
3. Coat stand with pegs (simple square pegs prepared by pupils).
4. Round plate with handle.
5. Spoon hanger improved or any simple domestic article.
6. Ink bottle box (box joint).
7. Time-piece stand.

1. Sawing and cutting pieces of wood for their work and for the use of pupils of earlier grades as per measurement.

2. Drawing of plan elevations, projection and projection line of solids. Representation of objects in 4 different views. Explanation of each. Finding out the volume of wood used in every case. Finding out the cost and estimate.

Isometric projection to be occasionally made. Ability to read drawings is also essential. Separate drawing boards, T-squares and drawing sheets should be used; if necessary Indian ink may be used for drawing.

3. (a) Tools:—Their classification—general tools and auxiliary tools; cutting tools; boring tools; striking tools; mechanical principles involved in them. Parts and materials of which they are made to be studied.

(b) Care of tools:—Setting and sharpening tools; use of oil-stone and grind-stone. To prevent rusting application of sweet oil.

4. Wood, its structure. Different kinds of timber-seasoning; classification and properties of some country timber to be studied. Pvvarasu, Nuna, Margosa, Mango and Jack in addition to Teak, Red Cedar, Rosewood, etc.

5. Preparation and use of glue, use of special tools for finish work, etc., such as a scraper, file, glass paper, etc. and wood oil.

6. Use of simple ambulance outfit in case of accident, etc. to be taught.

7 Suggestive models:—

1. Wall lamp stand.
2. Clothes rack.

3. Small stool.
4. Book-shelf (mortise and tenon joints).
5. Rectangular pencil box with drawing lid and dovetail joints.
6. Tool rack (for wood work tools).
7. Chess board (checquered).
8. Mirror frame.
9. Medicine chest.
10. Hectograph.
11. Simple school apparatus (scientific pulley, common balance, etc.).
12. Practical home work connected with mending, repairing.

EQUIPMENT FOR A CLASS OF 20 PUPILS.

Necessary tools:—

- | | |
|------------------|-------------------|
| 1. Jack plane | 7. Marking knife. |
| 2. Tri-square. | 8. Chisel 1" |
| 3. Steel ruler. | 9. do. 1/2" |
| 4. Marking gauge | 10. do. 1/4" |
| 5. Mallet. | 11. Brush. |
| 6. Bench hook. | 12. Back Saw. |

N. B.—20 in each of the above.

General tools:—

- | | |
|-------------------|------------------|
| 1. Rip saw. | 5. Cross saw. |
| 2. Bow saw. | 6. Key-hole saw. |
| 3. Iron plane. | 7. Smooth plane. |
| 4. Chamfer-plane. | 8. Rebate plane. |

- | | |
|-----------------------------------|--------|
| 1. Spoke shave with brass plate. | 2 |
| 2. Firmer chisel 1" | 5 |
| 3. do. 1/2" | 5 |
| 4. Mortise chisel 1/2", 3/4" | 5 each |
| 5. Gouges. 1/2", 3/4" | 2 do. |
| 6. Adjustable marking gauge | 1 |
| 7. Pair of compasses | 2 |
| 8. Sliding bevels | 2 |
| 9. Hammers. | 4 |
| 10. Bradawls | 4 |
| 11. Gimlets. | 4 |
| 12. Screw-driver (London pattern) | 2 |
| 13. Pincers | 1 |
| 14. Braces (with a set of bits). | 2 |
| 15. File (Half-round). | 2 |
| 16. Do. (Triangular). | 2 |
| 17. Bat tail file. | 2 |
| 18. A set of Auger bits. | 1 |

- | | |
|------------------------------------|----------|
| 1. Washita oil-store. | 1 |
| 2. Grind-stone mounted and fitted. | 1 |
| 3. Slips for gouges. | 2 |
| 4. Oil can. | 1 |
| 5. Sawing stool. | 2 |
| 6. Shooting board. | 2 |
| 7. Shooting board mitre | 2 |
| 8. G. Cramp | 1 |
| 9. Sash cramp. | 1 |
| 10. Vice cramp. | 1 |
| 11. Glue bottle with kettle. | 1 |
| 12. Primus stove. | 1 |
| 1. Emery paper | 1 quire. |
| 2. Glass paper | 1 do. |
| 3. Vaseline tin | 1 |
| 4. Drawing paper | 4 quires |

- | | |
|---|----|
| 1. Work benches fitted with wooden or iron vices model given. | 10 |
| 2. Single drawing desks, with chairs to suit | 20 |
| 3. Blackboard with stand. | 2 |
| 4. Racks for tools. | 2 |
| 5. Showboard. | 2 |
| 6. Almirah. | 2 |
| 7. Cupboards. | 2 |

Kinds of timber suitable for wood-work:—

1. Red Cedar.
2. Teak.
3. Yellow Teak.
4. Mangowood.
5. Jackwood.
6. Rosewood.

Books of reference:—

1. Teachers' Books of Constructive Work by Lay.
2. The Thinking Hand or Practical Education by Legge.
3. Educational Handwork by Jenkins.
4. Educational Woodwork by Binns and Marsdon.
5. Handbook of Manual Training, Books I & II by Yagnasami.
6. Hand and Eye Training, Book II by Ricks.
7. Handbook of Sloyd by Otto Salomon.
8. Hand and Eye Training Theory by Holman.
9. Educational Sloyd Theory by Hodson

S. YAGNASWAMI.

UNIVERSITY OF MADRAS.

SENATE SPECIAL MEETING.

The Senate of the Madras University met on the afternoon of Friday, the 21st January 1921, at the Senate Room with the Hon'ble Mr. K. Srinivasa Aiyangar, the Vice Chancellor, in the chair. Fifty Senators were present. The principal subject to consider which the meeting was brought together was the report of the Senate Committee appointed over a year ago and their proposals suggesting, in the form of resolutions, desirable changes in the University Act and in the regulations in view of the recommendations of the Sadder Commission. When the question came up for discussion, a Senator moved that the resolutions and amendments thereto should be discussed in committee. The motion was agreed to without any opposition and the Senate immediately went into Committee. What followed later was declared to be private and not open to the press.

A PRELIMINARY MOTION.

Mr. S. Satyamurti, at the outset, proposed a change in the order of business. He moved that under item VIII of the agenda relating to the recommendations of the Senate in respect of the Secondary and Intermediate education, resolutions 1 and 2 standing in the name of Mr. S. Srinivasa Aiyangar should be taken after disposing of resolutions 3 to 6.

He said that it was premature if not illogical for the Senate to resolve upon recognising the Intermediate Examination as a stage of admission to the University instead of the present Matriculation or the S.S.L.C. examination, before knowing what the Intermediate examination was going to be in the future. Resolutions 3 to 6 were of a far-reaching character embodying proposals for the constitution of a new Board to which it was sought to transfer very vital functions which the Senate had all along been exercising; and it was not a correct procedure that before such proposals were discussed and accepted, the Senate should agree to the raising of the standard of admission and the severance of the Intermediate from the University courses of study. He added that such an attempt would amount to putting the cart before the horse.

Mr. A. Rangaswami Aiyangar seconded the motion. He said that the question of making the Intermediate Examination the test of admission to the University in the future was intimately connected with the larger question of constituting the University into a teaching one. What must be the standard of admission depended upon the constitution of the proposed Board and its powers.

The Rev. Father Bertram in opposing the motion said that the suggestion of Mr. Satyamurti was really putting the cart before the horse. The one cardinal point on which hung the whole of the recommendations of the Calcutta University Commission was the suggested change in the Intermediate Examination. That was what was proposed to be done in the resolutions 1 and 2 on the agenda.

Mr. G. A. Natesan who also opposed the motion said that in the event of its being accepted, virtually all the labours of the Committee would go to waste and no good purpose would be served in discussing a question on which the Committee had come to a unanimous conclusion.

Mr. T. V. Venkatarama Aiyar spoke in support of the motion. He said that the resolutions were all inter-dependent and no serious objection could be raised in changing the order in which they were placed in the agenda. He further suggested that the Senate might go into Committee to discuss these resolutions.

Mr. Corley was in favour of considering questions of principle first before entering upon a discussion of matters of detail.

Rao Bahadur K. V. Rangaswami Aiyangar was surprised at the heat exhibited by the members in opposing the motion. What Mr. Satyamurti urged was that the principle on which the proposed reorganization scheme was based should be discussed in the first instance and then the details should be settled. This procedure had been adopted on former occasions and unless there was something electric in the atmosphere, he could not see any necessity for any one to oppose a purely formal matter.

The motion, however, was put and lost.

The Senate then transacted some formal business of assigning ex-officio and newly appointed ordinary Fellows to the different Faculties and of

exempting a number of students from the production of the necessary certificates of attendance.

THE REGISTRAR'S SALARY.

On the recommendation of the Syndicate Mr. C. P. Ramaswami Aiyar, moved to alter the Regulation 5 of XV so as to raise the maximum salary of the Registrar including personal allowances from Rs. 1,250 to Rs. 1,500. He said that the suggested alteration was necessary with a view to admit of the present Registrar Mr. Dawsbury who was now getting the maximum under the regulation, being paid more in appreciation of the way in which he had been doing his work.

The Rev. Father Bertram seconded the motion.

Mr. T. V. Venkatarama Aiyar proposed an amendment in the following terms:—

That Regulation 5, Chapter XV, be amended by substituting, instead of Rs. 1,250 or Rs. 1,500 proposed to be substituted, the following words:—Such sum per mensem as may with the approval of the Senate be fixed by a Committee hereinafter mentioned:—

That a Committee be appointed to submit a report to the March Meeting of the Senate on the finances of the University, its probable future income and expenditure, the work which the officers employed by the University may have to perform, the salary payable for such work, the period and conditions of service of such officers with recommendations as to the tenure of office of the present holders and of the remuneration payable to them and that the Committee do consist of:—

(1) The Vice-Chancellor, (2) The Director of Public Instruction, (3) Mr. T. V. Seshagiri Aiyar, (4) Any two members elected by the Senate and not being members of the Syndicate, with Mr. T. V. Seshagiri Aiyar as Convener.

He said that with impending changes in the University education in the Presidency and the contemplated Board for the control of Secondary and Intermediate education, much of the present work of the University Registrar would be reduced and the Senate would have to consider whether it was necessary to have such a highly paid official at the head of the establishment. Mr. Dawsbury was under an agreement to serve the Senate and the period expires only by 1923. There was no particu-

lar reason why any increase of pay should be granted when he was in the midst of service and was getting the maximum under the Regulation. On financial grounds also, the move objected to the raising of the maximum now stipulated. During the last few years, he said, the balance had dwindled from Rs. 65,000 to Rs. 4,000.

Mr. A. Rangaswami Aiyangar seconded the amendment.

Mr. S. Satyamurti opposed the amendment stating that it was vague, indefinite and unintelligible.

Mr. G. A. Natesan said that the whole establishment had been granted increase and in view of the rise in the cost of living and the very valuable work he had been turning out, the Senate should not grudge to sanction the increase.

Mr. T. V. Seshagiri Aiyar said that the Syndicate had come to the unanimous conclusion that the Registrar should be paid more and had sought the approval of the Senate to amend the Regulation to enable them to give increase. There was no use in asking them to reconsider their position. Changes were bound to come in the University administration in the near future and they had to be carried out by a man who knew his work. Mr. Dawsbury had rendered invaluable services to the Senate and the amendment which stood in the way of his getting an increase in his salary should be rejected.

Mr. T. V. Venkatarama Aiyar, at this stage, withdrew his amendment.

Mr. S. Satyamurti, in speaking against the original motion, said that public interest demanded that a voice of protest must be raised against the extravagance suggested by Mr. C. P. Ramaswami Aiyar. No figures were placed before the meeting giving the financial position of the University. Assuming their finances were now in the condition as they had been before, there were other more imperative demands than the one of increasing the salary of an official who was already well paid. A sum of Rs. 1,250 in a poor country like India was very handsome and there was no justification for a member to get up from his seat and plead for an addition to this amount on the ground that the cost of living had risen. The Senate was ever in need of more and more funds. There was an increasing demand for instituting a larger number

of University scholarships and for sending students to other countries. With Rs. 250 which was proposed to be added on to the salary of the Registrar, they could certainly give the much needed relief to the clerical and menial establishment and bring comfort and even subsistence to many families who were denied them at present. After all, they were not doing any injustice at all to Mr. Dewsbury. He entered service under the University with his eyes open. There was the Regulation that the maximum salary of the Registrar should in no case exceed Rs. 1,250. The speaker could not see the justice of the claim, that because, Mr. Dewsbury was now getting Rs. 1,250, they must enable him to get Rs. 250 more by making an alteration in the Regulation. After five years another motion would be made to increase that amount by another five hundred. Some limit must be placed in a matter like this. If Mr. Dewsbury could not continue in the service of the University because his salary was not raised, they should be very sorry to lose him. But they would certainly get an equally efficient European or Indian in his place.

The Rev. Mr. Macphail said that the question of the payment to the Registrar was altogether apart from the question of payment to the menial and subordinate staff. Mr. Satyamurti's appeal was one that was very often made in order to prejudice the payment of anything in the nature of a large salary. That was a sort of talk that left him cold. Recently liberal increases had been granted to the subordinate staff and now the question had come up whether anything ought to be done for Mr. Dewsbury. He would point out to Mr. Satyamurti that it would be extremely difficult to get a man for the place of Registrar who was as able and willing a worker as Mr. Dewsbury. In connection with the reorganization of the University they had no doubt to consider and see they did not give people too big salaries; but in the particular case of Mr. Dewsbury, the increase suggested was not at all extravagant.

The motion was put to vote and carried by a majority.

VANIYAMBADI ISLAMIAH COLLEGE.

Mr. F. S. Davies moved on behalf of the Syndicate, "That the Senate record its opinion that

the application for the affiliation of the Islamiah College, Vaniyambadi, in Group iii (Histories, Logic, Urdu and Persian) of the Intermediate courses of study may be granted by the Government."

Seconded by Mr. Abdur Rahiman Saheb, the Resolution was carried.

UNIVERSITY REORGANIZATION.

The Syndicate presented the report of the Senate Committee appointed on the 25th October 1919, "to consider and report upon the changes desirable in the University Acts and in the Regulations in view of the recommendations of the Calcutta University Commission and to present to the Senate proposals for such changes in the form of resolutions."

In accordance therewith, Mr. S. Srinivasa Aiyangar was put down to move the first ten resolutions of the Committee relating to the Secondary and Intermediate education.

Before starting a discussion on these resolutions, Dewan Bahadur M. Ramachandra Row proposed "that the House do go into committee for the consideration of the remaining subjects in the agenda." He said that the Senate Committee had proposed vital changes in the constitution of the University and there were several controversial matters requiring explanation from the movers of the recommendations and he thought it would be advantageous to discuss the proposals in committee rather than in a full dress debate.

Mr. A. Rangaswami Aiyangar seconded the motion which was put and carried.

The Senate then went into committee.

In reply to Dr. Slater, the Vice-Chancellor assured the House that the proceedings in Committee were private and they could not appear in public print.

The members of the Press then withdrew.

CORRESPONDENCE.

THE EDITOR, 'EDUCATIONAL REVIEW,' MADRAS.

DEAR SIR,

I shall be obliged if your readers will be so good as to communicate to me their considered opinions on the following points concerning Reforms in the administration of High Schools:—

1. Do you think that a Headmaster should continue to be the sole executive authority, or that his power should be limited by the establishment of a School Council whom he should be bound to consult in all important matters?

2. Should such School Councils, if they are to be established, consist of entire teaching staffs, or only of the graduate-masters and elected representatives of non-graduates?

3. What matters would you have "reserved" for the Headmaster, and what matters "transferred" to the jurisdiction of the School Council?

4. Should the resolutions of the School Council be advisory in nature, or should they be binding on the Headmaster? Should the Headmaster have the power of veto over Council decisions? Should the power of veto be limited, and, if so, how and to what extent?

5. In making new appointments to the staff, should the Headmaster consult the Council before making his recommendations to the governing body?

6. What is your opinion about the proposal to establish Students' Courts consisting of all monitors and a number of senior students, with powers to try all students' offences? Should Headmasters or any senior teachers preside or be present in any capacity at sittings of such Courts? What remedy would you suggest in cases where the Headmaster or the School Council thinks there has been a miscarriage of justice?

7. What do you think of the following suggestion? All Secondary Schools within a district being under the same District Educational Board, all trained graduate-teachers in the district should be in the same grade with the same time-scale of salary. Headmasterships should be elective and tenable for a term of three or five years, none being eligible for more than two consecutive terms either at the same school or at different schools: each election to be by the suffrages of the electorate consisting of the entire teaching staff of the school, and the person to be elected to be a trained graduate on the staff of any school within the district; the Headmaster to draw a local allowance of Rs. 30 or Rs. 50 a month; the reverting Headmaster, unless elected again either there or elsewhere, to be transferred as an Assistant at another school within the district; the District Educational Board to have the power of setting aside an election, but such veto not to be operative if the same person should be re-elected.

S. V. GULVANI.

New Edition.

BOSWELL'S LIFE OF JOHNSON

BY

THOMAS CARLYLE

EDITED WITH

INTRODUCTION AND NOTES

BY

REV. S. GNANAMUTHU, M.A.,

Professor of English, S. P. G. College, Trichinopoly, and
Fellow of the Madras University.

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EDUCATIONAL TOPICS.

Drawbacks of Existing Institutions.

Continuing his thoughts on National Education, Mr. P. N. Mukhopadhyaya, Secretary, National Council of Education, Bengal, writes in the *Collegian*, December, 1920, and points out the defects of existing *Tols* and *Chatushpathis* and of the English institutions.

About the former class of institutions he remarks: The *Tols* and *Chatushpathis* which are the indigenous centres of higher education in us have now certain drawbacks which should be specially attended to. *First*, the *spirit* of Indian culture and life should be re-vitalized in them: at present the *form* chiefly remains. The old *Garugriha* plan should be rehabilitated—living according to the best ideals of *Brahmacharya* should be insisted on. *Secondly*, intellectual training, in so far as it is now given, is one-sided, unsuited to modern conditions of life, not altogether socially and economically helpful. The present generation of *Pundits* is not altogether a very edifying and hopeful asset. Without detracting from the thoroughness of *Shāstric* training which they receive or ought to receive, we should introduce into the *Tols* something of modern culture in *useful* and *assimilable* shapes; e.g., a knowledge of geography, correct history, science, etc., cannot fail to be of use. Though these things should as far as possible be taught through the vernacular or through *Sanskrit* (works being prepared in them), a knowledge of English too has now become necessary for many obvious reasons, but let the students acquire it at a comparatively later stage. Supplementing, broadening and liberalizing the *Tol*-education is therefore our second point, as purifying and revitalizing it is the first. *Thirdly*, to promote the value, usefulness and independence of the *Tols* we should model them as far as possible after the village colonies which we have sketched here and in *Some Thoughts on Education*. We cannot do without *Tols* (the more intensive forms of which

are the *ashramas*) if we want true and well-informed interpreters of our Indian tradition, true carriers of our cultural continuity, true ministers of our religious life and true pilgrims to the Indian goal of life.

As regards primary schools he advocates they should be so formed as to supplement and enhance the utility of existing institutions and methods of educating the masses, like *Sangas*, *Melas*, *Yatras*, *Purana Kathas*, &c.

His indictment of schools and colleges is very trenchant, but unfortunately true to a large extent also.

Coming now to schools and colleges they are really a "grotesque fungoid growth", if growth we can at all call it. Physically (i.e., from the point of view of health and physical well-being) we are being ruined by this unnatural and mechanical sort of education. Catching us in the snares of towns and cities it is turning out clerks and "professions" but not men suited to agricultural, industrial or any other kinds of useful life in the country. Economically, our school and college education is far too expensive and unproductive: it has failed to teach a graduate how to *earn* and remove the impoverishment of the country. Teaching is too much theoretical and abstract and too little practical and concrete. Politically, it has given us the shadow but cheated us of the substance, because we have *not* been educated in discipline, tenacity, self-sacrifice and all that make character. Intellectually, we have been taught not only to forget but sometimes to despise our culture and tradition, and to pick up only so much of a foreign culture as can be had through cram, note-books, examinations, thoroughly heartless lectures and absurdly ill-conceived curricula of pedantry and specialisation. A master of arts of the University quite innocent of history and geography and elementary science (not to say, distinctive Indian cultures) is by no means an unfamiliar figure now. In one word, even from the narrowly intellectual point of view the present system of

school and college education is sadly defective. And shall we pause to ask about the moral and spiritual value of this education? This is a dismal picture in all conscience, and yet such is the deadening spell exercised by this unnatural, unfruitful and imitative sort of education (we do not ignore the few good points also in English education), that we commonly take it complacently as a matter of course.

National Ideals in Education.

Sir M. E. Sadler, writing in the *Indian Education* about the need for ideals in education, says, that 'a national system of schools cannot create moral agreement upon questions in regard to which national opinion is deeply divided. At the present time in Europe there is profound disagreement upon many of the issues which underlie national policy.' His opinion is that a uniform national system is bound to be monotonous and fettered by standards of mediocrity fixed by State regulation. If a re-birth of moral vigour should come it will be based on complete freedom of educational opportunity.

A national system of schools cannot create moral agreement upon questions in regard to which national opinion is deeply divided. Still less can international regulation of schools coerce divided opinions into unanimity. At the present time in Europe there is profound disagreement upon many of the issues which underlie national policy. Take, for example, Dr. E. J. Dillon's final comment upon the work of the Peace Conference. He was a close observer of its proceedings. For many years he has been a student of foreign affairs. In the foreword to his recently published book *The Peace Conference* he records his conviction that "the Conference has transformed Europe into a seething mass of mutually hostile States, powerless to face the economic competition of their overseas rivals" and that it has "left the very elements of society in flux." But he does not stop here. He indicates his own view of the future. And that view is far from being in accord

with the principles underlying international equality upon a democratic basis. "The continuity of human progress," he writes, "depends upon Labour. And it is becoming more and more doubtful whether the civilized races of mankind can be reckoned on to supply it for long on conditions akin to those which have in various forms prevailed ever since the institution of ancient times. If this forecast should prove correct, the only alternative to a break in the continuity of civilization is the frank recognition of the principle that certain inferior races are destined to serve the cause of mankind in those capacities for which alone they are qualified, and to readjust social institutions to this idea." Translate this into the plain words which would be necessary in school teaching. It means that the less developed races are to be organized deliberately in economic servitude to the nations which possess military and naval power. And which races are thus to be relegated permanently to such servitude?

Almost at the same time one of the most brilliant of German organisers, Dr. Walter Rathenau, was publishing his forecast of the future of Germany and of other of the Western European States. The view set forth by Dr. Rathenau in his *Die Neue Gesellschaft* is curiously like Dr. Dillon's, though more elaborately defined. He reaches the conclusion that hitherto all great national civilizations have been established by peoples which are rich, populous and *duplex*. By 'duplex' he means that they have had a double stratum of population—the wealthy and a mass of poor. Where such a mass of poor did not exist within their own boundaries, they have gone afield to find it or have drawn it within their system of government at home. He contends that the achievement of civilization, whether in discovery, applied science or art, have been due to capitalism and aristocracy, and to the leisure and security which are enjoyed by a class which is protected against economic risk. He points out that Socialism is pledged to abolish these duplex conditions in the modern civilized State. He thinks that in

the end Socialism will succeed in accomplishing its purpose. By the end of the century, he predicts, Germany will have become fully socialistic. There will be no personal property except the daily or weekly wages paid by the State for labour which the State regards as deserving such remuneration.

University Problems of To-day.

Prof. Jadu Nath Sarkar stresses in the January number of the *Modern Review* on the era of small universities which India has now entered. Five new small universities have been added between 1917 and 1920 and three more, Nagpur, Lucknow and Agra, are either in contemplation or actually created. The modern university is a very costly thing. The creation of a second university in a province means the duplication of its entire administrative staff, office buildings, examination halls, senate house, library, etc. So long as new universities merely act as examining machines and only reproduce the work of the older universities, these have no reason for existing. Of the work of improving the efficiency of teaching, the colleges must bear the brunt. The creation of a new university while the colleges are starved much as before, cannot in itself improve the teaching and raise the efficiency of the education given.

Again when the new universities undertake post-graduate teaching and organise research, the expenditure is large and there is perceived the necessity of a large body of graduates to pick out of, large honours classes to select capable research students from. A few hundred graduates of average ability cannot supply the necessary material for a research class. Fairly large classes are also necessary for the efficiency of higher teaching, as distinct on the one hand from mere lecturing and on the other the conducting of specialised research. The class must have enough boys to make it possible to hold discussions, mutual criticisms of papers and informal exchange of ideas. Failure to

improve the colleges and the secondary schools would lower the standard of teaching and of examination consequently. Again research depends on the collection of materials which must be complete, with light thrown on the subject from all sides. Rare books must be collected and MSS. as well; for this there should be a well-planned, sustained and expert-directed search. Our Universities in order to conserve their resources, must practise the strictest economy, avoid every kind of superfluous luxury and window-dressing and needless duplication and overlapping of effort. They should pool their resources and co-operate with one another and each should retrench its ambition and even ramifying programme.

Beyond the irreducible minimum of higher education which should be common to all universities, all other subjects should be divided among them, no two of them doing the same thing. The highest students, viz., researchers and candidates for doctorates, must be free to migrate from one university to another, and there should be an exchange of professors. So also in the collection of sets of journals or learned societies there must be co-operation with one another. Above all there must be no uncertainty about the financial basis of post-graduate teaching organisation.

Principles of Book-Selection in a Library.

It is a well-known maxim that a college or school library should not merely supply something to read, but should have a definite plan and object in view. The librarian needs to study his community just as a merchant studies his market. All Indian libraries must be particular about the collection of books of special interest to Indian peoples and the position of India from the viewpoint of outsiders and foreigners must also be taken into account. The purchase of a book should not be wholly influenced by a mere demand or inclination of the public mind. And the following

should be kept in view in the formation of a library :—

Indian Student, as a rule, of Serious Turn of Mind.—"The Indian school-boy," as observes Mr. L. T. Watkins of the Indian Educational Service, "is on the whole of a more serious turn of mind than the boy of corresponding age in England."* As in the case of Indian schoolboy, so also in that of Indians generally; and as such, an Indian library need not put much money into fiction on the model of English public or circulating libraries.

Fine Arts as a Recreative Study.—Works of fine arts may very well be of recreative study in addition to novels of really good quality; and this is perhaps a time when the attention of our people—not excluding the ladies of our homes—should be a little diverted from fiction to fine arts where a proper scope will also be found for higher and higher imagination, the source of poetry and joy. It may also be remembered that it often so happens in the case of an individual reader according to his tastes and instincts that, a subject of the branch of learning which he has made his own if presented in a different form may serve to be of recreative study.

Change of Subject a Recreation.—Persons of high intellect and much studious habit have always said that when the brain wants recreation, a temporary change from one subject to another in which the interest of the student is one degree less, will prove to be of pleasurable recreation.

Recreation not an end in itself.—The recreative study is not the aim of a student. Just as in the school the period of recreation in addition to health considerations is calculated to arouse the interest of a serious nature in the next hours of study, the whole amount of recreative reading of fictitious stories or other light literature in the case of a student should make him earnest about the next subject of study in books of real information and inspiration. The person who has only read hundreds of fictitious stories and can neither

give you any information of the world we live in, nor is inspired by a noble work or thought nor in a position to present to the world a new fiction of his or her own, is really an unread fellow in spite of the knowledge of so many volumes.—From Mr. S. C. Guha in the *Modern Review* (Decr.)

The El Azhar University of Cairo.

This is a very ancient institution which has been keeping the lamp of Muslim learning burning for so many centuries and which has played no small part in the Egyptian national movement. Mr. Panikkar gives a short sketch of its working in the last issue of the *Indian Review* :

The number of students who undergo training in this University is estimated at about 13,000. This does not include the vast body of day-scholars whose attendance is casual and irregular. The resident students come from all parts of the Muslim world. From Morocco to Malaya, from Fez to Delhi, every nation is represented there. The Muslim world is united in a very real manner by its religion, for Islam has in theory refused to recognise distinctions of nationality or race. Hence a Muslim capital is always a cosmopolitan centre. Naturally therefore a famous seat of Islamic learning like El Azhar is bound to attract students from all parts of the world. It need hardly be said, however, that Egyptians form the vast majority of the number.

The course of study includes Grammar, Law, Ethics, Logic and Rhetoric. According to the Muslim idea the Koran being the Book of God contains all knowledge and is therefore the only book that should be studied. But this seemingly obscurantist doctrine is capable of a liberal interpretation, since almost any branch of knowledge can be derivatively traced to the Holy Book. For example, the vast body of Islamic law has grown up on the basis of the Koran and this all Muslims are required to study. As the Revelations cannot be understood fully without a proper knowledge of Grammar the science of language is religiously of

the highest importance; and as false inferences may be drawn without a proper training in Logic and effective preaching is impossible without the study of Rhetoric, all these subjects come within the limits of Koranic learning. In this way a liberal curriculum can be introduced without in any way breaking either the letter or the spirit of the injunction that the Koran alone is worthy of study. It should however be remembered that although these subjects are taught at El Azhar the religious factor predominates the curriculum.

Our view of the value of El Azhar will depend entirely on what we consider to be the main aim of education. If we hold that instruction in "useful" science is the main object of education then El Azhar teaching is certainly of no high value. But if on the other hand we view education, primarily as a training of character, a process by which an effort is made not only to train the mind but to bring out what is best in him in nature, then, El Azhar is a great and unique institution. It certainly does not teach typewriting, book-keeping and such other highly useful arts. What it teaches may not be of any great market value. But it can hardly be doubted that El Azhar fulfils one of the most important functions of all institutions, the function of building up the character of young men.

Indian Medical Schools.

Mr. R. S. Kibe writing in *The Hindustan Review* (Octr.-Nov. 20) puts in a strong plea for the re-organisation of Indian medical schools (now 16 in number) for their being equipped with hospitals, up-to-date methods of teaching, well-organised staffs, etc., and uniform systems of curriculum, standards of admission and examinations.

In short we must have our medical schools completely reorganized as signs of the times vividly point out that these schools are backward institutions and to supersede them, colleges of physicians and surgeons are coming into existence. This is

the pious wish of one and all who have the interest of these schools at heart and a wish sincerely made would certainly have its powerful psychic effect towards banding the general inclinations to its own level and bring about the desired end. And no one if he sets a thinking, would count upon this as sad hope or vain ambition. The ladder of ambition must be scaled step by step or else in hurry to climb the topmost, if we fail to catch the right step, not knowing when and how, we would be hurled down in blank oblivion. It therefore behoves us to lay down at this critical moment, a scheme to be submitted to those concerned. As they are, medical schools have to take their share in the prevailing state of things. To be clear, all provinces are not on a par with each other, some have been modernized in proportion to the wave of civilization that dashed on its shores. The effect was that farther apart from the central place of modern science and art and the allied conditions of life, the chances are less and less for its wholesale reforms. In consequence, the medical schools of such provinces are less likely to keep pace with their sister institutions of civilized portions of the country in point of clinical tests, keen observations and multiplicity of subjects and execution of work. Thus there is great difference between medical school and medical school. At present Indore and Poona medical schools are highly spoken of but of what avail is this praise? All are birds of the same feather regarding their pay and observation. In days gone by, this was inevitable but the new era has now dawned, constitutions have changed, needs are increased and with this general change, if the question of Indian medical schools be left as it is, the 20th century would leave a great blot on the map of progress. Let us therefore be up and doing.

Reviews and Notices.

FOLK-TALES OF THE KHASIS, BY MRS. RAFY, ILLUSTRATED. (MACMILLAN AND CO., LTD. 1920) Pp. xi AND 160.

Mrs. Rapy offers to the English reading public this collection of quaint and fascinating folk-tales of the Khasis who are a hill-tribe akin to the Nagas and others living in the long stretch of the North-Eastern marches of our Indian Empire. As the land of Assam is "a land of mystery and witchcraft" its various peoples are equally interesting subjects for ethnologists, antiquarians and sociologists. Mrs. Rapy gives here a collection of tales, some of which are humorous, others again contain deep truths of nature embedded in them and all of which are very interesting. Several of these tales were originally published in *The Statesman* of Calcutta. The stories enable us to know something of the genius of hill races, the working of their minds and the general ideas underlying their complicated, if primitive, life. We have got here beast fables, legends of gods and men and the love of the chase which is instinctive with the hill men. The hunting of the stag *Lapalang* was so exciting that "oxen were forgotten at the plough, loads were thrown down and scattered and nothing mattered for the moment but the wild exciting chase over hill and valley; louder sounded the hunting cry, farther it echoed from crag to crag, still wilder grew the chase." The mountain of Shillong seems to have been instrumental in the creation of many of these myths. One, curiously enough, attempts to explain how the dog was privileged to live in the house with his master and the pig was forced to live in a sty by himself and to eat only the refuse from man's table and offal. Another tries to explain the origin of the betel, the pan and the tobacco, whereby the poor as well as the rich could indulge in the entertainment of friends without being burdened. The beautiful waterfall on the Khasi Hills near Cherrapunji has given rise to the legend of the Leap of Ka Likai—a beautiful woman whose child was murdered by her second husband and who distractedly threw herself into the abyss. The doleful sounds of the waterfall are said to be the echoes of Ka Likai's anguished cries.

These stories, as the preface remarks, afford a few hours of pleasant (and we may add instructive) reading which reveals the true genius of a virile and moral, though primitive hill-folk.

A BRIEF SKETCH OF SOCIAL AND INDUSTRIAL HISTORY, BY EDWARD CRESSY. Pp. viii & 225 (MACMILLAN AND CO., 1920). 3s. 6d.

The series of which this book is one is intended to give assistance in the teaching of boys who have passed the elementary stage and for whom further instruction has been provided in Extension Schools by the Education Act of 1918. The

volumes of this series are designed to satisfy two distinct ideals—one cultural and the other utilitarian or vocational—and in both cases the appeal to the boy is made by exciting his interest. The keynote of these books will be contact with life and work; for the aim of the Education Act of 1918 is to stimulate in boys an interest in the principles and processes of daily work through the stimulation of interest in the wonders and achievements of science and industry. The aim is to make each boy an efficient worker in his own line.

Mr. Cressy, already the author of "An Outline of Industrial History," rightly devotes three-quarters of the book to a consideration of the industrial movements of the last two centuries which really form the basis of the present industrial organisation, social conditions and politics of England. He does not ignore altogether the early period; but his object is to stimulate in the minds of the boys constructive ideas of industrial citizenship—which involve a preliminary knowledge of the conditions and raw material out of which these have evolved.

The age of mechanical invention is clearly traced in all its important bearings and each broad phenomenon in the progress of that age explained well. Mechanical inventions in agriculture, coal-mining, textile manufactures, etc. were followed by a revolution in transport and communication and the three leavens of this revolution—the railway, the steamship and the electric telegraph—entirely remoulded the manners and customs of the civilised world within half a century. These have speeded up the operations of commerce and quickened the processes of industry, have altered the conditions of life and labour and brought men closer together to quarrel as well as to unite. Proper stress is laid in this book upon the manner and extent to which methods of industry and facilities of transport have affected and are affecting the way in which Government is carried on.

The book is certainly a valuable one. The charts given in it are intended to help a clear apprehension of historical sequence and the inter-relation, especially in the recent centuries—of invention, social conditions and parliamentary action. Questions are appended to each chapter to fix the chief essentials of the subject-matter in the minds of the students. The book is an eminent help to the continuation classes where boys of fourteen and above are to be educated in those subjects and methods whereby they would become more efficient workers and better citizens, better appreciating the conditions under which they live and using better the franchise which they would be called upon to exercise so frequently hereafter.

A SHORT HISTORY AND ETHNOLOGY OF THE CULTIVATING PODS, BY MAHENDRA NATH KARAN, DIAMOND HARBOUR (24-PARGANAS) 1919. Pp. xxi, x & 82. Re. 1.

The Pods are a numerous tribe inhabiting many parts of Western Bengal, especially the districts of Khulna, Midnapore, Jessore and the 24-Parganas. Their population amounted to more than half a million at the last census. They are known by different names like Padmaraj, Padyaraj, Pundra, Pandarika, and one theory derives them from the Pulindis, a non-Aryan primeval race of India; this theory has however been disproved. All the characteristic good manners of a good Sudra are found existing in the Pods who generally live by cultivation and other equally honourable pursuits. At no distant time the Pods were not looked down upon in society. The theory put forward by the author is that the Pods were originally the Poundras or Poundrakas—a Kshatriya people who fell to the state of Sudras, having lived long unministered by the Brahmins. The Pods living by cultivation belong to the Aryan Poundras. They were regarded as fallen when they embraced cultivation as their profession and as still more so when they embraced Buddhism. Rai Bankim Chandra Chatterji noticed in one of his books that the Pods approached the Turkish or Turanian and aboriginal types. Sir Herbert Risley, proceeding on anthropometric data, remarks that they have a high nasal index which is a sign of their non-Aryan descent. But our author hotly declares that they are the descendants of Aryan Kshatriyas and as vigorously denies that they are the issues of non-Aryan aboriginals or semi-aboriginals. He says that the Kshatriic blood in the cultivating Pods still remains unstained and that they should be restored to their former prestige and reinstalled in their original status. The Pods are now calling themselves Bratya Kshatriyas and are busily striving towards improving their position. May success attend their efforts!

THE EXPANSION OF THE ANGLO-SAXON NATIONS—A SHORT HISTORY OF THE BRITISH EMPIRE AND THE UNITED STATES, BY SEVERAL CONTRIBUTORS, EDITED BY H. CLIVE BARNARD (A. AND C. BLACK, 1920). pp. viii & 404. Price 7s. 6d. net.

This book is intended for use in the highest forms of the British Secondary Schools and in Continuation Schools and Training Colleges. The various articles are written by men who can each adopt the standpoint of a native of the country he writes of and have, each of them, a special knowledge of the subject and a special interest in it. This sort of composite history written by different men has got its own faults and defects; and the task of editing such a collection of essays is particularly onerous. The chief object of this book is as the editor says, to bind together in a mutual respect

and understanding the various members of the great Anglo-Saxon race.

The beginnings of English expansion, English colonisation of North America and English enterprise in the West Indies and West Africa and in India down to 1713 are explained in the first essay by the editor himself. England's position in that year, superior to that of Portugal, Spain, Holland and France thus becomes the starting point of her imperial expansion in all quarters of the globe which is described in the succeeding chapters. Mr. A. G. Dornand, of the Ontario Queen's University, writes of the growth of Canada in which the chief contributing factors, a spirit of local pride and self-dependence, and the necessity for union against the French and the Indians are well brought out. The later problems, like the settlement of the Loyalists, the failure of constitutional government, the war with the United States, the responsible government of 1849, the complete autonomy of 1859, westward expansion, the growth of the Confederation and the formation of the Federation, are all treated clearly and cogently. The era of goodwill with the U.S.A. and the intensifying of ties that unite the colony with the mother-country are large and valuable assets.

Mr. L. H. Gipson, a good student of American History, writes of the history of the United States and takes us on through the establishment of the Federal Government, the period of the Federalists, the birth of the Democratic Party, the Civil War, the settlement of the Far West and the present day problems of Imperialism, immigration, etc.

By far the most interesting portion of the book to us is that on India since 1713, by Mr. Yusuf Ali, so well-known as a writer on India and its problems. Here we get a very good account of the growth of British Dominion and of the causes which favoured it. We are taken on through the period of liberalism and reform (1819—35) and that of Imperial reaction (1835—58) and we are treated next to a fine account of the reorganisation of the Government since 1858, the growth of nationalism and the introduction of Anglo-Saxon ideas and ideals and the brilliant record of Indians in the recent war. The adjustment of India in her rightful position as an equal partner in the British Commonwealth is the most knotty of the Imperial problems pressing for solution at the present moment. The geographical retrospect and explanation of the growth of the Indian Empire is very valuable indeed.

There are also valuable accounts of British Africa and Australasia, in both of which the rigorous policy of the complete exclusion of non-Europeans is in full swing. The underlying idea of historical unity, with cultural unity super-imposed is brought out in the last chapter of the book which deals with the smaller British possessions. Appended to the book are a valuable chronological table showing the gradual acquisition of the various parts of the Empire and a good bibliography

recommended to those who desire to study more deeply the history of Anglo-Saxon expansion. We cordially recommend the use of this book by all our secondary teachers and college students.

A SHORT SKETCH OF EUROPEAN HISTORY, BY H. E. MARSHALL: PART I—FROM THE FALL OF THE ROMAN EMPIRE TO THE REFORMATION. (A. AND C. BLACK, LTD. 1920) Pp. x & 243 Price 5s.

This small text-book deals with the general growth of Europe and describes the main factors that have gone to the forming and developing of the various European States from the fall of the Roman Empire to the Reformation, "together with sufficient detail to enliven that dulness which is the almost inevitable accompaniment of great compression." The earlier chapters are more detailed than is usual in text-books of similar compass, and we are treated to interesting anecdotes and incidents which reveal the crucial points underlying the general course of development and supply the necessary stimulus to the understanding of later events. The chapter dealing with Gregory the Great is markedly lucid and instructive, while the Arab rule in Spain receives adequate treatment. The effect of the *Northmen Fury* in Eastern and Southern Europe is clearly brought out, and the Viking period of Russian history is specially narrated in comparative fulness. The real beginnings of the Scandinavian Kingdoms, of Denmark under Valdemar and Absalon, of Norway under Harold, Haakon the Good and Olaf Tryggvason are told and this finishes the outline of the beginnings of modern European nations.

In the general sketch of the feudal system and society, tournaments and the features of feudal warfare find a prominent place. There is nothing particularly noteworthy in the narrative of the Papal-Imperial struggle and of the growth of France. The idea of knight-hood and knight-errantry is explained as creating a soldier aristocracy imbued with a passionate devotion for the Church which found a partial outlet in the Crusades. The complexity of the 14th and 15th centuries is attempted to be simplified as far as possible and the story of the beginning of Italian unity shattered is clever and informing. The story of the Renaissance, Spanish ascendancy and the Reformation completes the book whose value is enhanced by the boldness in outline of the narrative, the simplicity in style and clarity in presentation which are evident throughout. A chronological table at the end correlates the events in British history and those of the continental. The dates are few and well-chosen and are relegated to the margin. The maps are clear and that of Switzerland, explaining the growth of the Confederation is valuable, being absent from similar small works. The book can be confidently recommended for study by the Pass B.A. students of our University and we eagerly await the concluding volume.

HIGHER MECHANICS, BY HORACE LAMB, D. SC., F.R.S. (CAMBRIDGE UNIVERSITY PRESS.)

The book under review may be regarded as a sequel to two former treatises of the author, viz., *Statics*, 1912 and *Dynamics* 1914; and the treatment is as lucid and clear as in the former treatises. The author has wisely avoided all matters of a purely mathematical interest like the Theory of the Differential Equations of Dynamics and also matters of historical interest like the Brachistochrone problems and has confined himself to matters of genuine dynamical importance like the Gyrostatic Motion, Theory of Screws and Principle of least action. This, taken along with the author's *Statics* and *Dynamics*, would make an excellent introduction to the general principles of Dynamics and Statics and their applications. The exercises given in the book indicate useful and practical applications of the principles dealt with in the body of the book and some of them bear on the stability of aircraft and gyroscopic control of the rolling of a ship.

We have great pleasure to recommend this book to the Honours students of the Indian Universities. The get-up is very good as is usual with the Cambridge University Press publications and the price too is moderate.

"INTRODUCTION TO THE MESSAGE OF THE 20TH CENTURY," BY P. NARAYAN GOUDE, M.A., B. SC. (1920).

The book is a careful and intelligent treatise on the rules of construction of the Vedas and shows how the Riks and Mantras of which the Vedas are composed can, by a clever interpretation and logical construction, be shown to have formulated even in the ancient age of the Rishies what are now said to be the theories and truths discovered by the modern scientists. It shows an honest and earnest attempt to bring home to the minds of the readers that the grand discoveries of the modern science were not foreign to the Vedas and that they contain much more that is yet unknown and gives an incentive to persons possessing any interest in or desire for knowledge of the sciences to make a critical and intelligent study of the Vedas even in future. The society will be much indebted to the author for his staunch advocacy of the Vedic lore and wisdom which he has tried to reveal from the numerous garbs and folds in which it has been carefully secured by the Rishies of yore. The book deals with and shows that the several causes of neglect if not contempt of the Vedas are but the result of ignorance or the violation of the rules of Sanskrit grammar and heedlessness of taking that sense of the expression most appropriate to the context and subject dealt with. The illustrative way in which the truths contained; the Riks and Mantras selected of the Vedas and explained and reconciled with the theories and results attained by modern research, cannot but create in the reader a desire to know

and appreciate what Veda is and what it teaches. It is hoped that a study in the lines proposed will reveal to the world the soul of wisdom contained in the body of the Vedas in all its lustre, purity and sacredness.

A SECOND COURSE IN MATHEMATICS FOR TECHNICAL STUDENTS, BY P. J. HALER AND A. H. STUART. Pp. 363. (UNIVERSITY TUTORIAL PRESS, LONDON, 1920.)

As stated in the Preface, the book is intended to be a sequel to the authors' *First Course in Mathematics for Technical Students*. Chapters I—VI deal with elementary principles in Algebra including the applications of logarithms, graphs, areas and

volumes. Chapters VII and VIII serve as an introduction to the elements of Calculus, and Chapters IX—XII are concerned with elementary geometrical ideas including rudiments of Trigonometry, Geometry of three dimensions and vector quantities. At the end of the book are given tables of densities of metals, useful constants and mathematical tables as also useful elementary formulae in Trigonometry and Calculus.

Chapters IX—XII are intended to be read concurrently with Chapters I—VIII. The numerous examples given in the book are mostly of technical application and are carefully arranged. At least for the sake of the examples, the book may be used as a reference book in Indian schools and colleges.

The printing and get-up of the book are very satisfactory.

Hand-book of the English Language

FOR HIGH SCHOOLS

BY

MR. K. SUBRAMANI AIYAR, B.A., L.T.,

A Fellow of the University of Bombay;
An Incorporated Accountant of London, and late Principal of the Byramjee Jeejeebhoy
College of Commerce, Bombay,

REVISED BY

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The Educational Review.

We welcome the decision of the Government of India to establish a Central Advisory Board of Education. Government on educational matters. It is to be in connection with the Educational Bureau which is already doing excellent work under the auspices of the Government of India and we hope that its deliberations will always result in the giving of useful guidance to the Government. The essential idea of such a Board is that there should be a number of educational experts on it who will be able to speak with authority and practical experience on the subjects brought before them. The first list of members published is undergoing revision in view of the fact that many of the Indian members will not be able to sit on the body, having been elevated to Ministerships and memberships of various Provincial Governments. The choice of names with regard to Indians reveals however the curious mentality of the Government of India and lends point to the grievance to which we have given expression, times without number, that the Government neglects the Indian educationist actually engaged in the profession and is always for patting the Indian politician on the back and hailing him as an educational expert. We may observe incidentally that it is not the Indian educationist himself that suffers by this, but the Government is deprived of the privilege of rallying to its side sober academic opinion of which

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the Indian educationist is anyday a much better exponent than the Indian politician. The European members are all men of the educational profession: the Educational Commissioner, Mr. Richey; Mr. G. Anderson, Director of Public Instruction, the Punjab; Mr. Covernton, Director of Public Instruction, Bombay; Mr. Hartog, Vice-Chancellor of Dacca; Mr. A. I. Mayhew, Director of Public Instruction, Central Provinces; Mr. C. F. de la Fosse, Director of Public Instruction in the United Provinces, now on special duty in connection with the Allahabad University Re-organisation Scheme, and the Rev. Macphail, M.A., of the Madras Christian College, well-known to our readers as an educationist of considerable ability and experience. But what do we find when we come to the choice of Indians? Out of the six, Principal Paranjpye and Dr. Zeauddin are the only two members of the teaching profession and of these it is understood, the former vacates his office having been appointed Minister. The other members are Sir Surendranath Banerjee; Sir Chimanlal Setalwad; Mr. Fazil Hussain of the Punjab and the Hon. Mr. Srinivasa Sastri, all of whom do not belong to the educational line and for whose appointment Government had little or no excuse. Sir Surendranath's knowledge of educational matters must be very rusty indeed and it is two decades since the Hon. Mr. Srinivasa Sastri left the educational walk of life though we have respect for his knowledge of educational matters. It is true

that Sir Setalwad has been Vice-Chancellor of the Bombay University, but could not Government have found one actually engaged in educational work from that part of the country? We have also failed to discover the special claims of Mr. Fazil Hussain of the Punjab for membership of the Board. In the Madras Presidency, as well as elsewhere, there are distinguished Indian educationists whose presence on the Board will be of very great value and we hope that Government will have the wisdom to choose from among them, when new names have to be considered as the result of several vacancies having already been created. Principal Paranjpye, Mr. Fazil Hussain and Sir Surendranath Banerjee have become Ministers; Sir Setalwad has become a member of the Executive Council of the Government of Bombay, and we do not know if with the labours of the Railway Commission and with his impending departure to England in connection with its work, the Hon. Mr. Srinivasa Sastri will be able to sit on the Board. It is also understood that Dr. Zeauddin goes on long leave to Europe. A number of vacancies have thus been created, giving Government the opportunity of rectifying a blunder and we hope it will take advantage of it. At a Conference of Indian educationists, Mr. Gandhi is reported to have expressed his disappointment the other day, that he had failed to get the support of any Indian in the teaching profession for his movement of withdrawing students from Government and aided colleges. The

Indian educationist has stood firmly against attempts at wrecking educational effort built up by considerable labour extending over a century and has shown no quarter to the obscurantists and here is Government's appreciation of the fact! He is a wise man that knows his friends and let us hope that the wisdom will still dawn on the Government of India.

We had occasion to complain last month of the choice of the Educational Ministers. In the Madras Presidency and we are afraid that with the exception of Principal Paranjpye in Bombay, the choice has not been particularly happy in any Presidency. We are not blind to the fact that the Minister need not necessarily be an educationist himself, though in ideal circumstances it would be so, as in the case of the Rt. Hon. Mr. Fisher in England and of Signior Croce in Italy, but one would expect at least the possession of some special interest in education in a person entrusted with the work of guiding the destinies of education in a Presidency. Judged from the standpoint of even this lower ideal of fitness for Educational Ministership, we are afraid we cannot congratulate the educational interests in the country on the Ministers who have been appointed for their special benefit. Dewan Bahadur Subbarayulu Reddiar is the Minister in Madras for Education and the Ministers in the other Presidencies excluding Principal Paranjpye for Bombay are as follow:—

United Provinces: Mr. C. Y. Chintamani.

The Punjab: Mr. Fazil Hussain.

Bengal: Mr. Provas Chandra Mitter.

Behar and Orissa: Khan Bahadur Saiyid Muhammad Fakruddin.

Frankly, we must confess that some of the names are not very hopeful though we are willing to be agreeably disappointed.

On his return from Europe, after a tour of splendid triumphs in the scientific world and his election to a Fellowship of the Royal Society, Sir J. C. Bose has delivered an inspiring message to his students at the Bose Institute which is worth wider dissemination in the country. It is a manly appeal to strenuousness of endeavour and unflinching pursuit of the ideal:

He said that the world was going through a period of transformation and readjustment. Nature shows no mercy to the effete and the decadent. The parasite who is allowed to exist by the labour of others will surely disappear. How is India to meet these crises? It is only by securing strength of body, mind and soul. You cannot afford to weaken the one without weakening the others. Law of life and all its activities is one. It is not cotton or wool protection but the shock of adversity that strengthens every fibre of true manhood. Thus will you learn to stand upright and despise to be either cringing or vulgarly self-assertive. You will then lead no double life and your word and deed will correspond, rather will your deed exceed your work, for the sum total of energy is constant and when all strength is wasted in word there will be nothing left to build your character. Even a speck of protoplasm has a faculty of choice. It accepts or rejects multifarious stimuli of its environment. Have you made your choice of what life is to mean to you? Your destiny is to be determined not by outside but by you and you

alone. Are you to be satisfied by mere parrots training, a process akin to passive inertia. The result of it is that even the greatest message that came to us from the past is merely repeated without its being regarded as an injunction which is to transfer our life. There is thus a tendency to lay down the law for others, whereas the only law which it is given us to enforce is on ourselves. Why are we so inefficient? Because we have not daring to leave the beaten track and go out in great adventures. More difficult is quest, greater is challenge, and I firmly believe that when one has gained the vision of a purpose to which one can and must dedicate oneself, wholly closed doors shall be opened and the seemingly impossible become attainable. I hear it constantly said that had we been given opportunity we might have accomplished great things. Opportunities are never given but man has divine power to create. He can, if he wills, create necessary conditions and determine his destiny.

We regret to notice that in spite of the unequivocal views of Educational Non-Co-operation the President of the last Session of the Indian National Congress against the withdrawal of students from our present Government and Aided institutions, the resolutions of the Congress have embarked upon a policy of non-co-operation in educational matters which is ruinous to the best interests of the country. It is the duty of every educated Indian to see that the fine educational machinery now existing in the country is not destroyed and the younger generation is not denied the benefits of education of all things, in the name of patriotism. Calcutta is now in a state of turmoil, thousands of students having left the Colleges and some of the University examinations rendered

ed almost impossible by the tactics of the non-co-operators. The situation does not show improvement in Burma and trouble is brewing in Dacca and in East Bengal generally and also in the Punjab. Whatever the final issue of this agitation, we ourselves have no doubt that the bulk of the students will come back to the colleges, sadder and wiser men, but the conditions created by it temporarily are so disturbing that there is a sort of suspense of intellectual work in the student world and much precious time is being wasted. The excitement is so serious that no kind of educational work is possible in such an atmosphere. We hope that the country will be able to tide over the difficulties and the efforts observed in some quarters in the direction of national education will assume a really constructive shape and not indulge in mere meaningless destruction. Government will also be guilty of a serious mistake if it did not also profit by these experiences and read the signs of these times aright. No opportunity should be lost for conciliating national sentiment in educational matters. There should no longer be the perpetuation of racial inequality in the agency employed for educational purposes and the people must be made to feel that the educational system is their own and is intended solely for national advancement. Otherwise there is not much chance for the future of education in India under Government auspices and there will be the pathetic spectacle of a civilised government of the twentieth

century unable to run a satisfactory system of education commanding the confidence of the people in any measure. If the misguided boys come back to the college, as we hope they will, let not Government lay the flattering unction to its soul, that it is due to reconversion into love for the system as it is run now under Government auspices and patronage. It is more often due to the difficulties of the worldly sacrifice entailed by such withdrawal than to any conviction and much less to any affection in favour of the system. These troubles must be an eye-opener to Government and nothing short of immediate and wide transformation of the educational system will save the situation for the future.

Provincial Governments do not apparently realise the seriousness of the situation with regard to the condition of teachers in Elementary schools. The

Pay of Elementary Teachers.

increased cost of living has made the lot of the Primary teacher more miserable than it ever has been and we hope financial assistance and relief will be given immediately. Committees and resolutions are the order of the day and unfortunately they are not followed by adequate relief for some reason or other. The Government of His Excellency Sir Harcourt Butler in the United Provinces have recently issued a communique on the subject of the increase of salaries for Primary teachers which deserves the attention of other Provincial Governments:

Recently Government issued a resolution fixing

a scale for Primary school teachers serving under District Boards, and announced that it was making sufficient provision to enable all teachers to be given a certain minimum increase. The Local Government also invited the District Boards to raise the pay of their teachers to the full sanctioned scale as soon as finances permit it. Enquiry has shown that many District Boards are financially incapable of taking this step. The Local Government accordingly permits District Boards to divert to this object the sums that will be allotted to them in the next year for the expansion of primary education. It recognises that it is more important to raise the pay of existing school teachers to a sufficient figure than to increase the number of schools or teachers. An endeavour will, however be made either in the financial year 1921-22 or in the subsequent year to make sufficient grants to carry out and complete that expansion of Primary education which is thus being delayed. District Boards have been addressed on this matter, and it is hoped that the full scale will be introduced for all teachers under the Boards, with effect from the 1st April.

This is sound statesmanship.

The usual annual conferences in connection with educational associations have been held in England this year and their proceedings are full of interest to the student

Educational Conferences in England.

of education in India, in spite of the difference in educational condition and atmosphere. Prof. John Adams in his inaugural address spoke on Instinct and Education dwelling on the need there was for educationists to attend to faculties of brain other than mere intellect. The Assistant Mistresses' Association, the National Society of Art-Masters, the Teachers' Guild, the Head-

masters and Headmistresses' Association and all the other organisations with educational aims held their meetings. One of the most interesting of the papers read before the Conference was on the Value of Art Schools as Centres of Culture. Principal G.P. Gaskell said that the function of Art Schools was not merely to train designers and craftsmen and producers generally, but also to develop taste in potential buyers, without whose application the finest work of craftsmen and designers would be unsaleable. The appreciative study of art should go on side by side with the practice of it. The Civic Education League was concerned as its name implies with the study of civic education. It was argued, with a great deal of force that education must teach the new generation to use their social heritage and pass it on richer and nobler. Patriotism had proved a genuine force in the English educational system and it had to be fostered and if the second dominant motive was to enable young people to get, the commercial motive need not be entirely ignoble, commerce should be social service, national and international. The civic spirit should make men as anxious to serve their country in peace as in war, it should transcend class prejudice and make great changes come without revolution.

As the result of deliberation on the recommendations of the University, the Calcutta University Commission's report, important changes are being

adopted at various University centres in India. As we go to the press, the Senate of the Madras University and the Senate of the Allahabad University are considering far-reaching proposals of University re-organisation in the respective Universities. We hope that the changes adopted will result in making our centres of learning better suited to advance the cause of higher education in the country. We reserve detailed comments to the next number.

The General Report on Public Instruction in the United Provinces which has just been issued is a record of progress bearing sufficient evidence of activity on the part of the Provincial Government concerned. At the end of the year 1,005,600 scholars of all classes were under instruction as compared with 924,679 at the end of the previous year and the percentage of total scholars to population went up from 1.97 to 2.15. Educational institutions of all classes rose by 2,222 during the year and the total expenditure on education increased from Rs. 1,72,37,450 to Rs. 2,28,59,766. The last is an item of which the government of Sir Harcourt Butler might well be proud and if similar zeal for educational expansion actuated all the other provincial heads in the country, there will not be much to complain. A programme of expansion in Primary education having been determined upon sometime back the Government executed part of it during this year, the full programme being calculated to take three years for its adequate fulfilment. The total number of Primary schools rose by more than 2000 and the increase in the number of pupils was 73,842 or 11% in one year. Similar progress is chronicled in connection with Secondary education

while in University education, it is well-known, that there has been great activity in the Provinces as is evidenced by the foundation of the Universities of Lucknow and Aligarh, the reorganisation of the University of Allahabad and the schemes for the establishment of new Universities in Agra and Cawnpore.

We welcome the New Year number of *The Modern Review* which has got as many as 152 pages of reading

matter and forms as rich and varied a treat as can be given by any good periodical. The articles on 'India in 1605—A Review of Mr. Moreland's book' and on 'India in 1919—A Review of Mr. Rushbrook Williams' book' are both interesting and exhaustive. We are shown how both the authors though generally fair are sometimes induced to exalt the consequences of British rule. Mr. Moreland too often evinces an anxiety to take as favourable a view of the present and as unfavourable a view of the past as possible. Mr. Williams is fair to the Indian standpoint except where the self-interest of the ruling race or the reputation of the Government is closely involved.

The history of factory legislation in India by Dr. Rajani Kanta Das, St. Nihal Singh's note upon the effective results on India of Egypt's acquisition of self-government, S. K. Lahiri's comment upon the Esher Report and Dr. P. N. Banerjea's *Modern Economic Thought* are only a few of the numerous interesting articles of the number from one of which we have extracted matter published elsewhere in our Journal. The Notes of the Editor, Gleanings, Extracts from periodicals and reviews of books are on the usually high plane.

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late of the Presidency College, Madras.

SRINIVASA VARADACHARI & CO., TRIPPLICANE, MADRAS.

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THE EIGHTH INDIAN SCIENCE CONGRESS.*

MY first duty is to express my gratification at the honour you have done me in electing me your President for this Session of the Congress. The mere fact of your electing me, a non-scientific man to preside, is a sufficient indication that you do not expect me to deal with purely scientific subjects or to express myself in the language of the scientist. It is nevertheless with some diffidence that I address this assembly of scientific men to-day. Science has been described as organised knowledge. The classification of facts, the recognition of their sequence and relative significance is the function of science. But science has to do with everything to which its method can be applied and I shall content myself by saying only a few words from the standpoint of a spectator, who watches the result of the work of this Congress and its application for the benefit of

mankind. The progressive economic development of civilised nations is attributable to the perpetual and ever-increasing growth of man's power over nature, by the help of scientific investigation. The numerous discoveries that are being made daily have only been sufficient to reveal that our knowledge of the properties and laws of physical science is still in its infancy. But it is advancing more rapidly and in a greater number of directions than in any previous generation, and the knowledge derived therefrom is being rapidly converted by practical ingenuity into physical energy. It is evident, therefore, that the industrial progress of the world is dependent upon the union of science and industry and upon the co-operation of the different branches of science with each other. The present generation is being compelled to recognise the urgent demand of the working classes for greater leisure and for a higher standard of living, a demand which can only be met by an increased command over the powers of nature; and this can only be obtained through in-

* Presidential Address by Sir Rajendranath Mookerjee, M.A., F.R.S., F.R.C.E.

creased knowledge. Being myself a mere industrialist, I must naturally allude to your close relations with us and gratefully acknowledge the benefits which we derive from such a body of scientific men as that of this Congress, for the development of industries.

This Congress, during its short life of seven years, has already firmly established itself in the confidence of scientists and the general public and has undoubtedly given a great impetus to the promotion of scientific discoveries and their application for the development of industry. In the past, business-men were inclined to disregard the usefulness of science as applied to industry or accepted its benefits without being conscious of their source; but they are now firmly convinced that science is an invaluable aid to the development and advancement of industry, and that the dissemination of scientific knowledge with its experiments and discoveries is an essential condition of industrial progress. They are, moreover, fully alive to the fact that applied science is nothing but the application of pure science to a particular problem, the solution of which some manufacturer has found necessary in order to improve, if not indeed in some cases to save his business. The improvement in manufacturing processes can only be achieved by the application of science and the prosperity of any industry is based on this fundamental truth. It has been truly said that the foundation of industrial advance was laid by workers in pure science for the most part ignorant of its utility and caring little about it. It has now been generally recognised by every business-man that scientific research is an absolutely necessary condition of industrial advancement. The progress of Indian industry in particular, owing to our lack of scientific knowledge of

its raw materials and special problems, is inseparably bound up with the progress of science, research and discovery. We must recognise that science is our best friend, a working partner always willing to work for a bare subsistence to increase our profit. Scientists are sometimes looked on by businessmen as rather impracticable individuals; but it seems to me that the latter do not make sufficient allowance for the ideals and methods of scientists. Scientists and poets alike are inspired by their need for self-expression rather than the hope of making money. Neither of them can hope to succeed without originality and inspiration and both have, each in their separate ways, laid the human race under a deep obligation. I would ask my fellow workers in the field of industry to recognise the value of scientific workers both by liberality towards the individual, and towards the cause of science.

If India is to advance commercially and also economically, she must spend money on scientific investigation. After the lesson the Government of India has had during the war, there is no doubt that more attention will be paid to and more money spent on the encouragement of scientific methods in our industries. The scientific investigator should be provided with means and facilities necessary for the proper pursuit of his work. If scientific research is to yield the maximum benefit to industry, research students must live in close touch with industrial conditions. The gap between the laboratory and the shop must be bridged. Apart from the practical help and encouragement given by Government, I think it is part of the duty of all commercial and industrial concerns which benefit, directly, or indirectly from scientific research, to set aside a portion of their enhanced profits

for the purpose of contributing to scientific associations like this to enable its members to extend their work and devote more time to further discoveries. This Congress has charged itself with the function of bringing together from year to year in a convenient form the results of the researches and discoveries of those who are engaged in the different branches of science. These have been collected and reproduced in the annual proceedings of the Congress. It is not only most important but essential for the benefit of the whole of India that these discoveries, made by different scientists in different fields of work, should be brought to the notice of every one likely to be interested. Sufficient funds should, therefore, be in the hands of your Committee to enable it to make its work known to the public, so that anyone who takes an interest in a particular subject may readily obtain information. The objects of the Congress should be the advertisement of its activities to the non-scientist; the exchange of information between scientists, and the encouragement of them in their several activities. Make clear to the industrialist and to Government the practical benefit you are conferring on them and on the country generally and they will give you their money and their support. Show the intelligent public that practical work is going on, in which their interest, though often indirect, is always considerable; make them realise what the spirit of science means, and familiarise them with scientific methods: it will be good for their minds, and will educate public opinion in a direction helpful to the cause you all have at heart.

It has been aptly said that science has its hand on the lever controlling the major physical facts of our existence. The war has shown us the way, and we now see before us

a new prospect of unlimited possibilities of developments. The importance of the skilled chemist has been abundantly shown by the war which has proved beyond doubt that the best assets of a country are its scientific investigators and inventors, and that wars are won not only by the strength and number of the armies engaged but in the laboratory and the factory.

We owe to the achievements of science all the benefits and most of the comforts of modern civilisation, but it is a strange fact that great honour or profit are seldom the rewards of a life devoted to science. Generally speaking our best scientific men work on a mere pittance, for the love of their work, but however beneficial their results may be, they usually die poor and unrecognised by Government and the general public. Caring little for fame and less for wealth, they work for the achievement of results which when accomplished seems to be the only reward they care or hope for and they covet nothing else. Scientific enquiry is noble in itself and is its own reward. Nevertheless if science is to be of practical use to the world, scientific investigators should be duly encouraged and honoured and not left to starve. The prospects of India are unlimited if its unfathomable resources be developed by discoveries made by scientific research.

There are signs that the application of science to productive industry is daily increasing in India, but we require more scientific men and industrial chemists, and this Congress can at this opportune moment give an impetus to the policy by which this want can be met. We are grateful to Lord Chelmsford's Government for the active interest it has taken in establishing research institutes, both Imperial and Provincial, the investiga-

tions and results of which will be available to the industries concerned. Of course, these institutes do not imply any disregard of the interests of pure science which will always attract independent workers. Until a sufficient foundation of pure science has been successfully laid, there can be no applied science. Real progress comes from the pursuit of knowledge for its own sake. Not infrequently a research which has been undertaken in the interest of pure science has proved to be of the greatest value to industry and the difference between pure and an applied science is stated as merely one of intention. Apart from the vast mineral resources of the country lying undeveloped, the agricultural possibilities in the country are capable of vast development; but the people have not yet been educated up to taking full advantage of scientific methods of cultivation. The world is in need of more food and more raw materials for industries. The prospects of increased agricultural production are almost unlimited. The possibilities of improvement by scientific cross-breeding on Mendelian lines have been fully shown, but little has yet been done, I believe, to study the way in which, and the reasons for which, plants produce the valuable products for which we cultivate them, though much has been done to facilitate the study of the growth of plants by the researches of my distinguished friend, Sir J. C. Bose, F. R. S. The work along a combination of such lines as these, though it may take a long time, offers almost unlimited possibilities. The publication and distribution of the papers read in this Congress on this subject should be undertaken free of all cost. This Science Congress is a co-operative organisation—a process of cumulative effort in scientific advance, and I may be permitted

to repeat that it should be the distinct function of this Congress to disseminate at a nominal price the useful and valuable informative papers which are read and discussed by the members relating to scientific research and discoveries, and I am confident that if this Congress takes such a step, funds will be forthcoming both from Imperial and Provincial Governments and from commercial concerns as well.

The metallurgical industries, the making of machinery of every kind, the engineering, the electrical and the chemical industries, the making of high class textiles, glass, porcelain, optical and surgical instruments and scientific agriculture are activities which cannot be carried on without the highest scientific and technical skill, and the members of this Congress are deserving of the gratitude of the commercial community for their work. Nor is the health of the workers the least important factor in the industrial success of a country. The commercial and industrial people of Bengal are thankful to H. E. Lord Ronaldshay for the keen interest taken by him in the improvement of the health of the working classes. I venture to suggest that the Congress should direct its attention to the application of the sciences of physiology and psychology for the study of the individual worker in all his relations to industry—mental, moral and physical—for the benefit of Indian industries. Gentlemen, in closing, let me refer once more to the compliment you have paid me as an industrialist in inviting me to preside over this session of the Congress; but I see in your action much more than a mere compliment to industry. I regard it as a recognition on the part of men of science of the indissoluble bond which must exist between industry and science.

THE MORAL FACTOR IN EDUCATION.

THE function of education has been interpreted in different ways at different times. From the stand-point of the individual, education should aim at such a harmonious development of the inborn faculties of a human being as to enable him to rise to the full stature of his manhood. From the stand-point of the community or State, the aim of education should be to make him a useful member of society and a patriotic citizen of his country. But beyond these two functions and forming the basic principle on which to rear them is another conception of a higher kind. It is not a modern idea but as old as Plato who enunciated it in his *Republic*. That spiritual ideal has been brought into prominence during and after the war as the result of the exposure of the shallowness of the materialistic modern civilisation. As defined by Sir Michael Sadler recently, education is "initiation, i.e. admitting the individual's mind and soul to something transcendent, over-ruling and illuminative, or the initiation of mind and heart into the mysteries of life and duty, the union of the individual mind with the central and eternal power of Truth and Beauty."

The success or failure of our educational system will be judged according to the degree in which we are able to promote the moral development of the children of our country. The divorce of intellectual from moral culture is fraught with deplorable and even disastrous consequences. Yet who can deny that our education in the past has been mainly intellectual? As the Government of India observe in their Education Minute of 1913, "the most thoughtful minds of India lament the tendency of the existing systems of education to develop

Science is stretching out a hand to industry and it is for industry to appreciate the common need and to respond to the advances of science without stint or question. This alliance of the ideal and abstract, with the practical and material activities of the human mind, is not only a necessary condition of progress, but improves the mental outlook of every person who is affected by such a movement. Let us look forward, therefore, to a future in which the scientist, the industrialist and the administrator with a just appreciation, each of his own responsibilities and of the great possibilities which lie in the work of the other, will move towards a common goal, the utmost possible command of mankind over the forces of nature, to be used for the general betterment and greater happiness of mankind. Gentlemen, I will not take up more of your time. But allow me to thank you once more for electing me your President and for your indulgent and patient hearing of my address.

CLOUD MESSENGER.

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the intellectual at the expense of the moral and religious faculties." Some indirect good might have resulted in the past, but very little of conscious and systematic attempt has been made in the direction of moral training.

It is important to remember two facts concerning child-life. Though the intellect develops sooner and earlier than the moral sense, the latter is not absent but only latent even in young children; because we know from experience in our homes that our appeal to the sense of right and wrong in children, when they do something bad, does not often fail to produce the desired result. Secondly, activity, ceaseless physical activity and the sense of curiosity to know the why and wherefore of things, are normal characteristics of childhood, and it is our duty to provide proper and suitable outlets for them. The Kindergarten schools are based on this principle, and recently the Nursery schools for children of three and four, organised in western countries, is the result of this study of child-psychology in modern days.

The home is the first, earliest and most natural factor in moral education. The child lives the first few years entirely at home and even after he begins to attend school a large part of the day is spent amidst the domestic surroundings. The parents and other elderly members of the family, bound to the child by the silken ties of love and affection, do exercise a potent influence on his mind. The home atmosphere should be pure and elevating. But in the present state of things in India, where the majority of parents are ignorant or illiterate, it is very doubtful whether they have the necessary knowledge or inclination to take a real and intelligent interest in the moral upbringing of their children. Therefore that duty mainly devolves upon the school in

most cases. There should also be a closer co-operation between the school and the home if the best results are to be achieved. If properly utilised, the home can very successfully implant in the plastic minds of the children the noble qualities of love and reverence, self-help and unselfish devotion to others.

Next to the home comes the influence of the social environment. It is well-known that the friends and equals of a boy can influence him for good or evil and are capable of keeping him in the path of truth and right or of ruining him for life. How often do we see boys acquiring bad habits, such as smoking or indulging in other fashionable vices, solely on account of their association with undesirable companions? The elders in the society can also exercise much wholesome influence on young minds by studying their thoughts and feelings, hopes and aspirations, and moving sympathetically with them. Because youths have a natural desire to please and win the good opinion of their elders for whom they have great respect. It is from such contact that they can cultivate the social virtues, *viz.* courtesy and politeness, forbearance and toleration. If the public and social life is well organized, the boys will also have opportunities of rendering social service to their fellow-men and learn the value of co-operation and devotion to duty. The Boy Scout Movement, in which some of the Provincial Governments take a parental interest, is a healthy organisation from which the boys are sure to imbibe a spirit of union, a high sense of honour, and a spirit of mutual help and service.

The third important factor in moral training is the school. The scope of the school is conditioned and limited by the fact that the

child spends only four or five hours there every day, yet the responsibility of the school is very great. Among the several elements that are at work, we might first mention the *corporate life of the school*. The very organisation of school life, the spirit and atmosphere pervading it, the orderly arrangement and equipment of the materials, its airy class-rooms and spacious play-grounds, its well-furnished library and well-regulated out-door games, its hostel life and school societies,—all these leave their impress on the pliable minds. The study of *literature and history*, treating as they do of life and its varied problems, can be utilized in developing their imagination and emotions, awakening in them enthusiasm for high ideals and noble actions, and engendering in their minds a proper sense of social obligation and civic responsibility. These and other school subjects should be so taught as to foster in them the powers of independent thinking, reasoning and judgment. The school *discipline* also contributes its share to this important object. I am and have always been a believer in the discipline of love, strict without being severe, kind without being indulgent. I am aware of other kinds of discipline, *viz.* the barrack-room discipline, the machine discipline and no discipline; but I believe that they ultimately fail to attain their object, *viz.* the moulding of character. By love and sympathy we can make bad boys good more easily and successfully than by iron rigour and severe punishment. A kindly word, a timely rebuke or a gentle admonition often works wonders in reforming evil tendencies in boys, and they are made to learn self-respect, self-restraint and obedience.

Closely allied to discipline is the *personal example of the teacher*. The teacher is a great

moral force. In no other country in the world have the relations between the teacher and his students, or the Guru and the Sishya, been happier than in India. Yet how far away are we from that ideal now! It is true the times have changed, but even in the altered conditions of modern life it is an ideal that is worth cherishing in our hearts. To show that it is not impossible of realization in our day I might refer to the Gurukula institutions at Haridwar and other places in Northern India and the Santi-Niketan School at Bolpur of our illustrious poet Rabindranath Tagore. If the teacher should be a source of inspiration and an object worthy of imitation to his students, he should as far as possible try to embody in himself high and noble principles of conduct and character. In this connection I might mention the example of the great teacher Dr. Arnold of Rugby, who shines as a beacon light to guide and inspire us in our arduous work.

Lastly, *moral and religious instruction* is another potent instrument in moral training. In this, though much belated, the Madras Government has taken a wise step by making moral instruction compulsory in all schools. I believe that the discussion of moral subjects with the boys is well calculated to set before them proper ideas of what is right and wrong, and what is good and bad in their conduct and action. The subject of *religious instruction* is a more difficult one. But the people of India, whether Hindus or Musalmans, are an intensely religious people, and it is my conviction that moral instruction alone, unless it is based upon religion and supplemented by it, cannot produce the most fruitful results that we expect of it. It is a matter that deserves the most serious consideration on the part of our elders and our Government.

In conclusion, if education should fulfil its greatest and noblest function, if it should succeed in calling forth all that is noble and good in the young mind, if it should make them strong and self-reliant men and women, and useful and devoted citizens and members of society, the question of proper moral education should engage the earnest and watchful attention of the public as well as the educational authorities in our country.

P. K. ANANTANARAYANA IYER.

SPARE THE ROD, AND SAVE THE CHILD.

"Within their walls shall all that forwards perfect human life be started."—*Walt Whitman.*

To train the children from their infancy to realise fully that the kingdom of God is within them—or, in other words, that they may have practical knowledge that they have power within themselves to master their faults, to overcome all difficulties, and to have a vision of something within them "that makes for righteousness," has been the aim of the writer, who has been the head of a large school for a great number of years. The "Ethical Department" suggested to her that perhaps readers of the *Humanist* would like to know how the principles of the journal can be implanted in the minds of the young, even at a very early age.

To give the children a desire to attain, and that naturally and as a regular duty and not at fitful intervals, one ethical principle is taken each week and called a "Thought." No set lesson is given upon it, but when the "Thought" is announced for the week the children memorise, in connection with it, a verse or verses from a standard author. They study the life and character of some person, in whom the virtue was most marked, and sing every day a song that also bears upon it. Take, for instance, the "Thought," Truthfulness. The verse memorised was—

Govern thy lips,
As they were palace doors, the King within;
Tranquil and fair and courteous be all words
Which from that Presence win.

—*Sir Edwin Arnold.*

The life of King Arthur would be read or told to them, and the hymn sung beginning with the words—

Prune thou thy words, thy thoughts control,
That o'er thee swell and throng;

They will condense within thy soul
And change to purpose strong.

—*F. H. Newman.*

In this way the "Thought" is kept constantly before the children, and always associated with it is the verse they have learnt. The memorising week by week of helpful good poetry forms a storehouse which is of great value in after-years. The "Thought" gives the children an ideal, something to strive for; they may not attain, but the highest is ever set before them, week by week, under different names. It is the reaching forward, the striving to attain, the desire "to be" and "to do," that is so important. Are we not told by Plato that "Imitations, if from earliest years they be continued onwards for a long time, are established into the manners and natural temper, whether they be gestures or tones of the voice or *modes of thinking*"?

From their very earliest years, the little ones are taught that all wrong is something outside them; that they themselves can master and overcome all faults, which are called "dragons." To take a concrete example: a child is in a temper; he is not punished, that would only irritate or subdue (which is slow poison; for the will of the child is its greatest asset). He is left alone for a while; then told that a dragon, the bad-temper dragon, is trying to be his master; but he must be like St. George and master it. He can kill the bad-temper dragon by laughing. A happy face and a laugh, and the dragon slinks away. Little children understand this kind of reasoning; they act upon it readily, for it appeals to them. Other faults are treated in the same way: the greedy dragon is mastered by sharing; the lazy dragon is mastered by doing something; the sulky dragon is

THE TEACHING OF HISTORY IN HIGH SCHOOL CLASSES.

mastered by smiling or singing, etc. It all requires individual care and attention. But what parent or teacher worth anything would hesitate to take the trouble, knowing that the child's character and future depended upon it? Swinburne begs us to

Take care of this small child of earth;
He is great; he hath in him God most high.

A picture of St. George and the Dragon hangs in every class-room in school. It is a constant reminder to the children. When the children grow older, they understand that the picture is a symbol of their dual nature—St. George representing their higher self or the good in each one, and the dragon their lower self; for to quote from Plato again, "When the more excellent part in his nature governs the inferior part, this is being called master of himself."

In this way children early learn self-control, and it follows that it was quite natural after a few years of such training for the school to become a republic in which the children make their own laws and govern themselves. Rewards and punishments, of course, are never given; and discipline, in the ordinary sense of the word, is unnecessary.

The result of taking a "Thought" each week gives an atmosphere to the school. It gives a tone. It is a collective conscience. Above all, the "Thought" teaches control, balance, repose, and contentment. To teach little children the truth of their divine nature, to impress this fact upon them, is to lay the corner-stone of a healthful, happy manhood.—*F. H. ELLIS in the HUMANIST, January 1, 1921.*

THE amazing percentage of failures in C Group History in S. S. L. C. Examination cannot but set any History teacher a-thinking seriously as to the defects of its teaching and its remedies. The question naturally arises which of the three, *viz.* (1) Teacher, (2) Pupil, (3) Examiner, is responsible for such a heavy failure year after year. The causes for such a failure may be due either to the lack on the part of the teacher to teach the subject as a *real living thing* or to the forgetting of the fact that history is after all the geography of nations. It has often been complained that the present-day education has produced in India not 'a vital culture but knowledge.' The pupils are given a number of isolated, unrelated facts, which, however valuable they may be are of no use in rousing either their real thought or interest. Secondly, the teaching of historical geography in its right perspective is neglected. In the words of S. S. L. C. Report for 1919: "Neither real thought nor real interest seems to have been aroused in historical geography, for there is no sign of intelligence or eagerness in the drawing of maps. Teachers have to make the pupils realize not only how much geographical information can be learnt from the study of a map but also *how the knowledge thus obtained can help us to realise the processes which have brought about the existing social and economic condition of the people.* Thus the pupils must be made to understand how geographical conditions affect history. It must be taught "as a living background, to contemporary things as a clue to contemporary evolution" not as a dead thing to them, 'a thing printed on the

page between the covers of a text-book'; e.g., take the year 1815 in which the Battle of Waterloo was fought. How is it taught? It is taught simply as important because the Great Duke of Wellington crushed the power of France. But if that year or date is to be of any value, it should make the pupils understand what came in the way of the Duke of Wellington; a living description of the battle with the help of pictures should be read out, and what enormous changes in the culture and traditions of England was brought about; coming nearer home, we, Indians, with our own history, how do we teach it so that our children talk about the Battle of Plassey or of Wandiwash? It is taught as an important isolated fact. How is it to be taught then? When it is known that a certain battle was fought in a certain year, the pupil or the man must be made to remember in the crisis of life 'how a certain man won or lost, can look in the face of danger, that is culture, that is the date become life, that is, instruction become culture, a thing that is the *spirit of instruction* "that which impresses into a man's life to enrich him, to help him in every movement of life." This is real instruction and the teacher has therefore to adopt means and methods for the revitalising of his own spirit and that of his pupils. The following remedies may be adopted:—

(1) *On the part of Teachers:*—(a) Teachers must remember that they are expected to *teach* and not to *lecture*, i.e., they should place the facts on a given subject clearly before the pupils and at the next opportunity, the teacher should question minutely on the subject taught previously before proceeding to the new subject.

(b) They should give up their faith in the sufficiency of getting a text-book or the notes.

(c) Their work should be in harmony and in logical *development* of the work in *lower forms*. For this the High School teachers should know beforehand the knowledge of the pupils coming under their range.

(d) They must make the pupils understand the value and importance of the table of contents and the use of index, so as to enable them 'to cultivate a historic feeling and judgment and evolution.'

(e) 'They should set frequent exercises, oral and written, in the selection and classification and arrangement of facts' and take to S. S. L. C. Papers and get them answered.

(f) *Map drawing* and practical work *must be made compulsory*. The teachers should devote at least one period a week for map drawing as 'it must be set down as the weakest point in the equipment in the generality of the candidates' and as maps carry 30% of the marks.

(g) Study of documents should begin in Form IV.

(2) *Pupils:*—(a) They should be made 'to record for themselves the substance of a lesson on the main features of a subject after a lesson has been dealt with in the class.'

(b) 'Boys must be made to draw maps from memory.'

(c) Pupils must be encouraged to read a few simple good books other than their text-books so as to enable them to understand 'a detailed period or movement' better.

(d) Pupils must be taught to read the questions and instructions carefully and be made to see that they follow them to the very letter. For this purpose, the History question papers must be set on the S. S. L. C. model from Form IV onwards.

(e) Neat and methodical arrangement of answers which should not be roundabout but to the point.

THE TEACHERS AND THEIR ENVIRONMENTS.*

[IT is a matter for great congratulation that subjects of an educational nature are receiving the earnest and thoughtful attention of a number of educationists both in this Presidency and elsewhere.

(1) INTRODUCTION.

It has been told times out of number by all responsible administrators that we belong to the noblest of professions but it is unfortunately as you all know the sorriest of trades. The nobility of the profession consists in the fact that the school-masters in general have very little to do with the direct collection of tuition fees. They are paid through an agency, whereas a doctor, a lawyer, an engineer, a merchant and the members of all the other professions directly deal with their clients and receive their emoluments. The nobility again consists in the fact that the members of all the other professions think very highly of themselves and receive very fat emoluments, the school-masters never think of themselves, they go on with their own task unmindful of their remuneration and even the bare needs of life. It is this thing that has made the profession the sorriest of trades.

(2) THE PRESENT CONDITION OF SCHOOL-MASTERS.

The great majority of the teachers are miserably under-paid, have no fixed tenure of office, have no freedom of action, have absolutely no chance of raising to positions of dignity, power, self and importance, and have always to be at the mercy of the management.

* A paper prepared by Mr. K. T. Sundararajachari, B.A., L.T., Muthialpet High School, Madras, for the Educational Conference held in Madras in 1920.

B. NAGESVARA RAO.

(3) AIM OF THE PAPER.

The aim of this paper is to find out the root cause of the miseries of the school-masters, and to suggest remedies which are necessary for the welfare, progress and prosperity of the school-masters.

(4) EFFICIENCY.

The Secondary School-masters are really the backbone of the Educational system of any country. It is they that mould young minds at a very impressionable age of their lives. University education is sure to be affected by the quality of teaching in Secondary Schools. We are all aware of the proverb: 'As the twig is bent so is the tree.' In order that the intellect of the nation might improve, the efficiency in teaching must be improved, and teachers must be kept above want. In spite of the persistent efforts and proportionately large expenditure during recent years, the conditions under which many average secondary school teachers live are miserable and injurious to their health, work and dignity as school-masters. It is therefore imperatively necessary on the part of the Department not to make them suffer more, but to help them financially so as to make them live as honourable citizens doing a really noble and honourable work.

(5) EXPERT KNOWLEDGE.

Every one recognises a medical man as an expert. Even in ordinary fever cases, the doctor has to be sent for and his opinion is obtained. In the case of lawyers, their interests are well safeguarded and no one however clever he might be, would be allowed to practise before a Court of Law. But what is the condition prevailing in this profession? Any failed candidate fresh from the portals

of the Examination Room can enter the profession and pose himself as a teacher. He can get a living and pass the examinations at the sacrifice of the poor pupils entrusted to his care. The little money that is saved by the employment of these untrained people is not money saved and it is only false economy. In order that the status of the school-masters might improve, the Department must be approached by the profession to make a definite rule that the teaching profession is not the training ground for wounded soldiers to cure their wounds, nor it is a sanitarium for them to recoup their health and adjust the future programme for their lives. The Department must be made to come to our rescue in this direction. A pious wish that trained teachers must be employed in schools would not in any way improve our status and position in life.

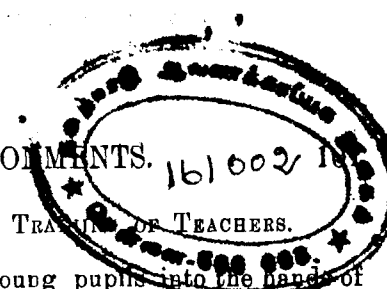
(6) SYSTEMATIC STUDY OF EDUCATIONAL TOPICS.

Change is the order of the day. Ideas are changing. Settled facts have become unsettled ones and there is change everywhere. At the present moment educational changes are taking place throughout the world. As a result of that there is a demand for increased educational opportunities to improve Elementary, Secondary, Collegiate and Technical education. There must be therefore expert opinion on all subjects of educational interest. An expert opinion formed by a nation living thousands of miles away and communicated through the cold print is sure not to be as effective as the researches carried in our own midst and under our own environments. While economics, history, geography, chemistry, etc., are being closely studied by experts, it is surely beyond the comprehension of a school-master why a study of education cannot be encouraged by the University and the Government. This study of education is sure to

bring very fruitful effects soon. The pre-suppositions of men can be critically examined, methods of scientific investigation can be indicated, ill-founded and mis-conceived notions can be checked and reduced to a minimum. A layman's authority to talk on matters educational can be stopped. In short a study of education is sure to bring maximum good with minimum trouble. As the authors of the Calcutta University Commission Report say: "There should be a number of vigorous and independent centres of educational thought in India, closely in touch with the scientific progress which is being made in the subject elsewhere, intimate with the special needs of India and the condition under which those needs must be met and well equipped with the means of practical experiment. The Department of Education if strongly staffed and well organised would in a comparatively short time produce work of great value and exert great influence upon public opinion." In another place they say: "The chief function of the department of the study of education would be to promote the systematic study of the science and art of education. The University Library should have an important collection of works on this subject including series of the chief official reports which have been issued in India, Great Britain, The United States, Japan (will I be pardoned if I add the Educational Germany) and other countries. The principal educational journals of the world should be available for consultation. When thus equipped * * the Department of education would attract graduate-students from all parts of India and from other countries. It would offer opportunities for investigation and research in Indian Education which are not at present available."

(7) THE TRAINING OF TEACHERS.

To entrust young pupils into the hands of untrained men whether in the school or at home is something like entrusting a swine with fine pearls. Fortunately for us in this Presidency untrained men are not employed to a large extent and the Department has recognised training for teachers as compulsory. Even a diamond necklace is sure to lose its brightness and splendour if it is not properly cleaned every now and then. Similarly the school-master as soon as he comes out of the Training College is full of fresh vigour and up-to-date ideals. When he comes in contact with hard realities of life, he has certainly to make some adjustment on his part. In the course of a few years, he loses his touch with the study of pedagogy and the result is, his class is dull and monotonous. In order that his knowledge might be up-to-date he must develop in him a taste for the study of pedagogic literature. There must be a large number of pedagogic magazines and journals and every school must be provided with some of the principal journals. As all of you know, books of pedagogic interest are only very rarely found in the libraries of most of the Secondary Schools. In order that the knowledge of the teachers and consequently the knowledge of the pupils might improve, the Department must be considered failing in its primary duty if it did not insist on a minimum number of pedagogic books and journals in the libraries and reading-rooms of the schools. The Department is aware of this but fails to discharge its duty for fear that it will have to finance this scheme. Again in order that the knowledge of the teachers might not become too wooden and anti-diluvian, occasional courses of



vacation lectures might be undertaken and attendance at these lectures would make the school-masters up-to-date and would also create in them a taste and a sincere desire to study matters educational. The lectures of Prof. Jones a few years back have certainly improved the pronunciation of the average student. It may not be out of place to mention here that the members of the Calcutta University Commission have a good opinion and have even praised the pronunciation of an average Madras student. But a warning is necessary in this case, viz., that the Professors chosen must be well-acquainted with Indian systems of education and must be such as would induce complete confidence in the minds of the Indian teachers.

(8). A FURTHER UNIVERSITY DIPLOMA.

For Medicine, Law, and other branches of knowledge there is not only a Bachelor degree, but there is an M. A. degree. But for this there is only one degree. Is it because there is no scope for improvement and there is dearth of subjects fit for reading, or is it because the last word on the subject has been pronounced? Even applying the principle of analogy there must be two degrees, one higher and one lower. A few years back, there was included in the L.T. course a study of the history of education. But when greater attention had to be paid for the practical training in the school-rooms and classes, this was removed. So the educational systems of the different countries of the world with special reference to the land of our birth might be made subjects of further study by the L. T.'s. After a few years of actual teaching experience, such of those who are anxious may be allowed to sit for examinations in subjects relating to the study

of education. There is certainly no dearth of subjects. Subjects like (1) the present educational system of the different countries; (2) the growth of the system of education in the different countries; (3) the history of education; (4) the study of child psychology; (5) Indian educational thought and system may form the syllabus fit for study for such courses. When the principle is recognised, subjects will not be found wanting. This will certainly improve the profession and the dignity of the profession also will improve. Perhaps this may seem an utopian scheme. The authors of the report say that the study of education may form a fit subject for the B. A. Pass course. In the same manner that Physics, Chemistry, Mathematics, etc., are read as special subjects. This study of education also may form a fit subject of study. I am conscious of the objection that may be raised against the inclusion of this subject, as being of no practical use. My only answer to this is, firstly that this subject is not inferior to any other subject especially Philosophy and that a study of man to bring more good to him is at least as important as the study of man's calculations, experiments, and experiences. A University course of extended education and a further degree call it M. T. (Master of Teaching) if you please, is important and this may perhaps serve as a nucleus for the improvement of the teachers and their knowledge. May I respectfully submit to this Conference in this connection, the attempt to deprive the L. T.'s of the benefits of training and to make the graduates appear in private for the L. T. degree is highly suicidal to the cause of true education and such a proposal deserves the strongest censure from school-masters.

(9) THE RESPONSIBILITY OF GOVERNMENT.

It is a common belief that the Government has not done what it is its duty to do in the matter of spreading education. Does it recognise it as its primary duty or not to educate the youths of the land? Or is it the intention of the Government to raise an income out of educational institutions. If it honestly feels that it is not its duty to educate the youths and to make proper arrangements for so educating them, let there be a clear pronouncement to that effect. The present Grant-in-Aid Code with all its recent additions does not meet the demands of even bare justice. Where is the sympathy of the Government, if out of the school-income, the teachers are paid, extensive additions to buildings are made, repairs are undertaken, and in short all the expenses of the school are met? What with the famines which have found a permanent residence in the land and what with contributions that the public have to make for purposes, organised by august personages, educational charity has been reduced to a minimum. It is therefore the imperative duty of the Government to come to the rescue of the poor school-masters by sanctioning them increased scales of pay; making provision for them when they retire, etc. The responsibility of the Government is also equally great in some other directions. In the matter of titles and honours, appointments to honorary posts, nominations to Taluk Boards, District Boards and Municipalities, the Syndicate of the University and the Local Legislative Council, it is but just and proper that some of the teachers are nominated. In so doing the Government is only honouring a class of loyal and honest public workers, who are not in any way worse than the best of the class of nominated men. May we sincerely

hope that as a result of the new angle of vision, some of the school-masters will be nominated to these honorary posts? This is sure to raise the dignity of the teaching profession in the eyes of the outside public. Having dwelt at some length on the points wherein outside agencies have to move for the improvement of the teachers, I shall try to put briefly before you the direction in which the teachers themselves have to move in order to keep pace with their environments.

(10) THE INDIVIDUALITY.

The teachers as a rule, the lower the grade of the teacher the greater is the evil, fail to recognise individuality in themselves. Even on matters which require their serious attention and thought, they do not concentrate their attention. Take for instance the Elementary Education Bill which is before the public for criticism. The individual teachers do not think deep about the different clauses of the Bill and come to definite individual conclusions. It is the teachers who are employed in the actual teaching of Elementary Schools that can appreciate the Bill and pass their opinion. When the individual opinion is formed after deep thought, a discussion can be arranged and clause by clause can be discussed and the collective opinion can be formed. Such an opinion is sure to arrest the attention of any august body whether it likes to hear us or not. The bane of the profession has been want of individuality and a layman who has the gift of the gab poses himself as the representative of the profession and gives expression to his opinion which we have to adopt and practise in our daily routine of life. This is a really pitiable state of affairs and no foreign help is necessary to make us read educational topics

and to be up-to-date with answers at our fingers' ends so as to meet an opponent who may hold views contrary to well-thought-out ones.

(11) SCHOOL ORGANISATIONS.

Next to the development of individuality in a teacher, it is necessary for every school to have organisations of its own. In order that the school-masters might be benefited by the opinions of others, every school must have pedagogic organisations where papers might be read, elegant methods might be discussed, up-to-date principles might be made mention of, and other useful purposes might be served. In this connection I beg to state before this Conference that the principle underlying this has been recognised and yet there is an air of suspicion in the minds of some managers of schools and even of some headmasters that such organisations would make them in course of time powerless. They think the principles underlying this are not as innocent and harmless as they appear to be at the outset. As it is absolutely impossible to work these organisations without the help and wilful co-operation of the headmasters and the backing up of the managing bodies, these organisations must be started only with the knowledge and approval of the managers of schools. If necessary all rules passed for the guidance of the members, the discussions that take place in these meetings, the results arrived at must be even communicated to the authorities. This is not a sign of weakness on the part of the teachers but a desire of the teachers to educate not only themselves but also their managers on their needs and necessities. The management is sure to come to the help of their subordinates, when they are made to feel and recognise that their help is necessary

and that they are capable of rendering such help.

(12). FORMATION OF SCHOOL COUNCILS.

The responsibilities of Headmasters are increasing day by day. The ministerial and administrative work they have to do every day is such that they have absolutely no time to acquaint themselves with the work of the teachers. The Headmaster has become now-a-days only a head ministerial officer instead of being really the head of the masters with whom he has the privilege to be associated. In order that the Headmaster might have more leisure to look after the real interests of the school, there may be different experienced and senior Assistants looking after the different branches of school work. The library, the collection of fees, the discipline and attendance of the pupils, the examinations, arrangement of work of a routine nature may form some branches of work, under the care of different masters. Each one is sure to look after the work and the work is sure to be efficient and the result will be, there will be very fine net result. The tone and discipline of the school is sure to improve. This is then really the formation of school councils in the manner in which they exist in colleges. This will surely improve the status of the teachers and with them that of the Headmasters also. But if necessary, safeguards may be provided in the rules so that this may not become the fighting ground for those who have no common views. In the colleges this system is working satisfactorily and it is indeed very high time for introducing the same in the High Schools also. Such Councils must recognise the authority of the Headmaster in the sense he is the first of the masters and

must also recognise the authority of the Managers. In order that there might be mutual co-operation between the staff and the management consideration must be shown by the management to the opinion of such Councils. It is not anxiety on the part of the teachers to deprive the authorities of their real power but it is more the real interest that they take in the authorities to see their decisions are correct as to be respected by the public at large.

This subject has been discussed and several Educational Conferences have passed pious resolutions and it is yet to be known whether there is any school which has really a well-formed school council.

(13) ORGANISATIONS AMONG SCHOOLMASTERS.

Excuse me, gentlemen, if I am a little harsh. If any good has come to us, it is, though it is painful to state, not on account of us but in spite of us. It is only recently that we have begun to move and have not moved even to an appreciable extent. The only organisation in Madras, "The Madras Teachers' Guild" is very poorly represented. More than 90 per cent. of the teachers of the Presidency town are not members of this body. If that body is doing any useful work it is doing that against odds. These are days of democratic ideals. When powerful organisations conducted by eminent men and for a number of years have been attempted to be shaken, and when clamour alone is able to draw the attention of the powers that be, it is idle on the part of the school-masters to keep quiet with folded hands hoping that God will help them. But let us remember that God will help us only if we help ourselves. Let us therefore shake of our lethargy and organise ourselves in such a manner as to be benefited by such organisations.

(14) THE ENVIRONMENTS.

The environments under which we live have not had any effect upon us till now. Every day we are teaching in our classes that "Union is strength;" "United we stand, divided we fall;" "The story of the dying father and the bundle of sticks," etc. Not a day passes but organisations are being formed around us. The Barbers, Washermen, Chucklers, Rickshawallas, Scavengers and others have organisations of their own and the most wonderful part of the business is that such organisations has helped them to improve their pay and status in life. Have we taken our environments into consideration and have we organised ourselves in the matter at least of the above mentioned people. Are we worse off than those people in the matter of organisation and discipline? Have we no intellect to guide us and organise us? Have we no desire to have organisations? If it is not any of these things, what is it that really stands in the way? Let us unite ourselves and present an united and solid front because our salvation lies in our own organisations.

CONCLUSION.

Before I conclude I beg to thank you for your patient hearing and the Secretary for his kindness in having given me this opportunity to express my stray and ill-connected remarks. If I have thrown a few thoughts for the serious attention of the Conference, I shall consider myself amply satisfied. I thank you, gentlemen, once more for your kind and patient hearing.

THE NEW EDUCATIONAL OUTLOOK.

FROM the soul-killing mechanical move through one groove to the days of broad outlook and free-play of nature, is no less than a revolution in educational policy. That the requisite efficiency can be the result of the unrestricted play of individual forces, provided there be a pervading centre of attachment, will ere long become an accomplished fact.

The historic rise of the Bolpur School of Rabindranath is bound to have its lasting effect on the Indian Educational System. For one thing, the place of Psychology in Education—though a term abhorred in the eighties—has well-nigh become a corner-stone of educational thought. The latest letter of Sir M. Sadler only corroborates this. The next step is to put a premium on institutions of the Bolpur type. The latest reports of improvements in school-plan only indicate an agreeable move on the right line. There remains only the necessity for putting up buildings where permanent records are to be kept in the case of Elementary Schools, the rest of the school-building is to be preferably open air, where the artless young can read “in communion with nature.” Temporary sheds may satisfy the needs of winter.

Surely here remains the best solution of decades of a soulless and godless education. Not in compulsory religious education with its overhanging spectre of protests from honest “burghers,” not in the meaningless iteration of a self-evident need with no suggestion of constructive measures, not in the institution of a thirty minutes’ religious class in a week of thirty hours; but, the true solution here as elsewhere lies in the old Gurukula system the best elements of which are found at Bolpur.

When the wind blows like this, the Madras Elementary Education Act has yet to be

made progressive in this respect. It is expected that the practically though not legally objectionable part of the Act, which suggests the remedy of a new school in cases of conscientious protest from honest burghers, will ere long become moribund. Hard experience alone will bring about the desired amendment; for one thing, the Indian peasant is a shrewd conservative who is found to stick to his Ayyanar and Esakki, in the very holy sepulchre of Jesus.

Readers of the Spectator’s “country-manners” need not be treated to the wastage incumbent upon a copy of institutions which have been tried and found wanting. To any observer the old Matriculation seems to have been reached after a decade of trial in a novel line. Our Boards are only beginning to build schools in a plan, which owing to a peculiar system of management, are ante-diluvian only by a century. Men as well as institutions ought to make use of lessons learnt in the hard school of experience.

One further internal blemish consists in the stereo-typed use of text-books, regardless of the culture and needs of the locality. It is a striking problem to consider if the time has not come when prescribed syllabuses on a dull plane have not to be deleted altogether. In other words these tabular statements are out of place in the open air system; particular seasons are bound to have their interacting influence over the hitherto lifeless regime. One striking instance, when the sweet Kokila began its songs, have we not read that all the boys at Bolpur were at once turned towards this gay messenger? Here lies the use of the ear, the gateway to the heart.

Again, it is a moot question if a course of agricultural education on indigenous lines is not the only interesting occupation for a village of cultivators. It is really difficult to answer otherwise the shrewd queries of villagers who are not interested in having their

sons at school during the agricultural seasons. It is time to consider if a well-thought-out open air agricultural course is not to be started in the fifth standard. On similar grounds in a village of weavers the weaving course may be begun in the upper primary class. Improvements on such lines alone can make the Compulsory Elementary Education a success.

Further with the spread of these ideas, the question of State vs. Voluntary Education is bound to assume a growing importance. Happily, the increasing demand for popular government, and the intense satisfaction in self-expression have in them very strong tendencies towards voluntary institutions. Purely public-managed institutions by their very nature cannot have the desired result in the new line. If the ill-timed and mischievous wranglings of our leaders were only to be directed along this line of individual self-expression, if only the desire to be original results in an analytical study of the ancient institutions, if only the historic cry of no taxation were to merge into the voluntary support to indigenous institutions where the best elements in the old system are to be preserved, many of the true educational needs of villages would have ere long been successfully met.

One broad blemish has to be acknowledged. In platforms and councils, our orators have been fairly good critics but our educationists and intelligent patrons have only produced replicas of Government institutions, in needy

localities. This is itself no easy work. But, when golden days are being described with overcharged metaphors, genuine attempts to establish such institutions under modern surroundings, have been deplorably disproportionate. With the distinguished exceptions of the “Gurukula” at Hardwar, Brindaban and Nasik and the famous school at Bolpur, the run has been towards one-sided imitation. The besetting error with Indian Education has been the growing educational discontent despite the increasing statistics of schools and colleges. This discontent is mainly economical. While in the West, the young who have won the war are “winning the peace,” the best educated young of India find themselves face to face with clerkdom, vakildom, or nevertheless poor school-masterdom. So, quality is the supreme concern; mere number has been found wanting. It is gratifying to note that Native States like Baroda and Mysore have wakened up at last to the intense need of technical education. The movement from below has anyway not been sufficiently weighty.

These are some of the many interesting and intricate problems bound to crop up very soon if not already; and it is to be hoped that the movement of “hands-off” and “communion with nature” will be allowed to show its beneficent effect so that many a knotty problem may find the natural solution.

K. R. RAMABHADRA SASTRY.

Oliver Goldsmith: THE VICAR OF WAKEFIELD

Edited with Introduction and Notes

By J. C. ROLLO, M.A.

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SOME THOUGHTS ON CHILD EDUCATION.

'THE old order changeth yielding place to new.' So said the great bard of the nineteenth century. How true is this even to this day! Ideals of religion, philosophy, education and art which gain general acceptance in one age are no longer in the ascendant in the succeeding age. In the cinematographic process of intellectual development, it would not surprise us if the ideals of religion which have been in the ascendant in the past are found unsuitable to the modern critical human intellect. In religion, modern man has travelled far since the view that reason should be the handmaid of religion was expressed. Modern man, in the light of modern knowledge, points out that religious experiences should be submitted to speculative criticism and construction. Not only in the province of religion but also in the region of philosophy there has been a change in the modern man's attitude towards men and things. The ideal of self-renunciation, the ideal of a life of retirement divorced from the practical activity of human existence, this ideal which finds characteristic expression in the immortal poems of Saint Thayumanavar, belongs to the dreamy passive type of life and character lived some centuries ago by our ancients and never can find ready acceptance in our age. To-day, we believe in life at its fullest, life which finds its hope and realisation in society rather than in the seclusion of the mutt or wilderness. Thus it is evident that we live in an age of progress and that the ideals in all the fields of human investigation are continually growing according to the needs of ages and that the greatest intellects of nearly all periods and of all lands have tried to enunciate some theories that

would harmonise with the ideals current in their times. This is true of the educational ideals also.

Turning our attention to education, we find that nowhere has reformation worked itself out so thoroughly and completely as in this field and especially in the sphere of child education with which we are chiefly concerned. This child study movement is a branch of human investigation which gained importance in recent times and which has, as its motto, the advice of Froebel, "Come, let us live for our children." There is no disputing the fact that a wave of materialism is passing through our land awakening us from our long spiritual stupor to the realities of life. It is profoundly convinced that the needs of the country must be taken into consideration when we want to frame a theory of education which would prepare the child for life in all its aspects. It is therefore profoundly convinced that any theory of education cannot be separated without disaster from theory of life and any system of education which does not prepare the child for the subsequent battle of life is doomed to be the victim of general dissatisfaction. Thus the Kindergarten has this great merit in that it trains us to become strong, healthy, sound-minded, young citizens fit to face well the problems of life.

With this fundamental idea in mind, we shall enter into the subject proper. The most outstanding feature of modern educational theory and practice is the recognition of the great psychological truth that the mind cannot be identified with one of its aspects. This was exactly the fault which the old educative reformers were guilty of, not to speak of that great German reformer, Herbart. Hence their education was based upon

an appeal to the intellect to the exclusion of the emotional and volitional aspects. The mind was associated with intellect and whenever the educational reformer advocated methods to improve the training of the mind, the chief recommendation made by him consisted in the inclusion of certain subjects to the curriculum. Thus it was that children in the past were asked to learn by rote the dry pages of vocabulary and the abstract aphorisms of "Auvayar" (அவையார்) the meaning of which might, it was hoped, dawn upon their minds in later life. It is a great mistake to suppose that we can secure efficient training of the mind as a whole when we attend to the intellectual aspect alone leaving the other sides of human nature untouched. Have we not heard of intellectual giants being moral pygmies? Have we not heard of instances where students trained under the old method have failed to take an intelligent general outlook of life? The great merit of the Kindergarten is that it makes an appeal to the pupils' entire self arousing their general interest and unless a pleasurable teaching is induced and a definite aim is had in view, there can be no effective activity put forth by the pupils. Its methods of teaching are those by which the children are looked upon as human flowers and plants in a garden and are not treated as machines. The writer of the article is more inclined to think that it is this defective psychology of treating children as machines underlying the educational practice that has been responsible for the great educational unrest.

Another great defect which has been cutting at the root of educational growth seems to me to be the failure to recognise the importance of child education in the past. Educational authorities then did not recog-

nise that the first stage of child development influences and conditions all future growth, awakens its mind to be ready for school life. A moment's reflection will bring home to us the profound truth that the education of the child is important for the growth of a strong, healthy nation, strong both in mind and body. The well-being of nations depends upon what man is and the well-being of man depends upon what the child is. The child contains in germ all that it will be in manhood and hence says the great poet Wordsworth: 'Child is father of the man'. It is incumbent upon the elders to see that these germs do not wither for lack of tending the little human plant. Thus the hope of the whole world lies in its children. The present widely prevalent idea in favour of even nursery schools which, I hope, will realise itself at no far distant date, is the expression of that belief that the first five years of life—"the longest five years that we shall ever spend"—are years which offer never recurring opportunities for the establishment of mental as well as of physical well-being. Dr. Montessori has demonstrated with what spontaneity and joy, children can, in these formative years, lay broad the foundations of a truly liberal education. There is, so far as my personal investigation goes, an insatiable thirst on the child's part after an untiring investigation of his ever-widening world and such desire ought not to be suffered to die out but must be carefully guided to fresh achievements. The sympathetic and strengthening environment of the nursery school might do much to prevent harm resulting from the unfavourable conditions which obtain in many homes. The best that has been said and thought on the subject points to the conclusion that, if we wish to develop the child in all its aspects, the

most favourable period for attempting to do so is the plastic years of infancy. The same thought finds expression in the saying of Auvayar (அவையார்) "இளமையிற்கல்." If this truth were to be fully recognised, the best thing to be done would be to establish not only nursery schools but also schools for mothers which would bring knowledge of certain psychological facts to inform the maternal instinct in such a way that the babe's first teacher would realise more clearly than she often does the nature and importance of her task.

It may not be out of place for me to discuss in this connection the oft-discussed question of the relation of child and heredity. Every school boy knows that the child is ushered into this world with numerous tendencies or in psychological language, congenital nervous pathways, both good and evil. Even to-day, there is a great misconception that the hereditary traits are stronger than the environment and they must of necessity develop when the time comes. And hence they are discouraged from strivings to escape. Have we not heard people say "அவன் தலை எழுந்து போலேதான் ஆகும்?" A Rational investigation into the question has resulted in the conclusion that heredity is the groundwork which will or will not determine one's future career according as how one reacts to one's environment. In other words, the inherited tendencies will show themselves if the environmental conditions are favourable just as they will atrophy if the environments are not conducive to their growth. What these tendencies are depends upon one's nurture, which of them are to develop and what form they are to take depends too upon one's nurture. Consider, for a moment, the case of a hypothetical child born into this world with strong social instincts but un-

fortunately brought up in solitude. It is quite evident that these social instincts, for want of tending, may atrophy. Thus the importance of education both for imparting instruction and for moulding character is, of course, well recognised. What was not sufficiently recognised was the importance of these early years and months of childhood. There should be far more earnestness in our endeavour to understand the child and surround him with every helpful and wholesome influence. Even so sure and profound a thinker as Plato, being convinced of the vital importance of nurture and influence, says: "In the earliest childhood the soul of the nursling should be made cheerful and kind, by keeping away from him sorrow, fear, pain, by soothing him with the sound of the pipe and with rhythmical movement."

One of the great achievements of the modern age is the distinct recognition of the great principle that education cannot consist of mere listening and imitation and that child education must take the form of spontaneous play leading in the direction of handwork. It is well known to all of us that the natural activity of children is play which is essential for the proper activity and development of the child. Mr. Watts, M.A., Lecturer in Psychology at the Manchester University, in his new book "Education for Realisation and Social Service" devotes a special chapter to the "psychology of play." It is shown that the play of children is, in any case, as educative as the play of animals. He gives us the following as the fundamental axioms: (1) In the first place, intelligence is best seen as functioning in the creative activity of the whole personality. (2) The obvious education for the development of this creative activity of the mind is through the exercise of the

whole personality. (3) In play, the whole personality functions spontaneously and in the creative spirit and with variety and joy. It is clearly understood therefore that there is a great psychological value in play which is expressed in the shape of hand-work.

Now, it is to the question of hand-work in child-life that we have to turn our attention. "Little children," says Miss Gillingham, "love doing things with their fingers, they like to feel and touch everything they see and there is a strong creative instinct in them." Naturally the child is delighted when he has made something new by his own efforts, crude as the result may be. His curiosity once aroused will lead him to seek for further information from books and friends. The Kindergarten therefore studies the child, notices the general likes and dislikes and takes into account its feelings and impulses and finally arranges a teaching so as to suit these characteristics. The point to be remembered is that, in satisfying the natural desires of the child, we make his education a pleasure and a delight.

The next important thing to be noticed in connection with child education is the fact that the child cannot apprehend or retain an idea abstractly expressed which was verily the method of teaching in vogue in the past. An ideal must take on definiteness in the mind of the child; let him make it exist concretely. He may cut his new found hero out of paper, mould him out of clay, draw him on paper. Let the beautiful flower that has called forth the child's artistic sense find its concrete reality in coloured cut or flower design. Many a girl's paper-dolls have, when finally perfected, expressed and embodied, as individuals and as a group, the sum total of childhood's ideals up-to-date. To be convinced of this, the

adult has only to overhear the conversation between the dolls as carried on by the girl while she "plays" with them.

The next thing that we have to notice is that children possess the characteristic of creative instinct. Care must be taken to give the child an opportunity for self-expression a chance to reproduce what has been presented to him plus the adding of his own contribution or even substitution. Once a teacher was instructing his children to make rhythmic borders as she counted. Suddenly the four year old got up and said: "Oh, look at me, I am going to make something and it will be nicer than that." With this announcement he began drawing and inventing as he drew. He made flower borders and within them houses and a barn. Thus a child absolutely refuses to be a mere receptacle of a teacher's theories and ideas or even stories.

Another important feature which marks modern educational practice is the recognition of the pupil as a factor in the educative process, a fact no less important than the teacher. For the educative process to be a success, there should be an interaction between the pupils' activity and the teacher's activity. That the importance of the pupils' activity was quite ignored is clear from the fact which Professor Adams points out of the absence of a correlative term corresponding to the term 'educator'. In the old days, the teacher did everything, the pupil counted for nothing. The latter was a mere passive listener. From the standpoint of psychology, this method in vogue in the past is liable to be condemned. For the individual is a unit psycho-physical organism. If it be so, then the mind and body must act together. According to the law of idea-motor-activity, every thought has an instinctive motor accompani-

ment. A life has not possessed itself of an ideal unless it has lived that ideal in behaviour. Likewise a child has not made an idea its own until it has converted it into activity of life. "A calendar consisting of a simple paste-card mounted upon a fancy paste-board or blotter-board background with a year pad beneath and ribbon finger-hangers becomes a worthy expression of love of even the youngest, and embodies the sum of the "Himself" of the child." Thus the Kindergarten tries to give an opportunity for the child for self-activity.

Again, the Kindergarten supplies and supplements a great need which is manifest in our study of modern psychology of the child and which was often neglected in ancient days. Children whether ancient or modern are naturally sociable and love sympathy. This final and nobler side of their nature the Kindergarten seeks to improve and develop. A wider social experience is necessary than what the family alone supplies and this is found in the free intercourse of children with their fellows. It is only by being brought into relation with their companions that they can come to learn something of respect for the rights and feelings of others. And hence the Kindergarten aims to be the great lever for raising the tone of national character.

Thus far I have tried to lay before the readers, in as brief a manner as possible, some of the essential psychological principles of the Kindergarten pointing out at the same time how, by trying to remedy certain defects in the old system of education, it attempts to lay broad the foundations of a truly liberal education. There is a great divergence of opinion among educationists as to whether there is an adequate return for the vast sum that have been expended on schools. Officials in Government service are dissatisfied with the general ability of the young men who go to them from schools. Social Reformers con-

less that there is little sign of a general elevation of national character. This to my mind is the result of the bad system of education prevalent in the past. The Kindergarten is an attempt in the right direction to solve a problem of educational unrest at its very root by trying to ward off the disastrous consequences of the education in the past. The fact of the matter seems to be that no importance was attached to infant education and even the little importance shown to it was based on a mechanical system. This was largely due to the misconception that the school is the only educational agent and hence no attempt was made to lay a deep foundation in raising the grand edifice of the education of man. And there is a consensus of opinion among educational reformers that the Kindergarten which has achieved a remarkable success in America is sure to play a vital part in India in developing all sides of child nature. To speak impartially, the modern child in the Kindergarten has the deep-rooted love of making or inventing or knowing all about things. This is one of the profoundest influences of the Kindergarten, on the modern child and thanks to Froebel, the founder of the Kindergarten, he has achieved a substantial victory in this field. We may be amply justified in the anticipation that, at no far distant date, the Kindergarten will spread throughout our land especially when it is worked out by persons like Miss C. Gordon, who have really entered into the spirit of Froebelian teaching.

T. V. APPARSUNDARA MUDALIAR.

THE COURT OF HONOUR SYSTEM AND ITS PLACE IN SCHOOL DISCIPLINE.

THE merit of a school is, in the opinion of the major part of the people, to be gauged by the measure of discipline that prevails therein. This is obvious from the familiar remark which one often hears made with reference to an institution: "What about that school; so and so, is a good disciplinarian." With them the belief is strong, rightly or wrongly, that once in a school good discipline is established, all other things surely follow as a matter of course.

I am inclined to agree to that, if they refer to discipline in its wider sense embracing in its scope mental and moral features of the pupils and not merely the external behaviour of the pupils in the school-room. Be that as it may, it is this aspect of the school life, if properly attended to, that sheds lustre over the whole institution, brings reverence, and regard for the masters therein and makes the pupils always hold their *Alma Mater* in reverential remembrance.

Such a gratifying result can be successfully achieved only, if, as I have said before, the disciplinary aspect of the school life is properly attended to. By proper attention I mean the regulation of disciplinary measures, no doubt in conformity with the psychological characteristics of the pupils and the modern theories of discipline but chiefly with a view to guide them on in their cultural development. In my opinion the school authorities should set before themselves as the chief aim of the disciplinary measures that of training of boys in all the qualities necessary for the future citizens of the land.

At present, every school calendar has a set of so-called disciplinary rules, obedience to which is being enforced by threat of fines and other similar consequences, for breaches

thereof. I ask of what serious educational value are they beyond helping the teacher in keeping silence in the class? Do they really tend to create and foster a genuine love for the habits of punctuality and regularity, which they are designed to develop; or a feeling of *esprit-de-corps*, a feeling of self-reliance, virtues of honour and nobility and all such special ingredients in the compound of perfect manhood?

There is none that will dare dispute nowadays that the aim of education should be not merely to help the boy to earn his bread but chiefly to fit him up for the future life of citizenship. What is true of the whole is also true of the part. Is not the scheme of discipline a part of the scheme of education? Are the present disciplinary codes capable of helping the attainment of the chief aim of education? They at best are mechanical, and at worst only irritate the boys.

Therefore, the present calendar code of discipline should change, yielding place to a newer and better scheme. We have one such ready at hand that can fairly well satisfy our purpose. I mean the Court of Honour System. Exaggeration it is not in the least to claim for it so much.

A knowledge of the principle and methods of its working will, I am sure, set at rest any doubt on that score. Hence, let me before referring to the excellent cultural potency the system has, state what it is.

I can do no better than give below a description of its constitution and rules which I framed for the one I have instituted for my class. It strives in its object to foster a sense of responsibility in the students, to promote *esprit-de-corps* among them and to initiate them into the art of managing their own affairs. If these three objects are secured, the educational aim, I think, is very largely fulfilled,

The court is constituted of the elected representatives of the several groups in the class, arranged for the purpose. It is given power to take note of all breaches of class and school discipline as per rules framed therefor and to exercise a sort of moral supervision over the class-boys outside the school. While in the former case the court is given authority to enforce its powers by imposing penalties upon the offenders, it can in the latter, only note and refer the misconduct on the part of a student to his parent or guardian through the head of the institution or class teacher.

The details of its working are as follows:—Every representative is in charge of the disciplinary conduct of the boys in his division. He has to see if each boy in his division is observing the rules properly. On finding a breach of a rule on the part of a student, he is to direct the attention of the boy to his non-observance of the rule and obtain an explanation from him. A record of such offences on the part of and explanations from the students, he is to place before the court of honour meeting. The meeting is held once a week. The court at its meeting decides in view of the nature of offence and explanation offered as to whether it should merely warn the student or decree a punishment. Here let me add a word of explanation re punishment. The word need not frighten any of us; to make the punishment imposed by the court less galling to the offending students, the whole class is at first consulted and a list of punishments is drawn up. Secondly, the court of honour is instructed in decreeing any punishment to bring home to the offender the moral sense of the wrong he had done. Punishments are therefore pitched as light as possible. The representative is then to report the decrees of the court to the students concerned and see they carry them out. There may be one or two

refractory students; with them the class teacher will have to exercise his arts of persuasion and bring them round.

This system is bound to produce a very great moral effect upon the students. This system would supplement on the practical side the moral instruction that is now insisted upon in the high school classes. This system would secure the spirit of Scout-training to all those who for some reason or other have not been able to join that movement of the "greatest of moral forces" in the world as its founder calls it. Every student in the class gets training in the habit of implicit obedience to the representative he has chosen. A spirit of healthy emulation is induced in the students, each division trying to have a cleaner record than the other, and the whole class aspiring to secure and maintain for itself as compared with the others in the school an honour and name for its own.

In spite of the excellent value of this system and also of the psychological recommendation, notes on pedagogy in the training schools do lay much stress on them, it is pitiable to see that the trained teachers, once they leave that institution become indifferent to it. If my memory is not false I remember to have read in your pages a reference to it in only one institution, viz., the Taylor High School, Narsapur: Let me therefore, through your columns, appeal to my brethren to try and work up this system for the self-development of the pupil and for their own benefit in the class-room.

V. JAYARAMAM.

THE HIGH SCHOOL.

11

WELL then, what are these duties of a teacher? His whole duty may be summed up in one clause, that he should make a *man* of his pupil, man as distinguished not only from an animal on the one hand, but also from a mere citizen on the other—a duty the very attempt at the accomplishment of which may very well stagger far mightier minds than that of a poor schoolmaster. All the same, a beginning has to be made, and by the schoolmaster, by the present generation of schoolmasters, if the result is to be achieved even at some future date by his unborn successors. It is because he possesses the rare privilege of having this responsibility entrusted to him that the schoolmaster's is the "noblest of professions." But let it be remembered that, unless the responsibility is nobly discharged by us, schoolmasters, somebody will claim the right to call ours the meanest of professions. True, the high school is not the place where the whole grand task can be accomplished, either now or at any future date. It is, however, in the high school that the seed is to be sown, the plant to be nurtured. Hence the responsibility which a high school teacher is charged with is a grave responsibility. We have to make men of our pupils, not animals, not mere citizens. Frequently, by the great and by the small, it has been preached that the school should turn out citizens, good, dutiful citizens, who should serve as the pillars of the State, as the builders of the nation. This is an idea taken from the wisdom of the West, and, like many another idea borrowed from that source, is only of limited application in this country, with its peculiar religious and social problems, which await peculiar solutions. That is not all. The West itself, the source itself, appears, since the outbreak of the

Great War, to be revising the doctrines which she had formulated and examined and verified and accepted and cherished and promulgated for centuries. *Internationalism*, as a higher ideal than *nationalism*, indeed, as the only true ideal, the only efficacious panacea for the epidemic of war, is advocated by the better minds of the West in every field of human activity, in politics, in labour, in education. And shall we, Indians, who have never before really known what nationalism is, now wear ourselves out to attain a worn-out ideal? At least, shall we set up this lower, this narrower ideal as our goal in approaching the problem of the education of our children, who will live their lives at a future time, when the higher, the broader ideal will be clearer understood and wider accepted? No.

Cosmopolitanism—neither nationalism, nor internationalism—shall be the ideal of the India that will be, as, perhaps, it was the ideal of the India that was. And in our educational institutions, we, teachers, must approach our work with this ideal in view. How far we can succeed in our task depends, not only upon ourselves—some may even go to the length of saying not at all upon ourselves—but also upon all those whose asset the school-boy is, all those, the parents, the managers, the department, and the public, who, by refusing the school-staff's autonomy in the framing and the directing of the general policies of their respective institutions, have set themselves up as the exclusive sponsors of the future generations, whose representative amongst us is the school-boy. But there is nothing like faith; "more things can be wrought" by faith than will suffice "to make a heaven of hell or a hell of heaven," according as the faith is heavenly or hellish. In faith, therefore, let us put our shoulder to the wheel and do our share of the task, faith that our

labours shall not be wasted incense. The task is great, to make men, the Creator's task, the very crown of it. But if we take the first step towards it, the rest we need not despair of. That first step is to make men of ourselves, men as distinguished from mere animals, men as distinguished from mere citizens, men as distinguished from mere instructors of the Three R's and their more advanced progeny. Here again we are not our own masters, surely not. Here again we are at the mercy of several influences. But here again, let us have faith and put our shoulder to the wheel; and, while achieving what we can within ourselves, let us achieve all we can with our pupils. But the pupils themselves have their own little hearts and wills and minds.

Let us win them, those little minds, those little hearts, those little wills. And how? Through love, through communion. Much more than in every other place, personal relationship between him who works and him who is worked upon plays a very important part in the life of an educational institution. A teacher cannot *draw out* the faculties of the pupils' minds—that he can *drive in* something or other, and somehow or other into those minds is a different matter—by a mere process of lecturing to them in the class. Whatever is given by one man to another, if there is no bond of sympathy between the two, if they do not work together in an atmosphere of mutual love, is not education, it may be anything else. In many of our schools, the teacher goes to his class, when the bell rings and leaves it when the next bell is given, and meets his pupils again, let us take it for granted, when again the timetable bids him do so. He is a mere teaching machine with no feelings, no sympathies for, no personal relations with, those whom a lifeless system commits to his charge. Aye,

system is the word. We cannot dispense with *system* even in our prayers to God.

I am not unaware of the obstacles in the way. We are a set of paltry pigmies to attempt at scanning the designs of the Omniscient, but one is tempted in one's ignorance to exclaim, "How is it that very often in this world we find roughest that path that ought to be the smoothest!" It is one of these paradoxes of creation that makes the success of a school-master's work very difficult of achievement. The need of personal relationship between the worker and the worked is most felt in a school, and it is in a school that it is rendered most difficult by the fact, that the teacher and the pupil are of different cultures, of different experiences, of different outlooks and of different ages. In order that a teacher may enter into the feelings of his pupils, he should be able to call to his aid, first a powerful imagination to realise, in his own mind, the state of the pupils' minds and next a steady, unvacillating decision of character to be always ready to maintain a frame of thought and feeling in consonance with the results of that realisation. Notwithstanding the hard buffets of experience, which he must have received in the course of his life, notwithstanding the misanthropy, which his dealings with the stern facts of the world must have led him into, notwithstanding the so many distractions, which his own domestic and personal griefs must have subjected him to, notwithstanding the very unpleasant sense of his own insignificance in a society where money and power are everything and a poor man with no authority is nowhere, notwithstanding all these, he should feel himself to be in his sweet sixteen, when the spirit is buoyant, the heart full of noble impulses, the mind surcharged with lofty resolves, the soul sings with cheerfulness, and the vision is not yet dimmed with the possibility of impossi-

bilities. Then again, if school-boys are young, they are also of various types of character, sometimes of various cultures, possessing different aptitudes, brought up under different systems of discipline at home, observing different customs and following different creeds. Hence whatever the individual culture, character and beliefs of the teacher, he must be broad-minded and tolerant enough to sympathise, also co-operate, with the condition of mind and the trend of feeling of every one of his pupils.

I do not like to be understood here as advocating that a teacher should be an unindividualistic second fiddle, that he should stifle his own distinctive note and play to the tunes—very often, discordant tunes—of the boys' idiosyncrasies. A teacher is not a teacher at all, if he has not an individuality of his own, if he does not at least develop one for himself. And he would not be doing his duty properly, if he does not or cannot impress that individuality upon his class, through everything that he speaks and everything that he does, also through everything that he does not speak and does not do. At the same time, there are, what may be called, oppressive personalities, which stamp out the individualities of others, which are too self-centred and hardened to leave scope for the growth and development of the personalities of those over whom they happen to wield any sort of influence. It is against this kind of individuality that I warn the schoolmaster. A teacher's individuality should be imperative enough to make itself felt by his pupils, while it is, at the same time, too unaggressive to efface or deface the distinguishing traits of the mental and moral nature of each of those pupils. But a graver blunder which a school-master often commits, against which, therefore, a more serious warning is necessary, is that he is apt to be indifferent to everything else than the examination at the

end of the year and the inspection in the middle of it; that he is apt to be indifferent to the truth, albeit he is reminded of it every moment of his life, that his pupils "live not by bread alone," much less by rotten bread, that they are something more than flesh and blood.

What a sublime influence the remembrance of an old teacher's sweet personality has upon his pupils' after-lives is a thing which must have been felt by many who sat at the feet of great masters in their younger days. The remembrance of how my old master's encouraging pat on the back used to cheer me up into making a last and successful effort in solving a tough problem; of how he used to smile me into reinvigorated energy, when, on many an occasion in the old days, I threw aside my books in despair; of how on an evening on the river bank, alone with my kind master, his open countenance inviting confidence, I poured into his sympathetic ear my own little troubles and how he listened to the recital patiently and felt for me; of how he took us all, the boys of his class, on a beautiful morning to the neighbouring hill, the master, with boyish laugh and ready joke, with cautioning frown and rough reprimand, mingling in the excitement, while guiding it—these are remembrances which make me, a prematurely old pedagogue, feel within a revival of the winged spirit which was mine in my teens. Nor is this all. The influence of a real educator of young men is not limited to affording them a moment's diversion from the routine of their future lives, but it ennobles and vivifies and transfigures that routine itself. More. It passes on to generations, that are to be, ennobling and vivifying and transfiguring all it touches. That this is so, that his work lays the foundations of future humanity, the school-master should always bear in mind, and should, in his dealings with his flock, conduct himself accordingly. If he

does this, "it is a chance that does redeem all sorrows that ever he has felt."

It has been suggested to me that, a generation back, the personal bond between the teacher and the taught was stronger than it is at present. This does not appear to be altogether unwarranted by the testimony of facts. Some of us can recall to our minds, with pleasure and respect, our relations with some of our masters. One of the changes, which have, in recent years, come into the world of education, is the daily growing demand for it. Even the inhabitants of the most remote villages, men, who, a quarter of a century back, would have viewed either with suspicion or with derision any suggestion to them, that they might, with advantage, send their children to an English school, are now very eager to see those children employed in some Government department or engaged as practising lawyers. English education has come to mean the gateway to riches to some people and a means of livelihood to others; while it is, to a third class of men, the guarantee to worldly position and social status. The most orthodox Brahmin, though he looks upon English education as the demolisher of his cherished ideals, the violator of his national religion, and the destroyer of his revered customs, does not hesitate to sacrifice the interests and the spread of his traditional lore (the pursuit of which alone by his countrymen can save those ideals, that religion and those customs) in the case of his own son, whom he would see rather a graduate of the University than a pandit of his own type. The most prosperous agriculturist has come to believe that it is a cleverer course for him to send his son to an English school than to bring him up to his own occupation. Even the successful merchant is not exempt from this general trend of feeling. Whether all

these men are victims to self-deception or whether their action is based upon proper reasoning, it is not my purpose here to discuss. Suffice it to say that the movement in the country towards the absorption of western culture is a potent, irresistible, unresisted force in our nation's life at the present moment and that one result of this is the great demand for secondary education.

Though political economists say that a demand cannot fail to discover new and, hitherto, hidden sources of supply, it is, all the same, true that the discovery cannot be fully made the moment the demand is felt. The interval between the appearance of the demand and the time of the satisfaction thereof is a period of transition, a period of maladjustment of things and consequent dislocation of work. We are now passing through that period, and it is very uncertain when we shall be out of it, for the demand for the new education is great and it is growing greater every year. Perhaps all this is as it ought to be. But the schools—those of the present type I mean—cannot be conjured up by magic, for they are to be built on silver foundations and golden walls, and equipped with crystal furniture and apparatus. The unhappy result is that the existing schools are inundated. During the past two or three years, the Government have been tangibly recognizing the truth that private effort can never cope with the education of vast populations. But, in view of what, we may fairly conjecture, will be the funds at the disposal of the future Educational Minister, even this tardy recognition does not appear to be thorough. There was a time when our high schools were very much weaker than they are now, weaker, I mean, as regards the number of their pupils. They

were also few. When the numbers in the schools increased, new schools were opened, but not until the old institutions attained their bursting point. Then there was a fall of numbers in the individual schools, but only for a short time, a very short time. Then again the bursting point, then again new schools, and so on. But all along, there was never a time, at any rate within the last twenty years, when for a tolerably long period the strengths of the schools were steadily moderate. It is, therefore, feared that, whatever relief may, just at the present moment, be felt from the pressure of numbers in the existing institutions, owing to the opening of the few dozens of new schools in the Presidency, the relief will only be of very short duration (as I pointed out it was so 'in the past') and will come to an end even before we can settle down to our work under the improved conditions. And, whatever may be the total number of schools, which may be opened in the coming years, this state of things will never change for the better, as long as it remains to be once for all recognized by all concerned that, in the sphere of education at the present stage of our country's life, supply should lead demand and not demand supply, as long as the policy is persisted in of taking time by the rear-lock.

When I speak of the present over-crowding in our schools, I have in mind not only the

total strength of each school as a whole, but also the strength of each of the several individual classes in the school. I remember when I was a pupil in the Fifth Form in the year 1899 in one of the High Schools of the Ganjam District my class was fifteen strong. We used to sit on three old-fashioned benches with backs, arranged round the three sides of a science demonstration table, the fourth side being occupied by the master. We were all, the master included, a small family, we rarely felt we were a regulation class. The same school has now about eighty pupils in the Fifth Form, though the number of high schools in the district has nearly trebled itself since the days to which I have referred. It does not require the employment of any elaborate logic to prove that the smaller the class, the greater will be the individual attention that can be paid by the teacher to the needs of his pupils, that the smaller the school, the more intimate and frequent will be the intercourse between the community of teachers and the community of pupils, and consequently the more effective will be the personal influence of the former over the latter. The present over-crowding in our schools may be said to be the cause of many evils, but the loosening of the personal bond between the teacher and the taught is, by no means, less harmful than any other of them.

(To be continued.)

J. GANGANNAH.

ABOLITION OR REDUCTION OF THE INSPECTORATE AND ITS TRANSFORMATION INTO A TEACHING STAFF.

FOR some time past the Government has been spending lakhs of Rupees every year for the maintenance of the Inspectorate consisting of Inspectors, Assistant-Inspectors, Sub-Assistant Inspectors, Supervisors, and their multitudinous clerks, and servants. The I. E. S., P. E. S. and S. E. S. officers and supervisors are expected to go about touring for a greater part of the month, so as to inspect all Non-Governmental aided schools and offer some constructive remarks on the suitability and efficiency of the staff, equipment and the management.

They generally pay visits to every school once in a year for a couple of days, ask teachers to deliver lessons in their presence, supervise the records and embody their constructive and destructive remarks in their reports.

The Government generally offers aid in some shape or other only to such schools as are manned and supervised by experienced trained and capable teachers. It is obvious that the teachers will have to undergo training for a period of about one year so as to make themselves conversant with the work of teaching. They are also subjected to the supervision of the Headmaster and to public criticism. In no other learned and dignified walk of life (say for instance, the Medical, Legal or Engineering Departments) do we find a professional man being subjected to so much ignominy and annual test of skill or talents.

Now-a-days we find mostly officers of mediocre abilities, forgetful of their own defects and shortcomings, entirely regard-

less of the teachers' many-sided duties and responsibilities lording over the poor schoolmasters during their annual inspections. They try to make teachers instruments in their hands and objects of criticism and feel shy to deliver model lessons for reasons best known to themselves. They also venture to offer remarks on teachers of greater experience and unquestionable abilities and on subjects about which they themselves know very little.

This state of things is quite derogatory to the self-respect and the dignity of "the noblest of all the professions and the sorriest of trades."

Moreover even from their point of view the Inspectorate only get themselves accustomed to an ease-loving and fault-finding life. They also feel it a great hardship to go about touring for about 15 or 20 days a month. There is also every likelihood of forgetting in course of time what they have learnt during their scholastic careers. In the light of the abovementioned facts an annual expenditure of several lakhs which form a lion's share of educational funds in mis-directed and least profitable channels seems to be wholly undesirable and mostly unnecessary.

We beg to suggest that Headmasters may be directed to offer suggestions on teaching work. Auditors may be appointed to audit accounts, and Doctors may be requested to look after questions of sanitation, ventilation and equipment. A very limited number of Supervisors may be retained so as to inspect Elementary Schools which are solely maintained and financed by the Government or Municipalities.

A Commission consisting of experienced

Headmasters and Assistant-Masters may be appointed to go round all the schools once in three years delivering model lessons on different subjects for the enlightenment of the teachers serving in various schools.

In these days of Educational Re-construction when an overwhelming majority betray a woeful ignorance of the Three R's, we beg to suggest that the amount spent on the Inspectorate and the services of the officers therein may well be utilised in establishing a large number of Lower Secondary Schools in all populous centres throughout the Presidency for the rapid spread of education. In this connection we beg to remark that about a dozen Lower Secondary Schools and a few High Schools can thus be established in each district, maintained, controlled and financed by the Government and served by the Inspectorate.

In conclusion we most humbly request the public and the District Educational Conferences to discuss this question and pass resolutions to that effect and send up memorials to the Government, the New Education Minister and the Director to carry out the same as early as possible in the best interests of the people and the country.

T. VENKATARAMAIA, B.A., L.T.

C. B. KRISHNA SASTRY, B.A., L.T.

D. PATTABHI RAMIAH, B.A., L.T.

N. SITHARAMIAH, B.A., L.T.

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FIRST STEPS IN THE TEACHING OF GEOGRAPHY.

IN working the syllabus in Geography published on pp. 579-80 in the September issue of the *Educational Review*, the following few lines will be of some use to teachers of the subject in the lower classes.

As Mackinder says in his "Teaching of Geography and History," there are six roads to be traversed by children before Geography proper is introduced to them. The first and the second are the twin roads of *drawing* and *modelling*. The third and fourth roads form *Nature-study* including animal and vegetable life and the *circulation of water* from sea to sky and back to sea. The fifth is the romantic road of *tales from the Wonder Book*, and the sixth goes with *the sun* in his apparent motion round the earth. The teacher should guide his children along these six roads simultaneously.

Nature-study should be the handmaid of Geography in the early stages of the school course. All 'Nature-study' lessons are geographical topics, such as weathering, soil, stream, action of water, cultivated plants, trees and domestic animals. The pupils should keep a record showing whether the day is hot and bright or cloudy and whether there is rain or not. They should study the conditions of the growth of the plants and realise from actual observation that temperature, moisture and light are essential for their growth. The cycle of vegetable and animal life should be taught and the great truth that "all flesh is grass" should be illustrated.

In connection with *circulation of water*, the pupils should study evaporation, condensation, clouds, rainfall and action of running water. All the lessons should be based on actual observations or experiments (e.g., to

illustrate presence of watery vapour in air and condensation).

There should be plenty of *drawing and modelling* exercises in connection with the above two courses, and modelling should precede drawing. Mass drawing should precede free-arm or free-hand drawing; colour crayons, brush and water colours should be freely used. Where a stream is not available in the neighbourhood of the school, clay and modelling trough should be used to illustrate action of running water.

The *Stories of the Wonderland* may be chosen as illustrating (a) the life of the people in different regions of the world as determined by geographical environment, and (b) adventures by land and sea. In connection with (a), the following topics may be taken up: The tropical forest, the apes and the pygmies—the Sahara with its camels and dust storms—the Eskimo with his dogs and ice houses—the Tundra and reindeer—The Red Indian and his wigwam—the Australian black fellow with his diet of grubs, frogs and grass seeds—the Kirghiz of the steppes. [Books to be consulted:—Herbertson: *Man and his Work*; Fairgrieve and Young: *Human Geographies*, Books I & II; Gullick: *Overseas Children*, 6 Books; Hambly: *Native Races of the Br. Empire*, 3 Books.] In connection with (b), The Adventures of Livingstone and Stanley in Africa, Sven Hedin in Asia, and the Arctic and Antarctic explorers may be taken up. [The teacher may consult Wetherill: *The World and its Discovery*, and Archer: *Stories of Exploration and Discovery*.] In these stories, names of places may be used, but there is no necessity for showing them on a map. One or two years later, these places may be identified on the globe. Pictures should be used wherever possible and there should be plenty of scope for pupils' imagination.

The *sun* should be studied directly and not from a model. Children should observe the time of sunrise, midday and sunset. To begin with, day should mean the presence of the sun, and night, the absence of it. By observing the circling of the sun, pupils should be led to think that there is another side to the earth and hence they should infer that the earth is a body hung in space like the sun and the moon. With the help of the sun directions should be taught; and in the beginning we should talk of the (apparent) motion of the sun. As the pupils advance in age, we may introduce the idea of the sun being fixed and earth rotating (on its axis.)

As regards *plan* work, distances should first be measured by the pupils' pace and span, and then the foot rule and yard-measure should be introduced. Let pupils first draw rough plans and then let them draw to scale. In dealing with the plan of a town or district, connect movements of people with streams and roads, and markets with the convergence of roads.

The *globe* is a symbol of the earth. The first globe to be introduced to the child is a wooden ball painted black or blue without a stand. This should be used only after the children have been made to imagine the enormous size of the earth. Then the teacher should introduce a ball (painted black or blue) with continents painted white or brown upon it. Mere coast lines will not do. The equator and the poles should not be marked on this ball, for these are not actually found on the earth. There should be no names, and the forms of land should be recognised by children just like human faces. Let the children model continents from the globe and pour in sea round them; let them make their drawings also from the globe. The names of

SLOYD—ITS AIM AND IMPORTANCE.

all continents and oceans should be taught with the help of this globe. Let the pupils understand there is only one ocean, all the various parts of it being connected by straits or channels and the continents are separated into islands and peninsulas. Now they may write down the names they have learnt in their note-books. After so much is done with the help of the globe, the teacher should transfer the directions from the heavens to the globe and mark the N. & S. Poles. The pupils should be asked to point out the position of the continents from the class, and they should show, with a motion of their arms, allowing for the curvature of the earth. Now all stories may be connected with the actual areas on the globe. Rivers may be marked on maps with blue lines and on the model with depressions filled with water. Finally the moving globe should be introduced and by rotating it before a lamp (representing the sun) pupils should be taught how alternate days and nights are caused.

In fine, I would strongly advise every teacher of Geography to read the first eight chapters of Mackinder's inspiring book.

T. S. SUNDARAM AVYAR.

SLOYD may simply be defined as a system of educational hand-work, whose aim is to develop and unfold the mental, moral and physical activities of the boy. In the system of Sloyd, the greater importance is always placed on the worker rather than on the work itself. It is the boy who is the object of primary importance, and that is why it comes rightly under general education and not under industrial education. It does not profess to teach any trade or profession or to make anybody perfect craftsmen. The models and tools are only the means to bring forth what is best and latent in the boy. In this respect it differs from all other manual work. For instance it is often confounded with carpentry, as both the carpenter and sloyder work with the same material and with almost the same kind of tools. Though the object of the carpenter and the sloyder is the same, namely, to produce some useful article, yet there is a great deal of difference in the methods followed by each. While in carpentry, all importance is given to the objects prepared, in sloyd the importance is given to the boy who prepares them. While the work of the carpenter is haphazard and not based upon any system, the method of sloyder is wholly educative. There is no division of labour in sloyd as there is in carpentry where one man prepares the back, another the leg, the third the seat, while the fourth fits them all to make a chair. Again while carpentry is a trade where the object of the worker is to make most of things, with the least possible trouble and expense, sloyd is a means of formative education where the object is to call forth the best effort of the boy without any undue hurry to finish the object within a limited time. So the aim of

the sloyd instructor is to see, not that the boy turns out a good many models or all in the year, but to see whether the best effort of the boy has been called forth by the work; for it is possible that in sloyd a boy may do all the models and yet know little or nothing of sloyd.

In sloyd, all the models are arranged in a system of gradation which call forth the higher capacities of the boy as he advances from one model to another. It begins with a simple model which requires only one piece of wood, with fewer exercises, beginning with familiar instruments and gradually takes him on to more difficult and complex models, involving a good many exercises and the use of many and complicated tools. And it is aimed that in doing these models, the boy must develop not merely manual dexterity but also self-reliance, accuracy, orderliness, carefulness, patience, perseverance, steady application to and love of labour, exactness, cleanliness, neatness, power of observation, etc. It is these that are the principal aims of sloyd while the dexterity in the use of tools is only accidental which he cannot help acquiring.

Yet this system is sometimes severely criticised by those who look for the work rather than the worker, who look for the produce rather than the producer. They may interrogate an High School boy as to what he had learnt in his school and may probably receive the reply that he had prepared Pencil-sharpener, key-rack, coat-hanger, blotter-pad, book-rack, ruler, pen-rest, etc., and then at once dub him as an *unindustrial* boy of the book-rack-coat-hanger class. Perhaps they may even go a step farther and say what an amount of waste of public money, time and labour to prepare a foot and a half long of

coat-rack which can be bought ready-made for a few annas in the market. Surely these men look upon education purely from an utilitarian point of view and do not regard the knowledge and dexterity gained in the use of tools and the habits of mind cultivated therein as valuable assets to the boy. They forget that they are the works only of the boys who are yet beginning to learn and not of the master-workmen who had already learnt the work probably after wasting so much wood, time and labour that they never hoped to do in their whole life-time. No man has become proficient in any art, all at once, without wasting the materials of his art in his scholastic period. Those who are afraid of wasting will never learn anything at all. Moreover it is not the models, as we said, that we want in sloyd but the skill, the mental and moral development acquired in making the model; and these surely cannot be purchased for a few annas in the market. So also in general education when we ask a boy to work a sum or to write a copy, it is not the copy or the sum that is of importance to us, but that the boy should acquire the skill involved in them. Thus sloyd is not technical education and its importance lies, not in the fact that it is a means of earning a living but in the fact that it is principally a means of education of the formative kind based upon rational and regular proceedings to attain aims which are solely educational. "It is" as Mr. Larsson had put it "a tool work so arranged and employed as to stimulate and promote vigorous intelligent self-activity for a purpose which the worker recognises to be good." It is thus equally good, useful and important for every-body.

S. NARAIN MURTHY.

THE TEACHING OF INDIAN HISTORY IN SCHOOLS.

THE teaching of Indian History is defective for more than one reason; the teacher can on no account be blamed for this. No doubt the personality of the teacher counts for much in the teaching of every subject, much more so in the teaching of history. However, the teacher apart, there are a thousand other things that go to constitute a successful lesson.

There is, first and foremost, the necessity for good books on the subject—unbiased in tone, literary in style and profuse in illustrations, such a book as we have for the History of England in Keatinge's *A First Book of English History*. Such books on Indian History are sadly wanting. No doubt the books published by Messrs. Fisher, Unwin & Co., by the Oxford University Press and by Messrs. Sonnenschein are, to a certain extent, well-illustrated; but only certain phases of history have received attention in these books; pictures illustrative of architecture and political history are abundant, whereas the social and industrial aspects of life are lost sight of. Whether the deficiency is due to the lack of material or due to the neglect of that phase of history is yet a problem. But the deficiency exists and must be removed if Indian History teaching is to be a success.

Of the few good books on the subject, some of them are vitiated by racial or caste prejudice; some others are far from literary. No doubt, scholars of the standing of J. Sarkar, B. K. Sarkar, R. K. Mookerjee, N. Law and K. Aiyangar are at present engaged to write scholarly books on the period of Indian History least known, and source books—the publications of Messrs. Cooper & Co., Messrs. Bell & Co., and Messrs. Longmans & Co.—are pouring in to meet the demands of the public.

Next we come to the all-important question of charts, maps, atlases and picture-books. So that the subject may be presented in an attractive form and so that the right sort of atmosphere may be created, it is but necessary that there should be, on the market, illustrative material in a cheap and accessible form, such material as exists for English History. Whatever be our need in English History it is easily met; the same can hardly be said of Indian History. Where is one to find charts to illustrate important historical incidents as one finds for English History in such publications as A. L. Historical incidents and Longmans' wall pictures? Where can one find such good atlases for Indian History as we have in the atlases of Gardiner and Ramsay Muir for English History. The only atlases available—Joppens and the one issued by Messrs. Macmillan & Co.—are elementary books bearing on the subject. As for picture albums similar to those published for English History by Messrs. Longmans & Co. and for picture-books like those to be had from Messrs. A. C. Black and the Cambridge University Press for English History, the less said, the better. To say that no such material exists can hardly be said to be an exaggeration. That the need for the same is keenly felt bears repetition; that the publishers will supply the demand is the devout hope of the writer, the more so as the interest in the study of Indian History is not at present confined to India.

To sum up. Good books are wanting; illustrative material is lacking; industrial and social topics are left untouched; source books are few and far between; dramatic and poetical literature on the subject is practically non-existent. Unless these defects are removed at the earliest opportunity, we cannot expect the pupils to be as much interested in Indian History as they are interested in English History.

K. SRINIVAS KINI.

AN APPEAL.

To

The Fellows of the University of Madras,
Madras.

SIRS,

I, on behalf of myself and of the present and would-be Graduates in Oriental Learning of the Madras University, beg to bring the following few suggestions to your kind notice and request you to place the whole or part thereof whichever you think fit before the Senate at its meeting in March next and to kindly see the Senate is pleased—

1. To modify the existing Regulations including Transitory for Titles in Oriental Learning, amending, altering, rescinding and framing such other Regulation or Regulations as are necessary:

(a) To discontinue the system of awarding Diplomas to the *here-in-after* passing candidates in the Compulsory Division of the said Examinations at a Convocation of the University, before they are able to pass either in any one of the Optional divisions, the course and question papers for which may be extended to Three years and Three papers respectively with necessary addition and omission of the Syllabus and Text-books or in Part I of the Intermediate Examination which may be introduced as the Fourth Optional Division.

(b) To grant instead to every such successful candidate in the Compulsory Division, only a certificate showing the class in which he is placed.

(c) To introduce Part I of the Intermediate Examination as the only optional Division for

the Afzal-ul-Ulama and Munshi-i-Fazil Examinations.

(d) To drop the Regulation 22 of Ch. XXIX, and

(e) i. "To change the names "Titles in Oriental Learning" into "Degrees in Oriental Learning"

ii. The wordings in the Diploma "make known the title of" into "admit to the Degree of"

iii. "Certificate of proficiency in Oriental Learning" into "Optional Divisions of the Oriental Degree-Examinations."

2. To prescribe new academic robes for candidates attending Convocation other than those given in Ch. V. (*The new prescription being a gown similar to that for the B.A. Degree Examination for all the Four Degrees with hoods of light green or green silk with four different edges.*)

3. To grant the degree-holders in Oriental Learning all such privileges as are enjoyed by the other graduates of the University and to recommend to the Government for the grant of the same.

4. To give such qualified candidates the chairs of the Indian languages in the various University Examinations in which they have completed their success, and

5. To add new Regulation or Regulations wherever necessary for the maintenance of the above-mentioned main points.

Hoping you will kindly do the needful and thanking you in anticipation.

T. M. THEYYUNI NAYAR VIDVAN.

LECTURES IN LOGIC

FOR THE USE OF THE INTERMEDIATE CLASSES
PREPARED IN ACCORDANCE WITH THE UNIVERSITY SYLLABUS

BY

RAO BAHADUR S. MANGESH RAU, B.A.

late Professor of Mental and Moral Science, Presidency College, Madras
and Fellow of the University of Madras.

Price—Rs. 2-8-0.

SRINIVASA VARADACHARI & CO., TRIPLICANE, MADRAS.

The Subordinate Educational Service.

To

The Editor of the "*Educational Review*,"
Madras.

SIR,

The members of the Collegiate branch are grateful to you for your well-informed notes on their unfortunate service. Nowhere else can we find so much injustice done with such impunity. To add insult to injury it has become the fashion to fill up all higher posts with imported spoonies from Oxford or Cambridge or some other foreign University, over the heads of distinguished Madras Masters of Arts and what all wonderful things are happening in colleges, it is a sight for the gods to see. The members of the service have tried every honourable means to open the eyes of the Government to this glaring injustice, but none are so blind as those that refuse to see. What a strange contrast it presents to the parental solicitude of the Government towards I.E.S. men. The Government like true Christian Government, know

their Bible only too well. The I.E.S. men who are doing more or less the same work as the less fortunate P.E.S. men or the unfortunate S.E.S. men, had already enough and therefore were first benefited by the new dispensation. Later came the turn of P.E.S. men and though their increments have not been gazetted, they have been drawn from 1-12-1919. The S.E.S. people are yet to hear about their re-organisation. Unto them that have been already given and if Mr. Knapp's wonderful recommendations are adopted it will form a most fitting sequel. It will take away from the S.E.S. men even that little which they have. The Bible for ever!

But is there not a limit to even an angel's patience? Do the Government intend to drive these unfortunates into the arms of the Non-co-operators or do they want them to strike, like Buckingham Mill labourers?

"PLAIN TRUTH."

P.S.—Since writing the above, a Committee has been appointed. We shall wait and see.

P. T.

TAMIL EDITION

of the LOWER SECONDARY ARITHMETIC

BY

S. RADHAKRISHNA AIYAR and K. VAIDYANATHASWAMI AIYAR

(i) Part I of the above book is *in the Press* and will be ready soon.

(ii) A specimen copy will be sent on application as soon as the book is completed, so that it may be prescribed for use in the school-year 1921-1922.

(iii) It contains all the matter found in the Syllabus in **Elementary Mathematics** recently recommended by the Director of Public Instruction for Forms I to III.

(iv) This Part I to be issued at present will be found **eminently suited and thoroughly satisfactory** as a **Text-book of Elementary Mathematics** for Form I and Class 5.

SRINIVASA VARADACHARI & CO., TRIPLICANE, MADRAS.

THE SALEM DISTRICT 2ND EDUCATIONAL CONFERENCE.*

Mr. President-elect of the Conference and brother teachers,—I welcome you here most heartily. I owe you an explanation for the delay in the convening of this gathering. It was due to causes beyond control.

The new Madras Council has been¹ formed and in regard to Education self-rule or self-determination has been granted to India, and an Indian Minister can guide the destinies of the land in a very far-reaching line of activity. It is usual now to condemn *in toto* the system and results of the education that we have been receiving, and schemes for cheapening, lightening and democratising University studies are manufactured by all. In times of passion reason retreats into her shell or is often driven from the field. If all charges against the system are true it behoves us to bestir ourselves to set our educational home in order. A new machinery is the first point in our favour and the Minister must make the future of India. But any machinery has to be driven by a power.

In any educational reconstruction mere imitation of models from abroad and the lip repetition of phrases like vocational training only swell the resolutions of the gathering. We must have a survey—an educational survey—of the possibilities of educational work in relation to the progress of the country. For, the task of training the youth of the soil has bearings not only upon cultural equipment that will bring sunshine upon daily life but also upon the economic and commercial potentialities that add to the

wealth of the nation. That is why the market value of English in the minds of Indians is high. That also explains the poverty of professional and vocational schools except for Law, Medicine and Engineering.The captains of industry are not as many as desirable and vocational schemes can thrive only in the midst of congenial, industrial and scientific surroundings.

This survey must go hand in hand with *research* in the educational methods. Up to now we have been mere recipients—worshipful and respectful—of methods and plans that have come across the waters. We have to assert our strength. As Sir J. C. Bose in his address at his institute, said to his students, we must *cease to be parasites* in what we do for our children and country. Research, educational, is common in America. Under our Minister we must stand on our feet and look around and about and keep our heads. Duplication of examining bodies and University buildings is no sound progress. Research in regard to University education I shall not touch upon here. With reference to Primary, Middle and High Schools, their aims and relations to each other and to the life of the people *a body of thought has yet to be*. And here Indian teachers and educationists have to give a satisfactory account of themselves. Every child of the soil should be given the opportunity of free education up to 16. As Napoleon said, Reasonable Democracy will never aspire to anything more than obtaining an equal power of elevation for all. *Secondary Education* is a charge upon the State which must recognise the aristocracy of intellect and character while allowing the *Democratic opportunity*. Democratic opportunism in a time of clamour and loud noise defeats itself

and drives the intelligentsia into the opposite camp. As in old China, where the civil service was manned by choice from the best intellect must be respected and given its place. In the rush into schools and colleges there is often no discrimination. Thus a *large waste* of energy in preparing for tests for which many are ill-qualified or equipped. Our research and thought must provide us with tests of intelligence and aptitude—as they have in America—and pupils must be marked off into proper spheres for which their education acting upon their endowment makes them fit. With many of our pupils it is a case of square peg in a round hole. Here our vocational, manual and other training must come to our aid. The situation calls for *good students of education* useful to our land now and in times to come to raise her in the world. 50 years have given us a Bose, a Ray and a C. V. Raman. The future is full of promise and I am hopeful of the advent of *constructive educationists*. The trouble in our midst has been the nature of the *control* over the large body of teachers and educationists as shown even in the case of Universities and large private Educational Societies. Control there should be. Petty annoyances and interferences and obstacles are always reported largely in various quarters. Without going into them or their causes I may say control must be informed by responsible sympathy that can have an eye for the worth and value of initiative. As Sir John Woodroffe said in his evidence before the Calcutta University Commission, schemings and intrigues in the Educational world are an immoral absurdity. Any control must be guided by a loftier intelligence and should not be synonymous with whim or opinion. With the *growth of responsible Government* things

may better and they should, if the future is not to be dark. But ultimately success in educational work rests with the educationists themselves—of any rank....The teacher must be a learner and a thinker. Instead of an easy satisfaction that covers a multitude of sins, a spirit of *strenuous endeavour* must inspire the teacher in his work, for work without an inspiration is waste in the school-room. A keen eye, a fresh eye and an open mind are very essential in the management of pupils and the moulding of their minds and character. Presentation, exposition and stimulation, these are virtues in which a teacher should be an unequalled master. The teacher must be recognised as good as any other member of society and his status must be assured. He should get not only a living wage—that is not good; more than of others his wage should have a wide marginal allowance. Starve him and your children starve in turn. Old age pensions, insurance against unemployment, cultural facilities and a good round recognition of his work in handsome salaries, our new Ministers and M. L. C.'s should guarantee us; Col. Wedgewood has strongly advised the formation of a corporation for the purpose—a hint very useful now; and our Ministers—now of our kith and kin—have to acquit themselves. Salaries of teachers have been enhanced tremendously in England: here we are where we were years ago. *Salaries* is the question of the hour and unless they are bettered the sin of under-payment of teachers may lie heavy upon the nation for years. The labourer is worthy of his hire.

* Welcome Address by M. R. Ry., N. R. Harihara Iyer A.V., M.A., L.T., Chairman of the Reception Committee, at Dharmapuri, on 21st & 22nd January 1921.

Reviews and Notices.

"A SHORT HISTORY OF THE BRITISH COMMONWEALTH," VOL. I, "THE ISLANDS AND THE FIRST EMPIRE" (TO 1768) BY RAMSAY MUIR, PROFESSOR OF MODERN HISTORY IN THE UNIVERSITY OF MANCHESTER. (GEORGE PHILIP AND SON, LTD., 32, FLEET ST., LIVERPOOL). Price 17s. 6d.

The Great War which took the world a great deal by surprise and could be brought to a close only after drawing in directly or indirectly all the world into the vortex of war has changed the angle of vision materially in every department of human activity. It has made a reconstruction of Europe, and, as a secondary consequence, of practically the rest of the world a direct and a necessary consequence of the great devastating war. This great European War which had for its object the destruction of British supremacy in certain departments and the establishment of German supremacy instead, offers great similarities to efforts made by older Europe several times in the course of its history. However much these great war movements directly affected the point of view of the study of history, no previous war had exercised the profound influence that the recent great war has.

Among the powers that had to bear the burden of this war in all the various departments in which this burden distributed itself, the British Empire stands foremost not merely in regard to the bearing of the burden but also in regard to the positive contribution that brought about the ultimate success. Other nations have had to struggle for existence and made immense sacrifices in the struggle. In a way the war might be regarded as a struggle for existence for the British Empire itself and the notions underlying that great Empire. The tornado of war is over and the period of reconstruction has set in. This reconstruction is necessarily to take into consideration the various influences that the war had brought to bear upon the general features of the British Empire and the relations between its various component parts, all of which were called upon to make immense sacrifices during the war.

This state of things would justify a new study of the British Empire and its history; the view-point of that study after the war would be materially different from the view point of historians who wrote before the war. It is for its new view that we welcome this new study of the British Empire by

an author who is well-known for his writings among which may be mentioned in this connection, his three volumes entitled 'The Culmination of Modern History.' The volume before us attempts to tell the story of the British Empire up to the year 1763 A.D., a later volume of about the same compass dealing with the period A.D. 1763 to the outbreak of the war. The history of the British Empire, as is well-known, had hitherto been studied generally as an isolated phenomenon.

The whole story of the British Empire was unfolded as merely a story of England and at that more or less isolated from the history of Europe except where broad movements like the Reformation or the Napoleonic Wars drew England into the great vortex. Professor Muir makes an attempt "at studying the story of the British Commonwealth regarded as a single whole, but also as a part of the greater Commonwealth of Western Civilisation." This ideal involves two separate aspects of the story of the British Empire.

It is first the story of the Island peoples growing more or less into a united State and gradually developing institutions side by side with the development of the United State itself. At the same time this work makes an effort to keep it constantly in view that after all the British Isles are a part of Europe and have always been profoundly influenced by what was taking place in Europe. The first volume is divided into six books. The first is entitled "The Making of the Four Nations" (to A. D. 1215). The second book treats of the conflicts among these four nations and the growth of self-governing institutions in England which went on simultaneously with this conflict. This takes in the period A.D. 1215 to 1485.

Book III deals with the beginning of the Modern Age and treats elaborately of the two outstanding features of this beginning, namely the Reformation and the opening of the seas. The period covered is 1485 to 1603. Book IV deals with the struggle for national Self-Government and what followed as a result of the beginning of this self-consciousness, the beginnings of English expansion overseas. The period covered by this book is A.D. 1603—1660. The next book has to do with the constitutional settlement under the later Stuarts and the development of the British Empire. This was achieved in the period A. D. 1660 to 1714. The last book deals with the Whig Oligarchy and the establishment of maritime and colonial supremacy, covering the period 1714 to 1763.

The plan of treatment adopted in this work distinguishes it from the many excellent books of English History and the History of the British Empire that are available in large variety. For one thing the treatment becomes fuller as the narrative draws nearer to our own time. In this volume a great deal more space has been occupied with the story of England, as it must be, because it was in England that the institutions and ideas had their birth and early development. While dealing with these, the history of the other three component parts, Wales, Scotland, and Ireland is given a fuller treatment. Similarly more space is given to the development of the colonies and the overseas trade; and the part played by the Navy and the history of the Commonwealth are given fuller treatment. Throughout this history adequate space is given to the treatment of the most significant features of contemporary European history. Another peculiar feature of the book is the suppression of that aspect of history which might be regarded as narrowly national, to expound rather more elaborately those aspects which are of direct importance to the further development of the Commonwealth of the British Empire. As a result of this plan, the work deals very briefly with the various minor wars of England and the other islands, but treats more fully of those great wars such as those of the Elizabethan War against Spain, the Civil War, which was epoch-making in constitutional development, the Wars against Louis XIV and the Great 18th Century Wars with France. The strong influence that wars exert upon combatant nations, even those not directly so, has been so recently brought home to us. The adequate treatment of this is essential to a study of the development of nations and Empires. The book exhibits one feature which might at first sight seem a defect in the writing. There is no detailed treatment of events of a reign or an epoch, and one sometimes feels he has to read another book of English History before he could follow this with sufficient understanding. Still it is unavoidable having regard to the plan of the book which attempts to trace the development of the British Empire from its multifarious beginnings, through all the intervening periods of development to its condition at the beginning of the war. This is essential to an understanding of the profound influence that the recent war has exercised upon the whole of this Imperial Commonwealth. This is the more essential as we are actually engaged upon a reconstruction having called into existence a "League of Nations" which must necessarily exercise a profound influence upon the in-

ternal constitution of the Empire. According to Professor Muir, "Its most striking feature is that it is not, a mere Empire, held together solely by the military power of a conquering people, like the many Empires that have arisen and decayed in the course of history; but that each of its members retains its own distinct character, and is either entirely free in the management of its own affairs, or (if it is not ready for that) is governed with a view to the interests of its own people, and not with a view solely to the interests of the ruling race. All the innumerable nations and tribes included within the British Commonwealth are able to live together in peace, and to help and strengthen one another, while each of them retains its own customs and modes of life. That is something far more wonderful than the building of even the greatest empire by mere force. As we all are, or shall be, citizens of this world-wide Commonwealth of nations and must share the responsibility for maintaining and improving the traditions by which it has grown great, it is our duty to understand its character, and for that purpose to study its history."

As far as the first volume of the work goes, the Professor has carried out his ideal successfully. In his primary aim of making "the noble and stirring story of the development of the British Commonwealth at once intelligible and interesting to the general reader," the Professor has achieved success. The new point of view and the freshness of its presentation have a utility for the teacher, which is of considerable value. One cannot feel quite so certain that it will meet the needs of the various classes of students, who, the author believes, would find the book suitable for their purposes. The line of treatment adopted leaves a certain amount of information to be otherwise supplied and thus makes certain of the portions of the narrative not quite clear; and this minor defect may take away somewhat from the value of the work from the students' point of view. The defect however is a minor one and there are compensating advantages to counterbalance it.

We wish the work all success.

A NEW SCHOOL IN BELGIUM, BY A. FARIA DE VASCONCELLOS, WITH AN INTRODUCTION BY ADOLPHE FERRIERE—TRANSLATED BY EDEN AND CEDAR PAUL. (GEORGE HARRAP & Co.,) 5s. net.

The book affords most refreshing reading, conveying, as it does, a strong protest against

what may be called the tyranny of tradition and against the prevailing disinclination to get out of long-established grooves.

The 'New School' described in this book is typical of a class. Thirty characteristics are enumerated in the Introduction, of which an institution should possess at least fifteen, to be entitled to rank as a 'New School.' The school is in the country, the instruction is based not upon text-books but upon experience and is enriched by manual work, there is self-government by the pupils to some extent. The classes are small, the subjects are not broken up into water-tight compartments, there is no rigidity in the time-table, there is no arbitrary limit fixing the duration of the lessons, special branches of study are taken up during specially appropriate seasons of the year, and more than all, 'the school is a slice of life'. Some of these features are too ideal for general adoption; there is, for instance, a strong tendency at the present day to give up the country and to gravitate towards towns, and pupils seek admission into the institutions in capital cities in overflowing numbers. Nevertheless, we may well make our system of physical education a prelude to intellectual and moral education, we may so organise our schemes and methods as to furnish facilities for developing the pupils' innate powers and we may well train up each pupil to become master of himself and a socially efficient citizen. The details of the ideal kept in view and of the practical methods employed by which that ideal is sought to be realised are set forth with great force and clearness. The whole account is highly stimulating and suggestive.

FULL NOTES ON THE POETICAL SELECTIONS PRESCRIBED FOR THE ALLAHABAD MATRICULATION, 1921-22, BY SAMUEL GOULD, M.A. (D. A. NADKARNI & Co., GRANT ROAD, BOMBAY.)

The author says he has "endeavoured to give all the explanation that Indian students may require," and we think that in doing so he has succeeded in keeping to a fair mean between copiousness and meagreness. The brief introductions are just what they should be; in a few cases, however, little or nothing is said about the author. The explanations (which in some cases are rather like a running paraphrase or commentary) are on the whole correct and satisfactory.

Knotty points have not been passed over, but received due attention. Opinions may differ on some points here and there, but "there is no key to the poet's mind unless he has himself provided one, and an annotator can do no more than exercise that faculty of intelligent guessing which every good teacher tries to instil into his pupils." The summaries form a useful appendix, but we wish the paraphrases announced as a supplement could be withheld.

THE MYSORE ENGLISH LOWER SECONDARY EXAMINATION PAPERS IN ARITHMETIC, 1891-1920, BY S. SITHABAMAYYA, B.A., GOVT. HIGH SCHOOL, CHITALDROOG. Price Re. 1.

This manual of solutions ought to be in the hands of every student preparing for the Mysore E. L. S. Examination. Over 200 questions on various topics connected with the Lower Secondary Arithmetic have been solved in this book. There are many alternative solutions; sometimes two or three for the same question. A study of these is well worth the time of every pupil who needs to learn up to IV Form arithmetic. Many of these alternatives are intended presumably for the more intelligent of the candidates for the L. S. Exam., and also for so many of our IV Form students. Neatness, clearness, arrangement and method are to be seen on every page of this book; and the distinction between the so-called rough work and fair work is well indicated all through the pages. The appendix with its tests of divisibility and short methods of work ought to come in handy to every student.

The chart of Mathematical Tables may well decorate the walls of the class-rooms. The arrangement and foot-notes will be very useful to the pupils of Forms I to VI. Many a student will do well to obtain a copy for himself, since it is priced so low as two annas.

Indian Educational Notes.

The South Arcot District Teachers' Guild.—An ordinary meeting of the above Guild was held on Saturday, the 12th instant, in the premises of the Board High School, Tirukoilur. Mr. K. A. Nityakanta Sastriar, the President, taking the chair. The Inspector of Schools, Mr. T. S. Krishnamurthi Iyer, was present for some time. Before he left, he addressed the meeting in very encouraging terms.

The proceedings commenced at 1.30 p.m., with words of welcome from Mr. M. Venkatarama Iyer, the Headmaster of the local school. In the course of his address, he referred to the present Minister of Education, who hailed from South Arcot, and felt confident that education in the hands of such a sympathetic gentleman was bound to prosper. Mr. V. Jayarama Iyer, the Joint Secretary, read a report of the progress of the Guild. There are already 192 members on the rolls and steps are being taken to enlist Elementary school-masters as well.

Mr. C. S. Rangaswami Iyengar, Headmaster, Board High School, Villupuram, outlined a scheme of work to be taken up by the Guild during the coming year. He said that it would be well if a division of labour was effected and each Association could take up, for study and exposition, one of the subjects suggested. He pointed out the following as deserving of attention:—

- (1) Improvement of the salaries of teachers,
- (2) Reform of the present day education, in the light of recent criticisms.
- (3) The holding of an Educational Exhibition. In the course of the discussion, the following additional subjects were proposed to be added:—
 - (i) The adoption of the Calcutta University Commission Recommendation re Secondary education with necessary modifications.
 - (ii) The consideration of the Provident Fund Scheme, as sanctioned by the Government.
 - (iii) The institution of a Teachers' Protection Fund.
 - (iv) Securing seats in the Senate for teachers.
 - (v) Removal of teachers' disabilities in the matter of freedom of speech and of association.

A paper was then read by Mr. R. Mahadeva Iyer of the Board High School, Villupuram, on the status of the secondary-grade teacher in a High School. He said that secondary-grade teachers are being considered as negligible quantities in the working of the school, though their contribution to the education of the young is considerable. He mentioned that the practice of supervision of their work by the senior section of the staff gave rise to distrust and lack of harmony in the school and pleaded for the same amount of leisure for the secondary teachers as the L. T.'s had. Lastly, he made an appeal to the University to admit school-masters to the several University Examinations without the production of term-certificates. After

a short discussion the President urged the need for all differences among teachers and suggested that supervision should be approached by all in a spirit of co-vision—if such a word be permitted—i.e. friendly co-operation.

Mr. S. Meenakshi Sundram Iyer, Mathematics Assistant, Board High School, Tirukoilur, then read a paper on "The Place of Elementary Mathematics in Secondary Schools." He spoke of the utilitarian and cultural value of mathematical education and appealed for greater interest in the subject. He pointed to certain defects in the teaching of the same and suggested remedies therefor. After a short discussion the President expressed his opinion that such subjects should more usefully form the topics of debate in special sections of the Guild.

In the second session after lunch, the following resolution was carried unanimously:—

"That a Sub-Committee of the Guild, with power to add to their number, be appointed to consider and report upon the desirability of the institution of a Teachers' Protection Fund under the auspices of the Guild." Before putting the above resolution to the vote, the President made a speech emphasising the importance of the proposition before the House and the necessity for conjoint and earnest efforts on the part of all teachers in the District towards their betterment.

Some other resolutions on the agenda having been withdrawn, the President made his concluding speech. He remarked that each must study every question that came in his way and no complete division of work was possible at the present stage. He called upon members of the Guild to send their suggestions to the Secretary, who would bring all of them for consideration before the Managing Committee.

After the meeting of the Guild was formally dissolved, the teachers again sat for the discussion and adoption of the Rules of the South Arcot Inter-Schools and College Athletic Association.

The Teachers' Association, Board High School, Tirukoilur, was "At Home" to the members of the Guild, who lacked nothing to make their stay happy.

Godavari Secondary School Teachers' Conference: Resolutions Passed.

1. This Conference accords a hearty and loyal welcome to H. R. H. the Duke of Connaught to India.
2. This Conference congratulates Mr. A. T. Palmer, one of the members of the Godavari Secondary School Teachers' Association, on his election to the Madras Legislative Council.
3. This Conference reaffirms all the resolutions passed at the last Conference held in May 1920,

except such as may be against the spirit of the resolutions that may be passed at this gathering.

4. This Conference emphasizes the necessity of Vernaculars being made the media of instruction in the case of all subjects except English in Secondary Schools and requests the S. S. L. C. Board to announce, in view of the reply of the Director of Public Instruction to an interpellation at a recent Meeting of the Madras Legislative Council, whether they are prepared to conduct the examination in those subjects in the Vernacular from 1922 in the case of schools that apply for the same beforehand.

5. This Conference prays that the Department so remodels the Curricula of Studies in Elementary and Secondary Schools as to make industrial education an integral part of school work.

6. This Conference resolves that a Sub-Committee consisting of the following members be formed to consider the desirability of curtailing the S.S.L.C. and Middle School departmental syllabuses:—

- (1) Mr. Ch. Bhimasena Rao
- (2) „ Ch. Viswanatham
- (3) „ K. Sundararamiah
- (4) „ G. Venkataramiah
- (5) „ G. Jagannatha Swami
- (6) „ G. P. Avadhani
- (7) „ A. T. Palmer (Convener.)

7. This Conference is of opinion that S. S. L. C. Certificates should be maintained only for pupils of the Sixth Form, marks for written tests only being entered therein.

8. This Conference is of opinion that the Rule that candidates for the S. S. L. C. Public Examination should have completed their 15th year be removed, as it places precocious intellects at a great disadvantage.

9. This Conference is of opinion that pupils who have once appeared for the S. S. L. C. Examination from a school should be permitted to appear privately for the subsequent examinations, and that their attendance at a school should not deprive them of the privilege of appearing privately, a privilege enjoyed by candidates appearing for the Intermediate and the B. A. Degree Examinations.

10. This Conference is of opinion that the candidates for the S. S. L. C. Examination in Science should not be asked to undergo their practical examination in a laboratory which is quite unfamiliar to them and which, in consequence, places them at a great disadvantage and deprives them of the chance of success.

11. This Conference is of opinion that the marks allotted to the theoretical and the practical tests in Science at the public examination should be in the proportion of 70 to 30. (The resolution was lost, 10 voting for and 11 against).

12. This Conference resolves that the above

question be referred to the Sub-Committee formed above under Resolution VI.

13. This Conference resolves that in view of the innovation introduced last year as regards the custodianship of Question Papers at the Public Examination, which casts an unmerited slur on the whole body of Headmasters in the Presidency, the Headmasters of all High Schools be requested to have nothing to do with the conduct of the S.S.L.C. Public Examination in March next.

(Resolved that a copy of the above resolution be communicated to the Inspector of Schools, II Circle, and the Director of Public Instruction.)

14. This Conference is strongly of opinion that the Government should take early steps for the provincialization of the whole of the teaching service in Secondary Schools.

15. This Conference strongly urges upon the Government to realise the keen discontent felt by the Secondary School teachers, who are also doing national service, at the indifferent attitude of the Government towards them in these hard days, and requests the Government to take immediate steps for granting allowances to all Secondary School teachers in accordance with G. O. No. 700, pending a satisfactory revision of their salaries.

16. This Conference resolves that the question of salaries of Secondary School teachers be referred to the Managing Committee with a request to prepare its report before the 31st March 1921.

17. This Conference is of opinion that the Rule requiring that either the Headmaster of an Incomplete Secondary School should be a L.T. or the school should be under the supervision of a L.T. should be abrogated.

18. This Conference resolves that the Secretary be requested to communicate with the Director of Public Instruction and ascertain from him if there is any rule precluding teachers from wearing the dress specified in Resolution No. 29 of last year.

19. This Conference is of opinion that teachers and professors employed in all educational institutions should be allowed to take part in the political work of the country and that all restrictions under Chapter VIII-A of the Educational Rules relating to them in this respect be removed.

20. This Conference resolves that the Managing Committee be empowered to consider and to approve, if so disposed, Mr. Gangannah's scheme of starting an Educational Anglo-Telugu Monthly Magazine as the organ of the Association whenever he may place his proposals before it.

21. This Conference is of opinion that a textbook or text books should be prescribed for History of England (O. Group) so as to enable pupils, teachers and examiners to know definitely what knowledge is expected of candidates at the S. S. L. C. Public Examination.

22. This Conference is of opinion that in the matter of promotion to a higher post in Secondary

Schools, seniority and service alone should be taken into consideration and no distinction should be made between Mathematics and Science L. T.'s on the one hand and History L. T.'s on the other.

Press Note No. 252, Educational Department, Bombay, 14th January 1921.

With reference to the concluding sentence of Government Press Note in this Department, No. 5150, dated the 29th November 1920, the following report of the Special Committee of the Legislative Council appointed to advise Government on the question of the revision of the salaries of teachers in Primary Schools is published for general information:—

Report of the Committee of the Legislative Council appointed to advise Government on the question of revising the salaries of teachers in Primary Schools.

We have the honour to present to His Excellency the Governor in Council the report of the Committee of Members of the Legislative Council constituted by Government Resolution No. 4252, dated the 7th October 1920, to advise Government on the revision of the salaries of Primary School teachers. The Committee met on the 23rd and the 25th of October, and on the 25th of November.

2. At the outset we were confronted with the difficulty that any scheme of permanent improvement in the salaries of the Primary School teachers would commit Government to very heavy additional recurring expenditure; this will be at once apparent from the fact that the number of teachers concerned is about 20,000 and the cost of increasing the monthly emoluments of each by a single rupee consequently involves an annual charge of approximately 2½ lakhs of rupees. In view of the approaching reform of the constitution of Government, under which Education will be a transferred subject, we do not feel justified in recommending any action which would be calculated to embarrass the Minister who will shortly be called upon to consider the educational problem as a whole, a problem which, on account of the great rise in the cost of living, is likely to be one of extreme complexity from a financial point of view. Accordingly we refrain from pressing upon Government a definite recommendation in favour of any particular scheme for the permanent revision of the salaries of the primary school teachers; we are confident, however, that the question is one which will receive the early and sympathetic consideration of the Minister who may be appointed.

3. We have considered the possibility that in order to pay adequate salaries to the Primary School teachers some schemes for educational expansion may have to be temporarily retarded, and we are clearly of opinion that if the only alternatives presented to Government are the establishment of a large number of additional schools, and the payment of increased wages to the

existing staff of teachers, the latter alternative undoubtedly deserves preference.

4. While we feel that we are thus precluded from suggesting any permanent revised scales of pay, especially in the middle of a budget year, we are satisfied that some measure of immediate relief, especially to the humbler ranks of the profession is imperative, and we accordingly unanimously recommend that as a temporary measure immediate relief be afforded to the following classes of primary teachers by way of allowances so as to bring their total emoluments to the figures stated below, viz:—

	Rs.
Unqualified assistants	... 20
Qualified but untrained assistants	... 23
Unqualified headmasters	... 23
Qualified but untrained headmasters	... 25
First year trained teachers getting less than Rs. 25	... 25

These rates should be payable from the 1st of October (i.e., on the September pay) and should cover six months of the current year.

We have examined the estimates of the additional cost which will be involved during the current year if our suggestion is accepted and it comes to about 5 lakhs. We trust Government will be pleased to accept our suggestion and provide the money by re-appropriation even if it results in retarding or curtailing the programme of extension of primary education in rural areas.

5. In the course of our examination of the question several scales of pay proposed for permanent adoption have been considered by us. While, for the reasons we have already adduced, we do not deem it proper in the circumstances to recommend any of these scales to Government for adoption, we desire to place on record that the non-official members of the Committee were unanimously of opinion that the scheme of revision proposed by the Honourable Mr. Sathe and the Honourable Mr. Paranjpye (a copy of which is attached to this report) is likely to satisfy the just claims of the teachers, and should be submitted to the Minister for Education and the reformed Government for their favourable consideration.

(Sd) IBRAHIM RAHIMTOOLA,
(„) H. S. LAWRENCE,
(„) G. K. SATHE,
(„) S. D. GARUD,
(„) HARILAL DESAIBHAIDESAI,
(„) R. P. PARANJPYE *
(„) GHULAM HUSSAIN,

Members of the Committee.

(Sd.) J. G. COVERNTON,
Secretary to the Committee.

* I think that the Committee made no distinction between the salaries of qualified or unqualified untrained headmasters.

(Id.) R. P. P.

Scheme of revision proposed by the Honourable Rao Bahadur Sathe and the Honourable Mr. Paranjpye.

The scale for all grades should be as follows:—

	Rs.	Rs.
	20	...
Unpassed	...	...
Untrained but qualified	...	...
assistants	25— $\frac{1}{2}$ —30	...
Untrained and passed head-	...	...
masters	30— $\frac{1}{2}$ —35	...
First year	30—1—50	55
Second year	35— $\frac{1}{2}$ —65	75
Third year	40—2—80	100

Till this scale comes fully into operation, the following temporary relief should be given immediately:—

	Rs.
All unpassed men should begin to get	20
All untrained and passed assistants should begin to get	23
All untrained and passed headmasters and first year men should begin to get	25

Every other teacher, if he is getting more than Rs 25 at present, should continue to get their salaries on the present scale till the full scheme given above comes into operation.

This scale should come into operation from 1st November.

Press Note, No. 657, Educational Department, Bombay, 3rd Feb. 1921.

Primary Education in Cantonment Areas.

In this Department Press Note No. 2963, dated the 9th November 1918, it was stated that in pursuance of a resolution moved by the Honourable Khan Bahadur Ebrahim Haroon Jaffer at the meeting of the Legislative Council held on the 1st August 1918 which was accepted on behalf of Government and passed by the Council in a modified form, Government had decided to place the Primary Schools maintained by Cantonment Committees on the same footing as those maintained by Municipalities as regards Grants-in-Aid, and that the question of affording to the former other facilities, given to the latter, such as, for instance, the interchange of teachers between Municipal and Local Board schools, the acceptance by Government of pension contribution on behalf of such teachers under Article 802 of the Civil Service Regulations in order to entitle them to pension from general

revenues, etc., was under consideration. Government have now decided to extend the latter facilities also to schools maintained by Cantonment Committees.

Press Note, No. 882, Educational Department, Bombay, 11th February 1921.

Medical Inspection of School Children.

In 1913, Government gave their approval subject to certain modifications, to a scheme for the medical inspection of school children in the Bombay Presidency submitted by the Director of Public Instruction in consultation with the Surgeon-General with the Government of Bombay. The scheme as finally approved contemplated the appointment for Bombay City and each of the Divisions of the Presidency, including Sind, of a special medical officer together with the necessary office establishment. These officers were to carry out the inspection of children in Government and Aided High and Middle Schools for boys, the Vernacular training institutions and the Practising schools attached to them. Owing to the number of pupils attending these classes of institutions in the Southern Division and Sind being considerably smaller than in the other Divisions, Municipal and Local Board High and Middle Schools in the Southern Division and Sind were also included in the scheme. The sanction of the Secretary of State, which was necessary before the scheme could be brought into force, was also obtained through the Government of India. In view, however, of the necessity for curtailing expenditure owing to the war, the introduction of the scheme was postponed.

Sanction has now been accorded to the introduction of the scheme with the addition of another Medical Inspector of the same status and pay as the other five Inspectors but designated (for convenience's sake) "Joint Medical Inspector" for the newly-created Bombay Division. This Inspector and the Inspector for Bombay City will have their headquarters in Bombay, share a joint office and will arrange the medical inspection of boys in the new Division which includes Bombay City, between them. In addition, the Joint Medical Inspector will assist the Medical Inspectors for the Northern and Central Divisions.

The Director of Public Instruction has been requested to invite by advertisement in the principal local newspapers applications for these medical inspectorships and to submit them to Government with his recommendations, which are to be made in consultation with the Surgeon-General. The salary sanctioned is at the rate of Rs. 500—50—800 per mensem with the travelling allowances permissible under the Civil Service Regulations (in the case of the Bombay Division Medical officers a conveyance allowance of Rs. 75 per mensem each also.)

The Educational Review.

We are glad that even the Madras Government has moved in the matter of a Provident Fund for Teachers. After all the inordinate delay there has been in coming to any practical solution. The announcement has been made through the Madras Publicity Bureau that a Provident Fund is to be instituted for teachers in non-pensionable service. The scheme will be compulsorily applicable to all educational institutions under private management which are recognised under the Madras Educational Rules whether they are aided or unaided. All certificated teachers whose pay is not less than Rs. 20 per mensem shall be compelled to subscribe to the Fund, while it will be optional in the case of those drawing lower salaries. Certificated teachers holding a policy in a Life Insurance Company, or employed by an institution which has a Provident Fund of its own will also be exempted from the operations of the scheme. We are glad to see that the scheme will be applicable not only to instructors, but also to the librarians and clerks employed in recognised institutions under private management. The teacher will contribute one anna in the rupee of his pay, the management half as much as the teacher and the amount will be invested in the Post Office Savings Bank with interest at 3% per annum. The Government will, on the occasion of the death or retirement of the teacher, pay

a contribution equal to one-third of the total amount standing to the credit of the teacher. The terms of the Provident Fund might well have been more generous; the management might very well be asked to pay an equal amount with the teacher, and the contribution of the Government might very well be at least half the amount standing to the teacher's credit, if not an amount equal to it, and the arrangement about investment could be better, but we are thankful for the little that has been done and the Government has been able at last to wipe off a serious blot on educational conditions. We only hope that the scheme will be given effect to immediately, without the usual delays which the Government is often capable of devising for the practical frustration of its own benevolent institutions.

All lovers of educational advancement will extend a cordial welcome to General Sir Baden-Powell who is now touring in this country with a view to help the Scout Movement. Sir Baden-Powell is the Chief Scout and thanks to his energy and idealism, the movement has spread all over the world and there are now millions of young boys and girls learning the lessons of truth and honour under the Scout banner and laying the foundations for themselves of right citizenship. We hope that every member of the teaching profession in India will do what lies in his or her power to advance the good cause and every school will be proud to have a flourishing Scout Troop

under its auspices, Sir Baden-Powell did well in expressing his regret, almost immediately on landing at Bombay for some remarks of his made years ago, depreciating the qualities of Asiatic and non-Christian children for becoming good Scouts. He has since made several speeches at various Scout rallies, giving expression to various wise and statesmanlike sentiments which, we hope, will be borne in mind by all workers in the Scout movement in India. He is anxious to see that the movement does not get into purely official hands, though it should be in the receipt of official help and encouragement. "We have kept it free of Government interference in England and elsewhere," said Sir Baden-Powell, "and there is no reason why India should not conduct the Scout movement just as it is being done in other parts." Sir Baden-Powell has also emphasised the need for keeping the movement in India in touch with local conditions. Several Indian parents have had a certain amount of anxiety about this matter and we are glad to note that the prime organisers are aware of the need of keeping the movement thoroughly Indian, though in touch with all the great communities in the world. In welcoming him at Allahabad the other day, an Indian Chief Commissioner of Scouts referred to him as "among the truest educational reformers of our time." The statement is no exaggeration and we hope the full force of it will be realised in various practical forms by the members of our profession.

Striking support has been received in recent years in Europe and America for the movement of adult education. In the form of University Extension lectures, or lectures of educational value delivered under the auspices of various guilds and institutes, an attempt has been made to reach the grown-up men and women of the great communities of the West, to create what Lord Haldane has happily termed, "a new aristocracy, a democratic elite of talent." Much of the valuable experience gained in the direction in Europe and America will be of great use to the educational worker and reformer in India and we welcome an admirable book on the subject which has just been issued by the Cambridge University Press, entitled *Cambridge Essays on Adult Education*, edited by R. St. John Parry. Our readers will remember an almost companion volume issued by the Cambridge University Press in 1918, and referred to with appreciation in these columns, *Cambridge Essays on Education*, edited by A. C. Benson. The new volume is of considerable interest to members of the teaching profession and is particularly valuable for workers in India, as it embodies experience of a movement which has yet to be started on any effective scale in this country. After the admirable introduction to the volume by the Editor himself there are essays on such subjects as: The Purpose and Meaning of Adult Education, explaining the scope of the subject and the great modern movement in its favour in

Western countries; An Historical Survey of the Progress of the Movement; Democracy and Adult Education; Labour and Adult Education; Women and Adult Education; The University Extension Movement and kindred subjects. In view of the new era of political expansion opening up before India in the coming years, the need for adult education receives special importance and we hope the information available in this volume will inspire valuable effort in the direction.

With regard to the most important proposals before the last Senate meeting of the Madras University, the recommendations of change in the light of the Report of the Calcutta University Commission, the Senate went into committee and we understand that the proposals will come up for consideration only before the next meeting of the Senate. We regret the delay and wonder why the Madras University does not follow the practice of the other Universities in India of meeting more often in the course of the year. A subject of such seriousness as the introduction of changes in the constitution of the University, in the light of one of the most epoch-making documents of Indian education in recent decades, need not be grudged a prolonged sitting of the Senate, extending over a few days with a view to finish business. The only item of business transacted at the meeting was thus a resolution enhancing the Registrar's salary from a

maximum of Rs. 1,250 to a maximum of Rs. 1,500 including personal allowances. There was some opposition to the proposal and but for our knowledge of the special capacity of the existing permanent incumbent of the office, Mr. Francis Dewsbury, we should ourselves be in support of the opposition. This writer, for instance, has heard more than one member of the Calcutta University Commission say that Mr. Dewsbury was out and out the ablest Registrar in India and we would not therefore grudge the increase in his case. Mr. S. Satyamurti however did well in protesting against extravagance in the matter of salaries and we hope that on the next occasion, when there is a permanent vacancy, the Senate will appoint an Indian to the office, though even in his case there cannot be reduction of the salary to anything below Rs. 1,000 per mensem, if an efficient person with some valuable and comprehensive academic experience is to be secured for the office. We are glad to note the affiliation of the Vaniyambadi Islamiah College, which thus provides the Muhammadan community in Southern India, with a second collegiate institution for the education of its youths. We hope that full advantage will be taken of these facilities by the members of the community in spite of the frantic efforts made in some ill-advised quarters, to boycott educational institutions in the name of Patriotism and Religion.

At a recent meeting of the Senate of the Calcutta University, it was resolved on the motion of Sir Ashutosh Mukherjee to start the publication of a *University Notes and News*. We congratulate the University on its decision and we hope that the other Universities in India will also follow suit—only one or two existing Universities in India having such facilities now. The *alumni* of each University should naturally be anxious to keep themselves in touch with the activities of their *alma mater* and such facilities will be welcomed in every case. It is however difficult to follow the main reason advanced by the learned ex-Vice-Chancellor of the University for the starting of the magazine. "The proposal," he said, "was also pressing from another point of view. Many people had no doubt noticed that for sometime past, a determined campaign of calumny had been carried on against this University. One would imagine that this was an age in which some people, at any rate, made their living by the manufacture and propagation of untruths and half-truths. It was therefore absolutely necessary that whenever an occasion arose they should be in possession of some means of communicating to the public, the true facts of the case." We have failed to discover why there should be such a state of affairs with regard to the Calcutta University alone, of all Universities in India, but to those "who are in the know," these apparently pointless remarks may possess special significance.

We wish to invite the attention of University women in India, Indian and European, to the useful organisation, *The International Federation of University Women* which is anxious to secure support in India and is willing to make ladies in India share in the privileges and responsibilities of that body. The following are the aims of the Association:—

- (1) Organisation of a system of exchange of lecturers and scholars of different Universities.
- (2) Provision of international scholarships and travelling fellowships, particularly the endowment of post-graduate and research fellowships.
- (3) Establishment of club-rooms and hostels for international hospitality in the various centres of University life.
- (4) Useful co-operation with the national bureau of education in the various countries.

Miss Cornelia Sorabji has made an appeal to her Indian sisters with University Degrees to join the Federation in large numbers and we hope it will not fall on deaf ears. The products of Indian Universities have several grievances and membership of a body of this kind should furnish them with influential support for remedying them.

Amidst all the destructive campaign which one notices all round in matters of education to-day in India, it is refreshing to note an occasional scheme of constructive national education. The country will watch with sympathetic interest the progress of the National Colleges and Universities which

**Federation of
University
Women.**

**National Edu-
cation.**

have come into existence out of the present turmoil, and we only hope that they will meet with better success than the National College started in Calcutta years ago in the days of the Partition agitation. Besides the Muslim National University at Aligarh and the Guzerat Mahavidyalaya at Ahmedabad, there have since come into existence a National College at Patna and another at Benares, in the latter place, under the somewhat ostentatious title of the Kasi Vidya Peet. Quite an interesting experiment of another kind is the Tilak School of Politics started by Lala Lajput Rai in the Punjab for the training of political workers for national service. The following is from the prospectus of the last-named institution:—

(a) To arrange at Lahore for the political training of our people. Political training will consist also of teaching in history, sociology, social psychology, journalism, etc.;

(b) To train up people for political work.

(c) To provide opportunities for study, research work in politics and economics.

(d) To provide a fine and up-to-date library of political literature.

Instruction will be imparted by means of lectures on the model of the University Extension Lectures in Great Britain or lectures in public schools in New York.

There is no gainsaying the fact that India is in need of large numbers of political workers in the present circumstances of the country, and if the Non-Co-operation movement will direct itself to such constructive national work, the very cause which it has at heart will probably be served better, than by the

orgy of boycotting activities we have been deprecating these months.

The writer of the Weekly Indian Educational Notes in the *Educational Supplement of the London Times* has taken the last Convocation Address of the Madras University by the Hon. Mr. K. Srinivasa Iyengar, as the occasion for lamenting the absence of progress in scientific and technological research in India. We take the following extracts from the article* :—

The neglect of science studies in India was dwelt on in the recent Convocation Address of the Vice-Chancellor of the University of Madras, Mr. K. Srinivasa Iyengar, now a member of the Madras Executive Council. His statistics showed that of 18,500 graduates of the University whose careers have been traced, some 3,700 have spent their lives in Government or administrative service, about an equal number are engaged in the teaching profession, and nearly 6,000 have gone into law. Medicine has had only 765 devotees, commerce only 100, and science a tiny fraction of the whole—58. The Vice-Chancellor added this crushing generalization from his laborious scrutiny of these 18,500 careers:—"You will search in vain for any solid contribution to the sum of human knowledge among the magnificent number."

It is well that in recent years many leaders of Indian thought have been awakened to the handicap which the neglect of science and technology imposes on their country. It is still better that several wealthy men have taken practical steps to assist in repairing the omission. The way was led by one of the greatest Indians of the Victorian era; the late Jamsetji Tata, to whose munificence and far-sightedness we owe the existence of the Indian Institute of Science at Bangalore. His

* Vide *Educational Supplement*, 20th Jan. 1921

example was followed some eight years ago by the late Sir Taraknath Palit, who made over to the University of Calcutta money and land of the aggregate value of Rs. 15 lakhs, for the promotion and diffusion of scientific and technical education in Bengal and the cultivation and advancement of science, pure and applied, amongst his countrymen.

For this purpose Sir Taraknath directed the establishment of University Professorships of Science as the first step towards the foundation of what is now the University College of Science and Technology. He rightly felt that for ultimate success the work should be conducted through indigenous agency. To quote the wise words of Sir Harcourt Butler in his Convocation Address to the Allahabad University this winter :—

"In the long run the research work of a country must be done in the country, for the country, by the people of the country, though for a time it may be necessary to employ men of distinguished reputation and accomplishment from outside India."

Similarly in 1913 Sir Rash Behary Ghose gave Rs. 10 lakhs for the establishment of a Chair in each of four subjects, viz. :—applied mathematics, physics, chemistry, and botany, with special reference to agriculture, to be held only by Indians, who may be required to receive special training during a period of not less than one year and not more than two years, under specialists in Europe, America, Japan, or any other place outside India.

A year or so ago Sir Rash Behary Ghose supplemented his previous benefactions by placing a sum of Rs. 11 lakhs at the disposal of the University for the proposed technological branch of the College of Science.

In connexion with this gift Sir Prafulla Chandra Ray, the foremost Indian chemist of our day, has lately completed a three-months' tour of the Universities of Great Britain, and has now returned to Calcutta. He is Dean of the Faculty of Science of the University, and to him will fall the organization of the new branch. Sir Prafulla did not recruit any leading scientists from this country; but the Calcutta University, in pursuance of

the intentions of its trusts in this regard, has sent over four of its most promising young scientific research-workers to be trained in London, and two others will shortly come here in connexion with the technological branch. While they are being trained Sir P. C. Ray will supervise the equipment of the laboratory.

The project has the better prospect of success from the fact that Sir P. C. Ray is no mere theoretical scholar, for he has been a pioneer of industrial regeneration in Bengal. His many researches and discoveries during the quarter of a century in which he held the Chair of Chemistry in the Presidency College, Calcutta, have borne fruit. Nearly 30 years ago he founded the Bengal Chemical and Pharmaceutical Works, which has grown into a large concern, and has done much to develop the manufacture and to popularize the use of India's indigenous drugs. Some 1,200 men are employed and the technical staff includes some 30 expert chemists, all of whom hold the qualification of a Science degree. Sir Prafulla has also been associated with such industrial developments as the Bengal Potteries, the Calcutta Soap Works, the Bengal Canning and Condiment Works, as well as several other Indian-managed concerns.

This practical application of Sir P. C. Ray's chemical researches can be referred to the more readily since his manner of life is simple almost to asceticism, and he deliberately abstains from reaping pecuniary benefit from these industrial concerns. An unmarried man, he has realized in practical life the ideal of the Indian guru. Fully nine-tenths of his income goes to the support of the poor students in Calcutta; and he is deeply revered by the great throng of undergraduates in the city.

With her fine traditions of humanism since the very dawn of history, India must feel specially drawn in interest to the activities of the Modern Humanities Research Association, formed in England in 1918

Modern Humanities Research Association.

and increasing in its popularity and usefulness to-day. It is nothing short of an International Association calculated to further research and higher studies in Modern Languages and Literatures and to unite all who engage in such studies in one world-wide fraternity. As the prospectus puts it, "its main object is the encouragement of advanced study in Modern Languages and Literatures by co-operation, through correspondence, personal intercourse, the interchange of information and counsel and financial support for students engaged in research. The Association aims at improving and facilitating means and methods and seeks such a co-ordination of isolated effort that those interested or engaged in the same branch of research shall be kept informed of each other's work and that unnecessary duplication of energy shall be avoided." The Modern Humanities Research Association further—

(i) Puts members who have interest in cognate subjects into touch with one another through the Secretary; (ii) collects and circulates information and suggestions likely to be of permanent use to research students; (iii) procures specialised information for members who are prevented from making personal investigations; (iv) organises co-operative research on the part of those who have not the opportunities to do much individual work. It hopes, as soon as funds permit, (v) to undertake publication of original work, (vi) to found bursaries and scholarships for the furtherance of its objects.

There must be a large number of members of the teaching profession in India interested in these aims and likely to profit immensely by membership in such

an Association. As the annual subscription is only 7s. 6d., there should be no difficulty in the average teacher's joining it. Applications for membership and enquiries should be addressed to the Hon. Secretary, E. Allison Peers, The University, Liverpool.

There is no section of the teaching profession in India more urgently in need of awakening than that of Elementary teachers.

Madras Provincial Elementary Teachers' Conference.

We are glad that the Elementary teachers of the Madras Presidency have just held a very successful Conference under the presidentship of Mr. S. Srinivasa Iyengar, C.I.E., well-known for his keen and absorbing interest in matters relating to education. Mr. Srinivasa Iyengar was right in saying that with the best will in the world, foreign educationists could not succeed in directing the educational policy of this country or settling educational details any more than Indian educationists could satisfactorily plan the education of English boys and girls. "*The Minister of Education would never be able to do anything unless the machinery of education and inspection was exclusively Indian.*" We hope the teachers will bear in mind the good advice given to them that they should be united and work for the advancement of the much-neglected profession. The Conference passed a number of resolutions which, we hope, will meet with due consideration at the hands of the authorities concerned. The increased stipends for

students under training and the increased salaries for Elementary schoolmasters suggested by the Conference were on a somewhat extravagant scale, but that there should be a substantial increase cannot of course be denied. The institution of a Provident Fund as a compulsory condition of recognition and the affording of facilities for teachers to improve their general educational qualifications were other matters on which the Conference passed resolutions. The teachers have resolved upon approaching the Director of Public Instruction and the Minister of Education in deputation, in connection with the resolutions and we hope that they will be received with all the generous sympathy and consideration they deserve.

We congratulate the organisers of the **The Indian Science Congress** on the very successful eighth annual session they have just had in Calcutta, under the presidentship of Sir Rajendranath Mukherjee. H. E. Lord Ronaldshay opened the Congress and paid a tribute in the

course of his speech to the distinction Indians have been achieving for themselves in recent years. Sir Rajendranath Mukherjee with an acquaintance with modern industrial progress which probably only one other Indian can boast of in the present generation, spoke on the great impetus given to industry by scientific development and urged on his hearers the importance of scientific investigation and research of an advanced kind for the impending industrial expansion in India. The Indian Science Congress was started in 1914, with the three-fold aim of furnishing opportunities for scientific workers themselves to get into touch with men working on allied subjects; to try to encourage research; to make scientific knowledge accessible to the general public. We are glad to notice the increasing measure of support it has been receiving in recent years and hope that the next session which is to be held in Madras will be a great success. It will interest readers in Southern India to know that Prof. C. V. Raman has just been appointed one of the two General Secretaries of the Congress.

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late of the Presidency College, Madras.

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The Educational Review

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THE MUSLIM UNIVERSITY,
ALIGARH:

I. PRELIMINARY FORECAST.

THE Muslim University, Aligarh, is now a *fait accompli*. The long-cherished dreams of the illustrious founder—the great Sir Syed Ahmad Khan—have eventually been realised. The heart-felt wishes of the Mussalmans of India to have a University of their own—a seminary of Muslim education and Muslim culture—are now going to be translated into action. Fifty years of educational struggle have now been crowned with success. We have high hopes about our University and we are determined to try our utmost to make it a distinguished member of the great family of the Universities of the world.

It is proposed in this series of articles to review the academic activities of the Muslim University, Aligarh, and to describe the lines of advance along which future developments shall probably be made in the various departments of study.

We were all anxiously waiting for the pass-

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ing of the Muslim University Act and its consequent enforcement at an early date. During the present hurricane of Non-co-operative propaganda and anti-educational activities, the advent of our University, which is primarily meant for the promulgation and advancement of knowledge in general, and the re-vivification of Muslim culture in particular, is doubly welcome. We are all grateful to those kind-hearted gentlemen who have helped us at this juncture by empowering us to widen the scope of our educational activities. We have been ushered into the "promised land," it is now left for us to tap the fountain-heads of knowledge for our communal amelioration and to utilise the streams of milk and honey flowing therefrom.

Everybody interested in the promotion of the Muslim University, Aligarh, must have the following questions along with others of a kindred nature uppermost in his mind:—What shall be the distinguishing features of the Muslim University, Aligarh, as compared with the quondam M. A. O. College, Aligarh?

In what respects shall the grant of a University improve our present condition? How far shall the Muslim community at large benefit by the elevation of the College to the exalted status of a University?

That we hope now to be able—

(1) to hold our own examinations on lines calculated to minimize the tyranny of such tests without impairing the quality or efficiency of education,

(2) to prescribe better courses of study in the various subjects, and

(3) to control our academic activities along steady progressive lines suited to our special communal requirements, besides

(4) imparting a useful knowledge of Islamic History and Theology to our *alumni*, are well-known facts which need not be elaborated in this preliminary forecast. Every educationist realises that these four points are the prime indispensable elements for the advancement of knowledge, for imparting Muslim culture and for rearing up a nation of Muslim worthies in the intellectually healthy atmosphere of our University. An exhaustive study of the economic needs of Indian Mussalmans and ways and means for their occupying an honourable position among the nations of the world should, also, certainly engage the minds of the promoters of the Muslim University.

Besides these obvious advantages accruing from the inauguration of the Muslim University, it is hoped that the study of Science shall also be greatly encouraged. At present very few Muslim youths take to the study of Science. Ignorance about Science and its achievements is abysmal amongst Indian Mussalmans. But we hope that with greater funds at their disposal, the various departments of study in the Science Faculty shall

certainly be able to widen the sphere of their activities. We will try to infuse a genuine love for the study of Science in the minds of our students and to train zealous researchers who will bear aloft the torch of knowledge. The scientific achievements of our mute, inglorious Newtons and Faradays shall exalt the good name of our University and the Journal of the University shall be adorned with accounts of the original research work carried on successfully in its laboratories. In this way we shall be not merely borrowers of knowledge but creators of knowledge as well. Thus shall our University add to the knowledge of the world and our recognition as a first-rate University shall be insured by the volume of meritorious work done by its teachers and students.

The broadcast promulgation and consequent popularisation of scientific lore shall also constitute an integral part of our activities. The publications of our University comprising monographs, dissertations, original memoirs, and popular works on scientific subjects coupled with public lectures illustrated with experiments and optical lantern slides are sure to impart an impetus to the study of Science. Like the Friday Evening Discourses of the Royal Institution of London, we should certainly make arrangements for series of popular lectures on different topics for adult and juvenile audiences.

We have got a brilliant academic future before us. We want to elevate our University to the status of "an educational Mecca." We earnestly appeal to the good sense of all well-wishers of Muslim education, and we ask them, in the name of Muslim regeneration to help us in starting the Muslim University Aligarh, on sound educational lines.

5-12-20.

FEEROZ-U-D-DIN MURAD.

UNIVERSITY LIFE IN ANCIENT INDIA.*

THE Buddhist Jātaka books contain many references to the Ancient Indian University of Takshasila or Taxila. Although these references are only of a general character, they give us, on the whole, a clear idea of the system of higher education which obtained in our country some six or seven centuries before the Christian era.

Of all the centres of higher education which existed in our country in those days, the most celebrated was the city of Takshasila, the capital of Gāndhāra. In spite of the vast distance that had to be traversed, and the difficulties and dangers of the journey, students of all classes from all over the country congregated at this place to study at the feet of the world-renowned Professors of the University. No one was considered to have completed his education, unless he had undergone a course at Takshasila. We learn from the *Tila-Mushti* Jātaka that kings from afar sent their sons all the way to Takshasila, in spite of the presence of celebrated scholars at their own courts.

The most remarkable feature of this University was its residential system. The students had all to live in the hostels and boarding-houses provided by the University. From the *Tila-Mushti* Jātaka we learn that the students were of two classes,—those who paid fees to the Professors, and those who did not or could not. When seeking admission to the University, the student had to inform the Professors to which class he wished to belong. Prince Brahmadata, for instance, was asked

* Translated by Mr. A. Rama Iyer, M.A., Lecturer in English, National College, Trichinopoly, from a Bengali article by Mr. Jatindranath Sirkar in the *Phalgun* issue of the *Prabasi*.

by the Professor: "Well, have you brought your fees with you? Or do you prefer to render service in return for the teaching?" Those students who paid the fees were allowed to live in the Professor's home as his own sons, and devote themselves exclusively to study; while those who had no money to pay had to spend the day in doing such services as drawing water from the well and fetching firewood, and engage themselves in study during the night.

The young men who went to Takshasila for education generally took along with them a sum of 1000 *Karshapanas*.* This included presumably all charges to be met during the period of residence at the University. The doors of knowledge, however, were by no means closed to those students who were too poor to pay. In many places, there was special provision for free instruction to the poor. The *Rōshaka* Jātaka tells us that Bodhisatva, after he had won renown as a teacher, gave instruction in the arts to five hundred students in Benares. At that time, we are told, the citizens of Benares took upon themselves the duty of providing for the poor students, so that they might receive the instruction free.

Nowhere in the Jātakas is there a detailed account of the life led by the students. From the few references that exist, however, we are able to learn that they lived in the closest intimacy with the teachers, who treated them as their own sons. Even the young princes had to go to Takshasila with merely a pair of sandals and an umbrella. The sum of 1000 *Karshapanas* which they took along with them had to be handed over to the Professors at the very beginning of the course. They

* *Karshapana* = a weight of gold weighing 16 *masaka* or about 176 grains.

could keep no pocket-money to spend on recreations or amusements. From an incident recorded in the *Jyotsna Jātaka*, we gather that even the princes were not allowed to keep a *courty* for their personal expenses. Prince Junha, the son of the King of Kashi, while returning one night from his Professor's lecture, happened to knock against a poor Brahman, so that his begging bowl was broken. The Brahman asked for compensation, to which he replied as follows:—"I am unable just now to give you anything. But I am the son of the King of Kashi. If, after my return home, you come to ask for the money, I will gladly pay." This incident speaks volumes for the extremely stringent discipline under which the students of the University had to live. They were not even free to go to the river for bath as they liked. They were accompanied by the Professors to the bath, and the slightest breaches of discipline were severely dealt with. The following incident is given in the *Tila-Mushti Jātaka*. One of the students, while going to the river for bath in company with his teacher, took some sweet-meats on the way without the consent of the seller. When the teacher came to know of the offence, he had the hands of the offender tied up with the help of two other pupils, and himself applied the rod to his back.

The students had to get up early in the morning at the time of cock-crow and engage themselves in their studies. If they awoke on hearing the crowing of the cock at a wrong hour, they were put to great inconvenience as we see from the *Akālārāvi Jātaka*. If they awoke as early as at midnight and began to study, they were too sleepy to read till the morning; on the other hand, if they woke up as late as at sunrise, they had not time enough

to memorise their lessons. Their home-study consisted apparently of two parts,—study with the help of the books, followed by repetition and memorising of the lessons.

We learn from the *Jātakas* that the Professors were all celebrated scholars, held in high esteem by all from the prince down to the peasant. There are grounds for supposing that all of them were not Brahmanas. The *Sarabhanga Jātaka* says that the Prince Jyotipāla pleased his master so much by his skill in learning that the latter presented him with his own bow and arrow, as well as his sword and armour. From this we may presume that he was a Kshatriya. As many as five hundred pupils studied under one Professor. There were, of course, many Assistant Professors to help the Professors; and, in some cases, the senior students also rendered some help.

The University gave instruction in the three principal Vedas, as well as in the eighteen arts and sciences. The names of all these eighteen arts and sciences are not given; only references to some of them occur here and there. Besides undergoing this general course, each student specialised in some one particular art or science. The *Asadisa Jātaka* says, for instance, that Bodhisatva went to Takshasila at the age of 18, and after taking the complete course in the Vedas and the eighteen arts and sciences, specialised in archery, and returned to Benares. A certain Brahmana youth won the name of *kshudra-dhānushka*, because he had specialised in the science of archery. We learn from the *Jātakas* that several students used to undergo their general course elsewhere, and then go to Takshasila for the special course alone. The *Suima Jātaka* says that the sons of court-priests used to repair to Takshasila to specialise in the science of elephant-management; the

Anabhirati Jātaka says that several Brahmanas used to go there to specialise in the *Mantras*; and the *Vinayapitaka Jātaka* tells us that Jivaka went there merely to study the science of medicine.

We ought not to suppose that the University of Takshasila contented itself with giving mere book-learning to its students. There is enough evidence to show that a sound practical instruction was given, and that each student had to know how to apply his learning in practice. The *Tila-Mushti Jātaka* says that, when the prince Brahmadatta returned to Benares after the completion of his course at Takshasila, he had to give a practical demonstration of his learning before his parents. When Jivaka was studying at the University he had to learn the practical applications in medicine of all the plants and herbs within a radius of six or seven miles; and his subsequent practice of surgery shows that the University did not confine itself to mere theoretical instruction.

The students went on a tour round the country, after the completion of their course, in order to gain an intimate first-hand knowledge of the history and the arts of the different provinces. References to such tours are found in the *Swētaketu Jātaka* and the *Darimukha Jātaka*, and we find that they were regarded as furnishing the coping-stone to the course of instruction at the University.

CLOUD MESSENGER.

A Critical Appreciation of Kalidasa's *Meghasandesa*.

By RAO BAHADUR M. RANGACHARYA, M.A.,

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THE LAST SENATE MEETING.

BY AN EDUCATIONIST.

THE Senate Meeting this time has had heavy agenda and we congratulate the Vice-Chancellor, the Hon'ble Mr. K. Srinivasa Aiyangar, for the energetic and expeditious manner in which he carried the whole agenda through in one session. The whole agenda fall into two parts, 23 items constituting ordinary business, viz., motions brought in by the Syndicate and motions of which notices had been given by members.

There were 25 items of the recommendations of the Sub-Committee appointed to consider the applicability of the report of the Sadler Committee. We shall deal with these separately. The first part of the agenda contains some details of interest and importance.

There were a number of interpellations for all of which the answers were printed and supplied to the members. The most important item relating to this part had reference to the work of the Tamil Lexicon. The Committee appointed to compile the Lexicon have completed the draft. It is in the work of revision of the draft and preparing it for the press that the Syndicate have been advancing from blunder to blunder, ever since the days of Sir P. S. Sivasamy Iyer and Mr. Mark Hunter, till at last they have been brought to this unhappy condition of having exhausted their funds long before completing their work. The matter reached an acute stage when the lakh of rupees sanctioned by the Secretary of State for this purpose had already been exceeded by a substantial sum, and to complete the work at this rate on the present scheme of its working would require almost another lakh and a half. It would be difficult to fix the responsibility for this state of things and it will

serve no useful purpose to go into any retrospect of all that was done that should not have been done. According to our information the work has advanced sufficiently for the first instalment of it to be published. If now at least the Syndicate and the Lexicon Committee should show that they have learnt wisdom by experience and make satisfactory arrangements, it might be possible to get the work through in another couple of years and at an expense, perhaps considerably less than another lakh of rupees. The change required might be drastic and we doubt the authorities concerned would face it.

One small item of interest is an increase of pay sanctioned to Professor S. Krishnaswami Aiyangar by raising it from 800 to Rs. 900, in the grade of Rs. 500-50-1000. We are told that this was in response to the request of the Professor to be placed on a footing of equality, in regard to his salary, with the Economics Professor. We have little doubt that the Professor's request was reasonable. We are sorry we are not able to say as much about the way that the Syndicate met the request. In these bad days the addition to the Professor's salary might come in handy if that would be a solatium to him. We congratulate him on having got this evidence of sympathy from the Syndicate.

On the recommendation of the Syndicate the Senate accepted the appointment of a Committee to consider the question of half-yearly examinations both for the Intermediate and for the B.A. degree. We are inclined to agree with a part of the resolution. While half-yearly examinations might serve a very useful purpose in respect of the higher examinations even including the B.A. degree, we doubt the wisdom, from the point of view of the students themselves, of its adoption in

respect of Intermediate students. We shall not say more at present. We shall await with pleasure the findings of the Committee.

We are really pleased to find an endowment from His Highness the Maharaja of Kolhapore of Rs. 5,000 for encouraging the study of Science by the Non-Brahmin students of the Presidency. We wish the Non-Brahmins of the Presidency themselves do come forward with more of such endowments not only for Science but for all branches of learning, so that the talented Non-Brahmins who may be set back for lack of means might be provided with the opportunity to grow to the full height of their talents and bear their own part in the battle of life.

The next item of importance relates to the report of the Sadler Committee and we shall not consider it here. One motion that was adopted by the Senate requires a passing note of satisfaction and that is the removal of the age-limit for the Matriculation. There were two motions before the House which involved a constitutional principle. One of them related to an officer of the University accepting nomination or election as a Fellow or Member of the Syndicate. This motion had apparently reference to the officers and servants of the University dealt with in Chapter XV of the Regulations. The proposition however fizzled through owing to a defect in the form of the motion. The next one related to members of the Syndicate accepting honorarium from the University for services rendered in items of work which do not come within the purview of the ordinary work of the Syndicate. Those that were in favour of the motion sought to make a great deal out of the general principle, viz., the body that dispenses patronage shall not dispense it among its own members. We have no hesitation in

admitting that as a general principle it is quite a sound one. However in regard to the application of that principle, the limitations of its application, with the special nature of the body to which it is sought to be applied and the special character of the benefits which that body has to dispense should be given adequate consideration. Besides examinations, the only other item of importance that we can think of is the fee for inspection of colleges. In regard to these two, appointments are made by the Syndicate generally on the advice of their expert bodies such as the Boards of Studies, etc. One important feature pointed out in regard to these is the consideration of peculiar fitness for the particular work, not because one happens to be on the Syndicate or on the Senate or outside of both. It is not that other people are not available, but it is specially a question of the best man available in almost all cases. The motion if adopted would impose upon the members of the Senate, who have the confidence of their colleagues to be elected to the Syndicate, the penalty of having to forego the additional remuneration that these services bring them. The class of Fellows that is likely to suffer the most is the class of Educationists, and among them the Indian Educationists the most. It is notorious that the salaries and the emoluments of the latter whether in the Government service or out of it are miserably small and to impose this disability upon them is to make it impossible for any Indian educationist to be on the Syndicate. It would apply secondly in a number of cases even with respect to European educationists though the senior members of the Indian Education Service might treat the sacrifice with indifference. That is the practical effect of it. Whether the principle, so

emphatically put forward has advantages, even as a matter of abstract satisfaction, to balance this deprivation to the Syndicate of the services of people whose advice and co-operation would be most valuable, is to say the least of it doubtful.

In the course of the discussion one University Professor who was on the Syndicate was quoted as an instance in point of a man who was drawing a salary from the University and taking part actively in the executive work of that body. It was pertinently pointed out that the so-called benefits of office that the Professor was enjoying were benefits that he had enjoyed for years before going into the Syndicate. It would be unreasonable to expect him to forego his salary or the remuneration that he was drawing simply because his colleagues did him the honour of returning him to the Syndicate. The Professor himself cogently pointed out that several other Universities under the Act of 1904 acted upon the principle, and made some of their Professors *ex-officio* members of the Syndicate. There is one argument against it put forward; that the analogy of the Mysore University and other Universities would be misleading as they were Unitary Universities. It is more than we can understand how the character of a University, whether it is Unitary, Constituent, or Federal, affects the question of a salaried professor of the University occupying a position upon its managing body. If the analogy of the Unitary University was likely to be misleading, the analogy of the Municipal Corporation and Local Boards has very much less application to this question.

Mr. Satyamurthi who moved the proposition apparently tried to make a point off the Professor Member of the Syndicate by stating

that he wanted the Syndicate Member to have no occasion whatsoever to leave the Syndicate because of any delicacy of position as the Professor said he left the Syndicate meeting on the occasion that his salary was being discussed. Mr. Satyamurthi has however failed to notice that the professor said that he had left the Senate also at the time when the motion for raising his salary was before the House. We instance this in some detail here to show how great principles get clouded in a discussion of petty details. The question was whether a salaried professor could occupy a position on the Syndicate and discharge his duties without fear or favour. As was pointed out a University Professor occupies a distinct and distinguished position at the University, and in all the Universities the world over, the University Professors have to bear the principal share in matters of University Administration as the professor rightly pointed out, and that is recognised even by the Madras University which places the University Professor outside the class of University officers and servants. The existing practice supports it. Expediency requires that members should be men of academical experience as even administrative matter that goes before the Syndicate is indissolubly connected with some kind of academical matter or other, knowledge of which is absolutely essential to the understanding of the financial or administrative aspect of the question. The Sadler Commission in this connection proposed a constitution for the University which is different from that which obtains at present. They wish to divide the functions of the Syndicate among two bodies which they call respectively an Executive Council and an Academic Council. The Executive Coun-

cil is to have the charge of the administrative and financial functions of the present Syndicate, and in that body of seventeen members they make provision for "three University teachers appointed by the Academic Council, one of these to be a Mussalman: the term University teacher to include teachers of Constituent Colleges giving public instruction in the University as well as teachers wholly paid by the University." In this Executive Council the Vice-Chancellor is to be an *ex-officio* Member, the Executive Council electing its own Chairman. The Vice-Chancellor is to be the President of the Academic Council and an educationist himself, and he is to be the head of the actual working body of the University as a corporation of teachers and scholars.

"It might well be felt that his position would be both freer and stronger if, in the Executive Council, he were exempt from the obligation of maintaining that aloofness and impartiality which ought to mark a Chairman."

These two or three extracts from the Calcutta University Commission Report would make it clear how futile the arguments were against a University Professor being on the Syndicate of the University. We hold no brief for anybody, but we are anxious that the Senate should not go after the will-o'-the-wisp of a principle in this or any other matter. We may point out that the position of the principal of an affiliated college or any other member of its staff would be at least as delicate as that of a Professor on the Syndicate, and a University Syndicate constituted to the exclusion of these would be a sight for the Gods.

A CHAPTER ON 'SQUARE ROOTS.'

THE students' imperfect knowledge of the principles involved in the extraction of square roots of quantities is due generally to the attempt on the part of teachers to teach them in classes as low as the 2nd and 3rd Forms. The pupils are not in sufficient mental development till they come to V Form to assimilate the rationale of extraction of square roots of numbers. Therefore from Forms II to IV only the conception of squares and square roots of numbers can be safely effected; in other words, only numbers which are perfect squares should be dealt with for square roots. Starting with the definition that the square root of a number is that number which, when multiplied by itself, gives the original number as its product, a fair progress can be made till the IV Form boys are able to find the square root of a number (when possible) by the method of factors.

The extraction of square root of any number, whether integral or fractional, may be safely postponed to Form V where the different methods including graphs should be clearly expounded. We shall now give in the following pages the development of the subject in its psychological order:—

$2 \times 2 = 4$	$10 \times 10 = 100$
$3 \times 3 = 9$	$13 \times 13 = 169$
$7 \times 7 = 49$	$89 \times 89 = 7921$
$8 \times 8 = 64$	$100 \times 100 = 10000$, and so on.
$9 \times 9 = 81$	

In the above cases the factors are both equal and the product is called the square of a factor; the factor itself is called the square root of the product. Thus 7 is the square root of 49; 13 is the square root of 169. What is the square root of 121? By trial we get 11 as its square root, for $11 \times 11 = 121$. The square roots of many of the numbers which are perfect squares are found out by trial only as in the above instance. When the numbers are a little large, the given square is resolved into its prime factors

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and the square root is then the product taken once each of all those numbers which occur twice in the factorised form of the square, e. g. find the square root of 213444. This when factorised into prime factors = $2 \times 2 \times 3 \times 3 \times 7 \times 7 \times 11 \times 11$. Taking only once the repeating numbers the square root is $2 \times 3 \times 7 \times 11 = 462$. But even this method is not always practicable especially in the case of square numbers which contain large prime numbers as factors. For example it is not quite easy to guess at once the factors of 7921; for its factors are the prime numbers 89, 89. This difficulty increases when the prime numbers entering as factors in a given number are very large. Methods of trial as mentioned above are of no avail in the case of such numbers. A different method should be available for finding the roots of large square numbers.

Before enunciating the principle of this method, it is necessary to know what the number of digits in the square root of a given number should be. It will be easily seen that the squares of all numbers of

- 1 digit from 1 to 9 are of 1 or 2 digits.
- 2 digits from 10 to 99 are of 3 or 4 digits.
- 3 digits from 100 to 999 are of 5 or 6 digits,
- and so on.

Hence the square of a number of n digits is of $2n-1$ or $2n$ digits.

Conversely if a whole number is given we can say the number of digits in its square root.

For example in the sq. root of 5,52,25 the number of digits is 3.

In the sq. root of 21,34,44 the no. of digits is also 3.

Hence the no. of digits in the square root of a no. can be found out by dividing the given no. into periods of 2 and counting 1 for each period taking the last number (if left alone) to count for 1 digit in the square root. If a no. is of 9 digits by putting into periods we get the no. of digits in the sq. root is 5.

To find the sq. root of 21,34,44.

Evidently the number of digits in the square root is 3. The sq. root is less than 1,000 but greater than 100.

Now $213444 = 2,10,000 + 3,400 + 44$.

The hundredth digit in the square root: corresponding to 210000 is obviously 4 for $400^2 = 160000$; 3 is too small and 5 is greater than the square root of 21.

The next step is to find the tenth digit.

The no. left after taking away 160000 is 53444

Now in the formula

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

$a + b$ is the sq. root of $a^2 + b^2 + 2ab$.

Taking $a^2 + b^2 + 2ab$ to represent 213444.

the no. corresponding to a^2 is 160000.

$$\therefore b^2 + 2ab = 53,444$$

In $a + b$, after a is got, b is arrived at by dividing $b \frac{(2a + b)}{2a}$.

Since b is very small compared with $2a$, $b \frac{(2a + b)}{2a} = b \frac{2a}{2a} = b$.

This $2a$ is called the trial divisor and b is called the trial root.

Similarly dividing 53400 by the trial divisor 800, we get 6 as the trial root, i.e. that root so far found out is 460.

It is necessary to see that 53400 is not exceeded by 860×60 . If exceeded the next lower no. 5 should be tried. The no. finally remaining is 1844.

Treating this again in the same manner as above by the trial divisor 2×460 or 920, we got 2 as the last digit in the sq. root.

$\therefore$ the square root is 462.

The above work is generally briefly done in the following manner:—

Dividing into periods, we have

$$\begin{array}{r} 21344(462 \\ 16 \\ 86 \overline{)584} \\ \underline{516} \\ 922 \overline{)1844} \\ \underline{1844} \\ 194 \end{array}$$

Multiplying 4 by 2 and bringing it to the next period we have 80. The trial quotient is 6. Multiplying 46 by 2 and bringing it to the next lower period we have 920. The trial divisor is 920. The quotient is 2.

Hence the square root is 462.

Find the sq. root of 55225:—

$$\begin{array}{r} 55225(235 \\ 4 \\ 43 \overline{)152} \\ \underline{129} \\ 465 \overline{)2325} \\ \underline{2325} \end{array}$$

$\therefore$ The sq. root is 235.

The above is the general method even for numbers which are not perfect squares.

To find the square root of any given number including decimal number:

It is easily seen that the square of a decimal no. of any number of digits contains twice the number of digits.

A decimal no. of 2 digits when squared contains 4 digits

" " 3 " " 6 "

" " " " " 2n "

Hence by taking in periods of 2 digits each, the decimal number from left to right after the decimal point, we can ascertain the decimal sq. root from the one-tenth place.

If the no. of digits in the decimal portion be odd, zeroes may be added at the end to make the no. of digits even; then the number of digits in the decimal portion of the square root is half the number of digits in the decimal portion of the given number.

EXAMPLE: Find the square root of

$$56181.324676,$$

Here the integral portion in the square root consists of 3 digits and the decimal portion 3 digits.

$$56181.324676(237.026$$

$$\begin{array}{r} 4 \\ 43 \overline{)161} \\ \underline{129} \\ 467 \overline{)3281} \\ \underline{3269} \\ 47402 \overline{)123246} \\ \underline{94804} \\ 474046 \overline{)2844276} \\ \underline{2844276} \end{array}$$

$\therefore$ the square root is 237.026.

EXAMPLE:—Find the square root of 527 to two places of decimals.

In the square root the no. of digits in the integral portion is 2.

$$527.000000(22.956.$$

$$\begin{array}{r} 4 \\ 42 \overline{)127} \\ \underline{84} \\ 449 \overline{)4300} \\ \underline{4041} \\ 4585 \overline{)25900} \\ \underline{22925} \\ 45906 \overline{)297500} \\ \underline{275436} \end{array}$$

$\therefore$ the sq. root to two places of decimals is 22.96.

Sometimes it is necessary to find the square root of a large number. The sq. root in such a case contains many digits. To find all these digits by the regular method becomes rather tedious.

Suppose it is a number whose sq. root is to be determined.

Let R be the part of the square root already found out by the ordinary method and let x be the remaining portion to be found.

$$\text{Then } N = (R + x)^2$$

$$\text{i.e. } N = R^2 + x^2 + 2Rx$$

$$\therefore 2Rx + x^2 = N - R^2$$

$$\therefore x(2R + x) = N - R^2$$

$$\therefore x = \frac{N - R^2}{2R + x}$$

Now $N - R^2$ is the remainder after R digits have been found out.

If x be very small, $2R + x$ can be taken to be $2R$.

This will be the case if R is large enough, i.e. if the no. of digits found out is more than half the total no. of digits required.

Then x or the remaining portion of the root can be found by dividing the remainder by the trial divisor after R digits have been arrived at.

This rule can also be stated this way.

If the no. of digits in the square is $2n + 1$ and if $n + 1$ digits have been worked out by the ordinary method, the remaining n digits can be found out by the contracted method of division.

EXAMPLE: Find the square root of 17 to 3 places of decimals.

Now the no. of digits in the square root is 4 and including 1 more for correction the total no. is 5.

If 3 digits are found by the ordinary method the remaining 2 can be found by division.

Proceeding by this method:—

$$\begin{array}{r} 17(4.1231 \\ 16 \\ 81 \overline{)100} \\ \underline{81} \\ 822 \overline{)1900} \\ \underline{1644} \\ 8 \times 8 \overline{)256} \\ \underline{247} \\ 9 \\ 8 \end{array}$$

At this stage divide 256 by 824 by contracted method of division.

$\therefore$ The square root is 4.123.

So far we have pointed out the methods for finding the square root of any number integral or decimal.

But how to find the square root of a fraction which is not a perfect square. Obviously the method is to express it as a decimal first and then find the square root by the method of extraction. This becomes rather laborious when the division is to be done to a large number of decimal places, and especially when the denominator of the fraction happens to be large enough.

We have therefore to resort to a speedier method. The square root of a no. is very often represented by the symbol $\sqrt{}$.

Thus sq. root of 3 is written $\sqrt{3}$.

So that $\sqrt{3}$ when squared becomes 3.

i.e. $(\sqrt{3})^2 = 3$ or $\sqrt{3} \times \sqrt{3} = 3$.

EXAMPLE: To find the square root of $\frac{3}{7}$ to 2 places of decimals.

That is, we have to find the value of $\sqrt{\frac{3}{7}}$,

$$\text{i.e. } \frac{\sqrt{3}}{\sqrt{7}}$$

Multiplying both numerator and denominator by $\sqrt{7}$ (the denominator), we have $\frac{\sqrt{3} \times \sqrt{7}}{\sqrt{7} \times \sqrt{7}}$.

i.e. $\frac{\sqrt{21}}{7}$. The denominator is thus free from square root. The process now simply consists in finding the square root of 21 to 3 places of decimals and then dividing it by 7 correct to two places. Thus

$$\begin{array}{r} 21 \quad (4.582) \\ 16 \\ 85 \overline{) 500} \\ \underline{425} \\ 908 \overline{) 7500} \\ \underline{7264} \\ 9162 \overline{) 23600} \\ \underline{18324} \end{array}$$

$$\therefore \frac{\sqrt{21}}{7} = \frac{4.582}{7} = .65$$

This process of clearing the denominator of its root is called Rationalization, i.e. the denominator is rationalized or converted into a rational from an irrational number.

Sometimes the denominator contains two terms, say $2 + \sqrt{3}$.

That is, suppose it is required to find the value of $\frac{\sqrt{10}}{2 + \sqrt{3}}$. How is the denominator to be rationalised?

Consider $(a + b)(a - b) = a^2 - b^2$.

Hence $(\sqrt{a} + \sqrt{b})(\sqrt{a} - \sqrt{b}) = a - b$, the right-hand side being free from radicals.

If $2 + \sqrt{3}$ is multiplied by $2 - \sqrt{3}$, the result is $4 - 3$ or 1 a rational no. that is, if the denominator is one of the factors of $a^2 - b^2$, it can be rationalised by multiplying both numerator and

denominator by the other factor

$$\begin{aligned} \frac{\sqrt{10}}{2 + \sqrt{3}} &= \frac{\sqrt{10}(2 - \sqrt{3})}{(2 + \sqrt{3})(2 - \sqrt{3})} = \frac{2\sqrt{10} - \sqrt{30}}{4 - 3} \\ &= 2\sqrt{10} - \sqrt{30} = 6.32 - 5.47 = .85. \end{aligned}$$

The case in which the denominator consists of more than 2 irrational terms is beyond the scope of this article.

N.B. (1) A number which does not have as its last digit 1, 4, 5, 6 or 9 cannot be a perfect square.

(2) The square root of a number may be positive or negative; for $-a \times -a = a^2$. The sq. root of a^2 is $+a$ or $-a$.

(3) The square root of the product of a number of factors is equal to the product of the square roots of all these factors.

(4) The square root of a fraction is equal to the square root of the numerator divided by the sq. root of the denominator.

Graphs of Square Root.

The square root of a number can also be graphically found out by applying the properties of a few well-known geometrical figures.

(1) It is the property of a right-angled triangle that the square on the hypotenuse is equal to the sum of the squares on the other two sides (Theorem of Pythagoras).

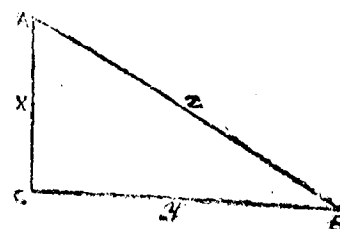


FIG. 1.

In the $\triangle ABC$, the $\angle C$ is a right angle.

If AC measures x units, BC y units and AB z units, then the relation is that the areas of the squares described on AC and BC are together equal to the area of the square described upon the hypotenuse AB.

i.e. $x^2 + y^2 = z^2$.

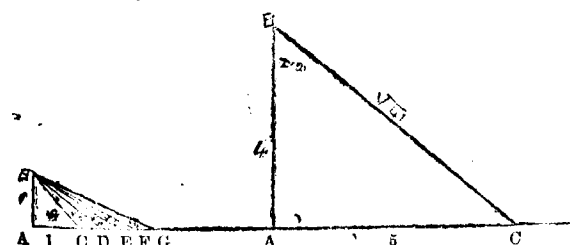


FIG. 2.

In fig (1) the hypotenuse of a right-angled triangle of sides 1 unit each is $\sqrt{2}$. This side when measured gives the sq. root of 2 as 1.42 (using the centimetre diagonal scale.)

Again placing BC ($\sqrt{2}$) along the side AD and joining BD, we get $\sqrt{3}$; for $BD = \sqrt{1+2}$ or $\sqrt{3}$.

Thus repeating this process we can find the square roots of 4, 5, 6 and so on.

$BE = \sqrt{4}$; $BF = \sqrt{5}$; $BC = \sqrt{6}$.

(2) Suppose it is required to find the square root of 41.

Now $41 = 25 + 16$.

Construct a right-angled $\triangle$, the sides containing the right angle being 5, 4. (See fig. 2). Then BC the hypotenuse gives the square root of 41 as 6.4.

The method is: Express the number as the sum of two perfect squares. Construct a right-angled $\triangle$ having the roots of these squares as sides containing the rt. $\angle$. The hypotenuse when measured gives the square root of the given number.

(3) Sometimes the number cannot be expressed as the sum of two perfect squares, but it can be expressed as the difference of two perfect square numbers, say, $48 = 64 - 16$.

The square roots of 64 and 16 are 8, 4.

On 8 units as hypotenuse describe a semi-circle. With one end, A as centre and 4 as radius describe a circle cutting the semi-circle at C.

Then CB is $\sqrt{48}$, when measured gives 6.93.

The method is: Express the no. as the difference of two perfect squares. On the greater of the square roots as diameter describe a semi-circle with one end of the diameter as centre

and with the other sq. root as radius, draw an arc cutting the semi-circle at C. Join C to the other end. Then this when measured gives the square root of the given number.

For in fig. (3) ACB is a right-angle. $CB^2 = AB^2 - AC^2 \therefore CB = \sqrt{AB^2 - AC^2}$.

(4) The following is another graphic method for any number, say 42.

$$42 = 6 \times 7.$$

Lay out a length 13 units (sum of the factors).

On 13 as diameter describe a semi-circle.

At the pt. of division between 6 and 7 erect a $\perp$ to cut the semi-circle. Measure this length. This gives the sq. root of 42, (6.4)

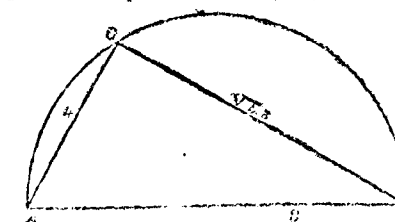


FIG. 3.

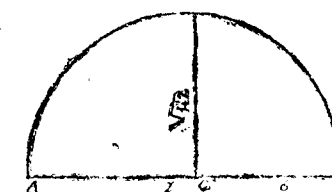


FIG. 4.

N. B.—Unity also is a factor, e.g. $7 = 7 \times 1$.

Fig. (5) is a graphical representation of a number and its sq. root.

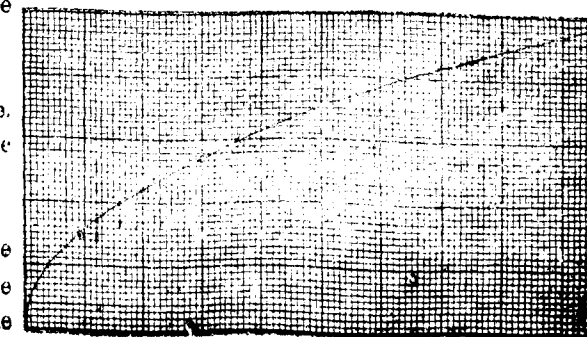


FIG. 5.

Take all numbers along x axis and their square roots along y -axis and plot the corresponding points. The join of these points gives a curve which grows with the growth of the number.

If x be the number, and y its square root, then the curve drawn is the graph of $y = \sqrt{x}$. Hence it is also the graph of $y^2 = x$.

The square root of a number less than 100 can be read from the graph.

Problems sometimes require the use of sq. roots.

EXAMPLE 1. A rectangular plot of ground is 48 acres in area. If its length is thrice its breadth, how long would it take a man to walk across it along a diagonal from one corner to another (opposite), at the rate of 3 miles an hour?

Let its breadth be x yds.

Then its length is $3x$ yds.

$\therefore$ its area is $3x \times x$ or $3x^2$ sq. yds.

But $3x^2 = 48 \times 4840$ sq. yds.

i.e. $x^2 = 16 \times 4840$

$\therefore x = \sqrt{16 \times 4840} = 4 \times 22 \times \sqrt{10}$

$= 88 \sqrt{10} = 88 \times 3.162 = 278.26$

$\therefore$ The breadth is 278 yds. to the nearest integer length 835 yds.

$\therefore$ The length of the diagonal $= \sqrt{10x^2} = 880$ yds.

$\therefore$ The time $= \frac{880}{3 \times 1760}$ or 10 mins.

EXAMPLE 2. A piece of metal measures 7 in. by $4\frac{1}{2}$ in. The greatest circle is cut out of it and the remainder is melted up and cast into a square piece of metal twice as thick as the original piece. What is its length?

The diameter of the greatest circle is $4\frac{1}{2}$ in.

$\therefore$ Its area is $\frac{11}{7} \times \frac{9}{4} \times \frac{9}{4}$ or $\frac{891}{56}$ sq. in.

$\therefore$ The remaining area is

$31\frac{1}{2}$ sq. in. $-\frac{891}{56}$ sq. in. $= \frac{873}{56}$ sq. in.

when this is melted and cast into the form of a square whose thickness is twice the thickness of the rectangle, the area of such a square is

$\frac{873}{112}$ sq. in.

$\therefore$ The side of the square is $\sqrt{\frac{873}{112}}$ in.

$= \frac{1}{28} \sqrt{573} = \frac{1}{28} \sqrt{6111} = 2.8$ in nearly.

O. RANGANATHAN.

THE IDEAL TEACHER.

WHEN so much is spoken of about the Teacher, his emoluments and status, in the various papers, it is equally equitable that we should consider what should be the qualifications of an ideal teacher, besides his academical ones. We have very often heard that the teacher's profession is "the noblest of all professions but the sorriest of all the trades" and let us see whether a teacher can really make his profession the noblest.

The teacher must be earnest and unselfish in his work. The teaching should be a pleasure to him, a balm to soothe his other anxieties and not an unpleasant, tiresome work. The class-room should be a temple where no sin should be committed but where he should expect to derive a pleasure something of a heavenly nature.

The foremost qualification of a teacher is Love. A kind, sympathetic, social and loving teacher can do far more in the progress of pupils' education than one who is otherwise. The teacher, in being social, amiable and kind, should, of course, see that the respectful distance between the pupils and the teacher is always kept up. They should have freedom in the class-room to discuss freely with the teacher on matters of doubt. They should not be afraid to talk to their teacher in having their doubts cleared. The boys are naturally happy and eager to learn, and a good teacher should utilise such opportunities as may arise in the class, to promote their eagerness and thus their education. Punishment in any form must disappear, and caning should be scrupulously avoided. In cases where punishment is inevitable, serious advice in the class-room couched in appropriate words, a reference to his honour, and the like might be

adopted. We have heard that "words strike heavier than blows." If a teacher is really loving and kind, that love itself will do him a good turn. He will be able to maintain a fine discipline in his class. The pupils who love their master will be perfectly respectful, honest, obedient and silent in the class-room.

The second qualification of the teacher is that he must possess clearness in teaching. For this, he should have no doubts, in the subject to be taught, he should have a thorough idea of the syllabus prescribed, and finally should have an analysis of the work to be done not for a particular day only, but for the whole school-year. If the teacher explains any portion either in English texts, or History or works a problem in Mathematics or does an experiment in Physics or Chemistry, he should be slow and clear and at the end of his explanation, should invite questions from the boys to see if they have any doubt. The teacher should also note that slow teaching is not necessarily clear teaching. The progress and clearness should go hand in hand. If the teacher is able to read from his pupils' faces that they have not grasped a particular portion taught, he should explain a second time without being impatient. Good discipline in the class-room, concentrated attention of the pupils towards the teacher, fluent, elegant and clear speech of the teacher, neatness in the writing on the Black-board and above all, the general cheerfulness of the teacher will greatly help in the achievement of clearness in teaching.

The third qualification of the teacher is that he must be able to make the pupils assimilate what they learn in the class. It very often happens that many pupils who appear to be bright in the class fail in the

examinations. Though the teacher has taught well, and the boys have understood well, it is quite desirable and necessary that they should be made to remember what they learn. In other words, they should be taught how to work hard and systematically at home, by creating in them a pleasure for reading. Interest in the lesson should be created so that boys should naturally feel happy and eager in working mathematical problems or reading about the French Revolution or about the wonders of Science. At the same time their eyes should be opened to the fact that slight work every day, continued throughout the year, will enable an average boy to come off successful in any examination so that they need not "consume midnight oil, pouring over the books" for the sake of the examinations. In coaching the pupils properly as noted above, daily oral questions, light home work, supervision of the boys' work in their note-books, periodical written examinations at the end of a particular portion finished in the class, will greatly help the teacher. The final examination should not be regarded as a dreadful ordeal but the last of a series of tests which they have already gone through.

When the pupils are thus trained for examination purposes, it is equally essential that they should be trained to become good citizens. For this they should receive moral instruction. Moral instruction is better taught by example than by precept. Hence arises the need of another important qualification of the teacher.

The fourth qualification of the teacher is that he should be a model to the pupils for all good qualities. The pupils naturally look upon their teacher as an ideal and hence he should try his best to be really an ideal. The teacher should be a model for punctuality

politeness, patience, kindness, diligence, obedience, broad-mindedness, and other good qualities so that the boys must think that it is quite possible for any human being to possess such good qualities and be happy in the world. There is no use if the teacher simply lectures about these subjects without himself being an example. He should be a sun in punctuality, a saint in patience, a mother in imparting the food of knowledge, a true monarch in kindness and administering justice, a Buddha in love and mercy and a true hermit in indifference to name, shame or fame. Above all, the teacher should possess patience inasmuch as the students composing a class will be of different dispositions and hot temper on the part of a teacher may lead to irreparable consequences. When the pupils have thus received mental and moral education, it is necessary that they should be taught a spirit of universal brotherhood. Hence arises the necessity of the next qualification of the teacher.

The fifth qualification of the teacher is that he should be able to form an esprit de corps among the boys. This is best done by having a Students' Association in the school and the teacher addressing the students as often as possible in the meetings, upon useful subjects. Thus the teacher has an opportunity to teach everything about physical, moral, intellectual and social topics. Here he may command more freedom both as regards time and subject. If he is but a fluent and persuasive speaker, he can surely turn the boys' activities into useful channels. The boys will incidentally learn the importance of several good qualities necessary for happy life, such as philanthropy, universal brotherhood, self-sacrifice, self-control and the like. Thus the foundation for future citizenship and desire

to do good to the country may be laid at school. Occasionally, pleasure-trips, picnics, social gatherings, 'at-home' parties, might be arranged under the auspices of the Association and these will bring about a healthy relation between the boys and the teachers and will greatly help the formation of an esprit de corps, among the boys themselves.

The next and the last qualification of the teacher is that he should be able to adjust himself and get on smoothly and amicably with his colleagues in the school. It often happens that in almost all schools, especially in schools under private management, the teachers are always at variance with one another. We often hear about the cliques in schools as, the High School Staff vs. the Lower Secondary Staff, the Headmaster vs. his Assistants, or the Headmaster and his party vs. an Assistant and his party, and so on. Happy is the school where there is no clique at all, where the teachers (including the headmaster) are of one mind and where real sincerity, mutual kindness and sympathy exist among the teachers. Such schools are sure to thrive and would always be in prosperous condition. As "good wine needs no bash" such schools need no advertisement for the rush of students. Woe to the school where the state of affairs is otherwise. Hence arises the necessity on the part of the ideal teacher to so conduct himself in the school, that he is a sincere friend to all and improves the condition of the school in all aspects. He should not only not promote cliques but also should suppress them as far as possible. He should be a friend to all and enemy to none. Jealousy, hot-temper, discontent, back-biting, haughtiness, evil-scheming, ever-gloomy appearance, factious feeling, all these should

SOME PIONEERS IN MODERN GEOLOGY.

be thoroughly weeded out of the mind and should be replaced by kindness, feeling of brotherhood, humbleness, readiness to do good to others, desire to make them happy, self-sacrifice, ever-cheerful appearance, etc. In my humble experience, it is quite possible for a human being to possess these good qualities and move socially with all in the school. It is unnecessary to point out that such a teacher will shine like a gem not only in the school wherein he is employed, not only in the town wherein he lives, but in all the places where he is known.

Thus we see that it is quite possible for a real, sincere, kind, calm and sedate teacher who puts his heart and soul into his work of coaching the pupils left to his care, to train them in such a way that they not only come off successful in their examinations but also they develop their character, understand how to make their life on earth as happy as possible, and become useful and successful citizens in their future life. When a boy, say, 10 or 12 years old, put under the care of a proper tutor, becomes a man, holding some high position, capable of doing service to his relations, friends and countrymen in about 15 years or so, after successfully passing through his educational career, how much would be the pleasure of that tutor to see his former pupil in that happy position? How much would be the gratitude of that pupil and his parents towards that master? The pleasure of such teachers may better be imagined than described. So, though the teacher may not get full emoluments during the working part of his life, he will have the satisfaction of turning young irresponsible boys into useful and happy citizens after a few years' training. When can the glory of such teachers fade?

K. RAMASWAMI IYER.

IN reviewing the history of Geology as a science, it is a very noticeable fact that even so late as the middle of the eighteenth century, not more than the first few steps were taken in the progress of geological thought; and to those that know to what stage this science has evolved at the present day, the progress made in the last century and a half seems indeed remarkable. The science of Geology as we know it to-day, might be said to have taken its birth only about the beginning of the last century; and ever since, it has developed, both extensively and intensively, almost at a continually accelerating rate. The age of the pioneers in modern Geology might roughly be said to cover a period of a hundred years—from the middle of the eighteenth to the middle of the nineteenth century. During all this period, the science gained more and more of public interest and continually added to the number of its votaries; and there was such an abundance and variety of work done in the various branches of the science that to enumerate all the contributions made by every one of these workers towards laying the foundations of modern Geology, would be a task well-nigh impossible to accomplish in the space of a small article like this. Yet, it would be interesting to take note of some of the more prominent of them,—those that enunciated, beyond doubt, the first basic principles of the science and directed it, as it were, on the way of progress; and but for whose timely influence in directing its course, the science should certainly have been lost in a maze and would never have progressed so far as it has actually done at the present day.

Among the numerous workers that paved the way for modern Geology, we might first consider those who lived and did their best work in the second half of the eighteenth century. The most prominent of them and the most modern in his point of view was James Hutton—born in the year 1726. He will ever be remembered in the annals of modern Geology as the first to have enunciated a fundamental law in the study and interpretation of geological facts, which though strongly discredited in his days, has now been the dominant key-note in the study of all geological processes. He was one of those who based all his views on the study "of the natural operations of the globe." He was the foremost to recognise the part played by several agencies in the formation of sediments and new deposits. He saw that all sediments, on a large scale, are deposited layer upon layer in a horizontal position. That the energy of the internal heat of the Earth, as manifested in volcanoes and earthquakes, greatly influenced the character of the surface and has been responsible for upheaval and subsidence of vast land areas, was observed by him.

The great feature of Hutton's work—one for which he will be ever known—was that after making all these observations regarding these phenomena which he actually noticed, he was the first to boldly suggest that all events which we can infer in the past history of the earth were merely due to similar agencies working with similar results; that denudation and deposition of material have always been going on side by side as at the present day; that all sediments were originally laid down horizontally and that whatever departures from this position we see now are merely due to subsequent influences; that

volcanoes and earthquakes have from time to time been exerting their influence in shaping the earth's surface just as they have done in more recent times. He also suggested that on account of upheaval and subsidence of land areas which must have taken place in the past, the relative distribution of land and water on the surface must have greatly varied during several periods in the earth's history. His main dictum therefore was that all geological changes in the past history of the earth might be explained by the operations of agencies, similar both in kind and intensity to those we see working at the present day—that there is no reason to have recourse "to the agency of any preternatural cause" other than those we see before us. This doctrine of his is embodied in two important works; one, a paper on "Theory of the Earth—or an investigation of the laws observable in the composition, dissolution, and restoration of land upon the globe" which he sent to the Royal Society of Edinburgh in 1785, and the other, a book on "Theory of the Earth, with proofs and illustrations" published in two volumes in 1795. Hutton was therefore the first to formulate the "Doctrine of Uniformitarianism" in Geology which though severely opposed during his own days, was later on confirmed by another master-mind and has been the ruling creed of geologists even at the present day. Many of Hutton's views were amply substantiated and strongly supported by another who closely followed him in time—Sir James Hall, who is to this day recognised as the founder of Experimental Geology.

Another of the dominant workers during this period, and partly contemporary with Hutton, was Werner, the son of a poor mining inspector, who since his youth took to

collecting minerals and latterly became the Professor of Mining at Freiberg. In addition to much valuable work he did himself, he trained a good many for geological work. Amidst his writings, which in many cases suggested new ideas, it is surprising to come across a statement like "Volcanoes originate from the combustion of underground seams of coal."—He was one of the first to study strata and try to determine their respective ages by noting the order in which they were arranged. One important feature of his study of strata was that he laid down that all rocks above the Primitive, i.e., the oldest, were of an aqueous origin. He considered 'water' as the most dominant agency of change working on the earth's surface in the geological past. This view obviously is against that of Hutton, who, while recognising the part played by water, believed in the greater part played by the internal heat or "fire" of the earth. Each had his own followers; and a very severe controversy raged for some time between the Neptunists, as the followers of Werner were called, and the Vulcanists, who represented the followers of Hutton.

The latter part of the 18th century also saw at work another very important observer in the field of Geology—William Smith. Though in his younger days, he was put to odd kinds of work, yet he soon took a keen interest in the study of strata, together with the extinct animals they preserved in the fossil condition. In such a study, he was the first to show that between two sets of strata, one overlying the other, there is often evidence to prove that the two beds, which seem to have come one immediately after another, in point of time, are as a matter of fact, separated by a long interval. In other

words, he first showed the existence of what are now known as "unconformabilities" in the sequence of strata. But the work for which he is entitled to be recognised among the pioneers of modern Geology, is that he it was who found out that "each stratum contained organised fossils peculiar to itself."

This idea at once leads us on to the root-principles of our modern Stratigraphy—which forms such an important and valuable branch of Geology. He wrote a book "Strata identified by organised fossils"—in 1816 and many of the terms which he used are current in Stratigraphy even to-day. His good work in the study and classification of strata in England led Sedgwick to designate him as the "Father of English Geology."

In addition to these three important workers, we may just mention two others, Lamarck and Cuvier, practically contemporaries, who, though better known as Biologists, laid the foundations respectively of Invertebrate and Vertebrate Palaeontology. Lamarck was the first to conduct "investigations of living forms with an examination of the extinct types preserved in various formations of the earth's crust," while Cuvier studied several of the extinct higher animals—particularly the Mammals and contributed to raise Geology to its place "among the exacter sciences." The work of all these people in the latter part of the 18th century led to the dawn of what Zittel calls the "Heroic Age of Geology"—covering the period of thirty years from 1790—1820.

On passing from the close of the 18th century to the beginnings of the nineteenth, we find a host of workers devoting their attention to the study of geological facts—in one or the other of its several branches. As the number of those interested in Geology

increased and as their output of work became more and more extensive, there arose a natural desire among most of them to have some means of coming together from time to time and thus afford scope for the comparison and collation of work done in the same field and for the discussion and elucidation of some of the general principles of the science. About a dozen of the more important of those dedicated to the service of Geology, therefore started the Geological Society of London in 1807, expressly "for the purpose of making geologists acquainted with each other, of stimulating their zeal, of inducing them to adopt one nomenclature, of facilitating the communication of new facts and of contributing to the advancement of geological science." It is needless to say that when once such a co-operative action is brought to bear in the cause of any science, its progress is well ensured. Public interest in the science was also manifested in the introduction, at about the same period, of the teaching of Geology in the several important Universities, as at Oxford, by about the year 1810.

There was thus an incessant train of workers throughout the first two or three decades of the nineteenth century, both in England and elsewhere; particularly in America where the famous William Maclure, named "the Father of American Geology" conducted an extensive geological exploration and subsequently published a voluminous report, accompanied by a map, showing all the important formations—probably the first of its kind published. In Germany Leopold von Buch, who according to Geikie is "the most illustrious geologist" that that country had produced, did remarkable work in the study of rocks, as well as in the study of strata in association with their fossils. Wollaston, the

well-known mineralogist, Parkinson, Webster, De La Beche, Lonsdale and Fitton—these are, to name only a few, some of the many who laboured in the cause of Geology during this period—most of them having engaged themselves in the study of the relationships of strata, together with their fossils. This period from about 1820—1840 is fittingly called the "Golden Age of Geology"—when Geology claimed for her service some of the master-minds of the age. There was one other ardent devotee to the cause of geological science, who it was that gave the "golden" splendour to this age, who by his towering intellect and unique powers of observation, stood head and shoulders above his contemporaries in the field—that was Sir Charles Lyell—a name which is practically synonymous with modern Geology. Born in 1797, his life of 78 years was one wholly spent in the cause of our science. The first publication in 3 volumes of his "Principles of Geology" during the years 1830—1833 might be said to have established, once and for all, the trend along which the science should move and has, to this day, determined its course. In his own words, the book was an "attempt to explain the former changes of the earth's surface by reference to causes now in action" and its publication marked a distinct era in the progress of Geology. It is true that the key-note of Lyell's leading principle—that the present must be used as a key in unravelling the past—was enunciated fifty years before by Hutton, but it was Lyell, by his extensive travel and keen personal observation, that established the principle beyond all shadow of doubt. His books ran through as many as eleven editions during his own lifetime and by their wealth of illustration and detail showed "that the pre-

sent physical geography was but a portion of the latest chapter of geological history, separated from the past by no universal break in the continuity of life or other natural phenomena."

This work of Lyell expounded essentially the uniformitarian doctrine, first suggested by Hutton and dealt practically the death-blow to the older school of "Catastrophists"—a term sufficiently self-explaining. It was only natural that Lyell's views elicited much opposition and discussion in his own lifetime, and every successive edition of his "Principles" tended more and more to confirm his doctrines. It is, however, interesting to remember that Charles Lyell was not such an absolutely rigid uniformitarian in his views as some of his opponents are likely to make him out but allowed a certain amount of elasticity to his doctrine.

With Charles Lyell, we might take it that modern Geology was well on its course and that the period of pioneers was over. The progress made since Lyell down to the present day is truly vast: but it was his work that showed the full scope of Geology as a science—its aims and methods. Several geologists of light and learning have followed Lyell in quick succession during the past fifty years, and by their co-operative endeavours, have contributed to the rapid growth that the science of Geology has had in recent times.

L. RAMA RAU.

STUDENTS AND STRIKES.

THE atmosphere so far as it pervades the student-world seems to be much ruffled, since there is not a day when we fail to see in the Dailies, Reports of strikes, Student Non-Co-operation, College boycotts, Educational reconstructive programmes, National schools, and the wild excitement of the students blown on either side by the "Wait and See" Moderates, and the active extreme Non-Co-operationists. The youth's mind is susceptible, and the slightest spark in this direction of violence has kindled a huge flame. Many are the off-shoots of this dismal phenomenon, for we see not only a marked lethargy in the progress of education, but a candid misdirection of the immature minds of India's youth. The clouds are rent everywhere with wild huzzas, and hallucinations either decrying an anti-Non-Co-operator, or extolling a passionate hero. Some call this diverted outlook, a 'fit of frenzied fury,' a 'result of the machinations of fanatical politicians,' a passionate plea for the nationalisation of education, and it is being manipulated to the likes and dislikes of individuals.

The late Hon. Mr. Gokhale expressed his opinion as early as 1909, that the participation of students in political agitation, impaired the dignity, responsible character and effectiveness of public life. He decried the unhealthy excitement and partisan spirit which such movements were bound to create and emphasized the need for the elevation of the depressed classes and improving of the industrial, social, and economic condition of India. The non-violent Non-Co-operationists preach complete abstinence for students, to step into any sort of institution that breathed an air of British influence, and trumpet the truth that the students to-day are the mould-

ers of India's future, and have to participate in the struggle for Swaraj as such.

Strikes to-day have become common and we are least surprised at such a sudden disturbance in the equilibrium of society. We find strikes in industry and the students' realm but the latter really is worth considering. Strikes are defined as certain maladies, which dislocate or make the peaceful working in any department temporarily dead. The causes for such strikes are not insignificant. They are the concrete and active manifestation of any grievances on the part of the governed, that have not been redressed in spite of repeated requests. They may be due also to any wanton attempt on the part of the strikers to gain, by threatening to keep aloof from their work. Strikes in schools aim at effecting large and comprehensive revolutions in educational methods which are less practicable and possible in smooth and peaceful times.

Strikes are both a curse and a blessing. They are the only effective form of expressing the real condition of the sufferers, by which the oppressors can be shaken up and concessions wrested. But there are some very serious drawbacks. They foster a rebellious spirit, that is least advisable in a student. They check the progress of the mind of the youth, in the flower of his age, and leave it at a stand-still and indifferent, to any significant improvement. The students are to be fully equipped before they can fight for India's reconstruction, and to leave them unfledged in the wide battle of life is not a thing to be congratulated upon.

While we see many things in Non-Cooperation and the strikes, quite laudable and advisable, the aspirations lofty and well-aimed, we cannot fail to observe that the means devised are too vigorous to be peepable.

While the Root and Branch party want to

end the present system, the other flank is for steady mending and reconstructing upon the present. While the motives of each party are beyond any question, we cannot congratulate either opinion. Mr. Gandhi wants the Indian youth to boycott all English institutions and to retire to the spinning wheel which surely will improve India's lot. While his policy is wholly destructive in its strain, the positive side of his scheme is not so vigorously promising. A total over-hauling first, and then gradually building up of India's glory, that is what he wants. What are the unfledged students to do, when they boycott schools, that is the point not satisfactorily dealt with.

Strikes are only means to an end. They are not the end itself. They often turn out to be for the student's good. The recent Medical School strikes are now ended. But they have been productive of good fruits. A thorough destruction is less advisable and wholesome, than a gradual system of threats and extracting concession on grounds that are convincing and palpable to the layman, but which have been badly overlooked, by the masters. So we see that strikes are more effective and healthy than virulent Non-Cooperation.

P. VENKATESIAH,

Board High School Teachers' Association,
Villupuram.

RESOLUTIONS.

1. The Teachers' Association, Board High School, Villupuram, has read the budget of the Madras Government for 1921-22 with regret, as there is no adequate provisions in it for payment of enhanced salaries to masters in the Secondary Schools under Private or Quasi Government management.
2. This Association earnestly urges upon the Government to set apart a substantial amount to be distributed as special subsidies and teaching grants to Non-Government Secondary Schools to enable the management to give effect at least to the scales of salaries recommended to teachers in Government Schools by the Committee of the Legislative Council, that set to consider the question of salaries.

CORRESPONDENCE.

Sir :

You are representing the cause of education in this Presidency and offering suggestions for solving great educational problems and also voicing the opinions of eminent educationists. There is yet one important problem which has not been caught sight of by many (*viz.*) the lot of trained F.A.'s who have afterwards become graduates. It is a world-known fact that one following this profession cannot keep pace with his friends following other walks of life and much more so with those who are in lower grades in these hard times. The Madras University allowed F.A.'s to appear for the B.A. examination and many have come out successful. These F.A.'s have been fully certificated teachers with some experience as in the profession. Now that they have passed their B.A. degree examination in private, the Department compels them to undergo training once more to qualify themselves as L.T.'s, or the prospect is uncertain and gloomy.

They have already spent one year to be trained as secondary-grade teachers and they have picked some experience as teachers. Everybody knows that remaining one year in a Training College will improve their modes of teaching. So it is a hard case with those who are following this 'sorriest of trades' to make them undergo one year more training which makes them lose their pittance of pay for one year. Now-a-days there is a talk in the educational world to exempt teachers from the production of attendance certificates for appearing for higher University examinations. When such is the case why not these poor paid teachers be allowed to appear for higher training examinations without the production of attendance certificates.

It is requested that some members of the Senate kindly take up this question and get exemption for these trained graduates to appear in private for the L.T. degree examination. You will please sufficiently represent this cause not only through your valuable magazine but also through any means whatever to the Senators to move a resolution to that effect.

T. V. MUTHUSWAMI AIYAR,
Edward Middle School, Mudikondan.

EDUCATIONAL TOPICS.

Amusing School-boy Mistakes.

Mr. H. Clive Barnard was offered the first prize for the best collection of 12 amusing school-boy mistakes by *The University Correspondent*. From his collection and from others the following selection is given:—

In the reign of Henry VIII, the head of the church fell into the hands of the king.

William ordered his archers to shoot at the thickest part of the English, so they shot upwards so that the arrows might fall on the, Englishmen's heads.

Q. How does Gray refer to Milton? A. In the words "mute inglorious Milton." Gray tersely summarises the characteristics of this great classic poet.

Sir Walter Scott wrote Quentin Durward, Ivanhoe, and Emulsion.

Lord Macaulay suffered from gout and wrote all his poems in iambic feet.

In Russia there are vast carnivorous forests.

Napoleon tried to injure England by means of Berlin degrees.

The only signs of life in the Tundras are a few stunted corpses.

Many ships use Calcutta as a coaling station—hence the term "Black Hole of Calcutta."

Charles II told the people they could get drunk or gamble or do what they liked. This was called the Restoration.

The cold at the North Pole is so great that the towns there are not inhabited.

Magna Charta said that the king was not to order taxis without the consent of the Parliament.

The Pope called Henry VIII "Fido the Offensive."

Simon de Montfort was a true Englishman because he fought against the king and put him in prison.

The Constitution of the United States was adopted to secure domestic hostility.

The Pilgrim Fathers were the men who went to worship at Becket's shrine in Canterbury.

The Duke of Marlborough was a great general who always commenced a battle with the fixed determination to win or lose.

The Fire of London did a great deal of good. It purified the city from the dregs of the Plague, and burnt down eight-nine churches.

The imperfect tense is used in French to express a future action in past time which does not take place at all.

The seven old English kingdoms were called the Septuagint.

Parliament then passed a Perdition Bill for Ireland.

Indian Ideals in Contemporary Literature.

Mr. T. L. Vaswani of Karachi writes in *The Collegian* (January) about such Western poets and literateurs who find inspiration in the wisdom of India's Scriptures and India's Sages. Indian idealism is influencing Western thought and some of the great ideas of Indian consciousness are influencing Western literature.

"Yeats has, in several of his Essays and Songs, rung changes on the Hindu idea of Karma and Re-incarnation. James Stephens has blessed his little volume of Verses, published sometime ago, with the title "Re-incarnation;" and Algernon Blackwood and Violet Pearn have in a play attempted to represent dramatically the ideas of Karma and Re-incarnation. The book is frankly named 'Karma: A Reincarnation Play.' Its hero and heroine live in four different births, in Egypt, Greece, Italy, England." When they live in Egypt, the heroine induces the hero to give up thoughts of priesthood."

Another book indicative of the great influence of Indian thought is Mrs. Rhys Davids' *Book of Kindred Sayings*. "Mrs. Rhys Davids is an ardent student of Buddhism; and this book gives a beautiful translation of the sayings of and about the Buddha. The Teacher sits in the forest, yet not cut off from communication with men and women; they come to him from far and near; they come to

listen to him; to gaze at the calm beauty of His Face, and to carry with them some strength for life of action in the world. A mother tells her little boy to be quiet as they approach him:— 'Hush! make no noise; the Buddha is speaking holy words,' and His Holy Words have but one dominating idea—the Peace of life cometh through self-renunciation, 'Save by renouncing,' says the Teacher, no safety can I see for living things."

"There is a book named "Karma" by that famous interpreter of Japan, Lafcadio Hearn. There is a play on Krishna and the Gopis by the famous Irish poet, James Stephens; these and several other books, of which there is no time to speak to-day, afford proofs of the growing influence of Indian idealism on several groups of earnest men and women in the West. Some of them, indeed, appreciate Indian thought and literature and religions,—the philosophy of the East, the poetry of Iqbal, the mysticism of the Upanishads—better than many of us who call ourselves Indians but are strangers to our rich intellectual and spiritual inheritance. This book,— "The Book of the Kindred Sayings,"—presents in a simple and suggestive way the Message of the Buddha's life."

Vittorino de Feltre as a Humanist.

Mr. N. C. Daruwalla of London writes a brief sketch of this great educationist of the Renaissance Period who led a revolt against the existing dogmatic ideas about education. He started a school, *La Casa Giocosa* which was intended to give equality of opportunity to children of equal capacity and to turn out cultured men fit for society.

"A child of the age he lived in, it was but natural that he should devote much attention to classical learning. Perhaps he devoted more attention to Greek than most of the early Humanists, not excluding Guarino, firstly because he had an excellent teacher to teach the subject at his school, Theodore Gaza, and secondly because he himself had a great love for the Greek literature. However, he never went to the extreme as Erasmus did with regard to the love for the ancient languages.

"His ideal being to develop the mind, the body and the spirit, simultaneously, it was but natural that he should devote much attention to the æsthetic side of education. An ardent love for music made him see music in all nature around him, although not to such an extent as Leo Battista Alberti saw it. Attention was paid to physical exercise, military drill, and games. Like a teacher who took an ardent interest in his pupils he was himself seen on the play-ground. History too was taught, but to Vittorino, History meant primarily the story of ancient Rome, the country of his forefathers and secondarily of Greece. In an age when personal force was everything, he could not but give much importance to the biographical side of History. Hence Plutarch was studied with interest. He corrected the compositions of his pupils with assiduity, pointed out mistakes and better ways of expressing the same ideas, discouraged anything prolix, pompous or merely ornamental and pointed out his disgust at anything meant to tickle his vanity by way of a personal compliment. Above all, he had love for and influence over his pupils, as is shown by his interference in the family affairs of the Marquis and the way in which he was respected by the son, the daughter and the wife of the Marquis." On the whole his conception of education was freer, more individualistic and more patriotic than before his time.—*The Collegian*: January, 1921.

The Dacca University.

Mr. P. J. Hartog, Vice-Chancellor of the Dacca University, addressing the students of the Dacca College on the present situation, brought out to them the fact that the University was a national one in every sense of the term.

The majority of the Court which will be constituted under the Act would be Indian. The great majority of the staff would be Indian and the University would manage its own affairs. Continuing he said that he himself was not a Gov-

ernment officer, but an officer of the Dacca University. He exhorted the students to exercise their independent judgment as to whether it was expedient for them to go on strike. He advised those who deemed it would be unwise to leave efficient educational institutions not to follow the majority simply because they had not the courage of their convictions. Referring to the strike at Aligarh, he pointed out that while all the students had struck a few months ago the great majority of them had approached the authorities to take them back, and he understood that many for whom there was no room at Aligarh had asked for admission at Patna. The speaker emphasised the fact that whatever might be their ideals they should enter the world after completing their University career. He further pointed out among other things that it took time and thought to create an efficient college or university and he anticipated there was very little probability of their finding any other college in which they could prosecute their studies for some time if they left the Dacca College. In this connection he referred to the advice given by Sir Ashutosh Mukerjee who had done more for University education in Bengal than any other living man and in whose opinion the present movement was a great mistake. He asked the students to think over the matter and to do what they thought to be wise for their own future and the future of the country. The Dacca students were, he added, capable of taking a line of their own and though they might find themselves in a minority at first they may prove right in the end.

Historical Novels in the Victorian Age.*

The Victorian Age took itself seriously to instruct by means of historical fiction which frequently failed to combine the agreeable with the useful; and as historical novelists, four names

* With apologies to *The University Correspondent* (January 1, 1921).

stand out prominently—Dickens, Thackeray, Charles Reade, and Charles Kingsley. We give examples of the work of each.

Barnaby Rudge, based on the Gordon Riots, is not one of Dickens' happiest efforts, but *A Tale of Two Cities* ranks high. It owes much to Carlyle's *French Revolution*; and Dickens, like Carlyle, was wise enough to see good and bad on both sides. Madame Defarge, one of those Tricoteuses of Paris who went to the guillotine as to a play, is a terrible portrait of a terrible breed. The Marquis approaches caricature; yet, in days when the *droit de seigneur* was unrepealed, there must have been many who thought that a gold coin was a fair price for a child's life. But, vivid as are the revolutionary scenes, it is by the character of Sydney Carton that the book lives, and its interest is mainly dramatic. There is little attempt to reproduce the tone of the period.

Esmond scores where Dickens falls short. Its author was soaked in Queen Anne literature, and had temperamentally much in common with Addison and Goldsmith; and *Esmond* is so flawless in the "keeping" of its delicate prose that one could almost believe it to be what it professes to be, a contemporary record. The mock *Spectator* paper is not a parody but a resurrection. The hands are the hands of Thackeray, but the voice is the voice of 'Atticus.' The Prince is not sympathetically handled—but then one would not expect that attractive prig of a Colonel Esmond to idealise a Stuart. It was different for Scott, who could be as "loyal" as he liked without fear of any inconvenient Jacobite rising when he would have to live up to his principles. *Vanity Fair*, less obviously dramatic, surpasses *Esmond* itself, and challenges the most pretentious realist of our day, by the quiet cruel realism with which it shows up the seamy side of war.

The Cloister and the Hearth, Reade's masterpiece, gives us an amazing study of mediæval

France, Germany, and Italy. Churchman, archer, and artist, tavern-keeper and thief, the great lady and the little peasant girl jostle one another in city street and country high road. One is reminded of Chaucer, for "here," too, "is God's plenty." Life was violent in those days, there were fierce contrasts in it, vermin and satin, the torturer and the saint.

Kingsley's hearty good fellowship has lost some of its charm for us who enjoy life so much less than he did, yet *Westward Ho!* has a charm of its own. The very names, Grenville, Raleigh, Drake, "Bideford in Devon," stir the blood "like the sound of a trumpet." We are a sea-going nation still, and with our temper fired by Jutland we

remember the black wharves and the ships
And the sea tides tossing free.

Any well-brought-up English youth would for two pins

take to the sea again
To singe the beard of the King of Spain.
Or capture another Dean of Jaen
And sell him in Algiers.

So we read *Westward Ho!* and fancy ourselves Admirals. *Hypatia* is less popular: yet it is a wonderful book—a *tour de force*. Cyril the Patriarch and Orestes the Prefect, Synesius the "hospitable hurricane," Wulf the Goth, and Pelagia the dancing girl, receive even-handed justice. Raphael the Jew is the subtlest of Kingsley's characters: his detached and witty irony is rather out of Kingsley's line.

John Inglesant is unique in being mainly a history of spiritual adventure. There are a few memorably dramatic incidents—no one can forget the terrible scene when Inglesant, to shake his determination, is brought out on the scaffold to face the howl of a hostile mob, which almost daunts one who would never have feared

death. But it is essentially an inward, mystical book.

There were, of course, many others: George Eliot's *Romola*, the most laborious, Conan Doyle's *White Company* one of the most amusing. But since 1900 the genre has not flourished, and no recent writer has done much in it except Rudyard Kipling in the queer adventures of his Sussex Pack. Of these adventures we shall have no more since, Puck's friend "Dan" is dead and his very grave unknown.

The Decline of Books in Education.

Writing on the declining faith in books as potent instruments for the formation of the mind and on the infection of the higher literary education with dilettantism, Mr. G. F. Bridge says as follows in the February issue of *The Journal of Education and the School World*.

"The Universities appear to have lost their faith in books, and do not consider that they are necessary for the education of young men and women. Take, for instance, the schools of English, and, by way of example, that of the London University. The lists of prescribed books for the year 1921-3 contain nothing but a few Anglo-Saxon and mediæval texts, certain portions of "readers," and a few plays of Shakespeare. The history of English literature from 1500 onwards appears as a subject, but not a word is said about the study of any author. True, the student must offer a subsidiary subject; but the most likely one for him to choose will be Anglo-Saxon or mediæval history, as that will fit in best with his literature. The curious result will be that the only prose author he will read will be Asser. Surely this is the very narrowest University course ever designed. It is not even the study of English literature, but only the study of mediæval English literature, for the perusal of text-books on the history of literature cannot possibly be considered as equivalent to the reading of authors; if it does not degenerate into mere cram, it is as much as we can expect. Strange, indeed, that with all the intellectual products of five or six

great nations at their disposal, young men and women should elect to spend the two best learning years of their lives spelling out the works of half barbarous writers. Strange that they choose to study the human mind, not at its best, but at something like its worst. Strange that they should not be encouraged to read a single great modern prose author, if it were only a study in modern English. Strangest of all, perhaps, that when they become teachers, as no doubt many will, they will claim to be specialists in English, even if they have no first-hand acquaintance with any author later than Shakespeare.

"The whole of our higher literary education is infected with dilettantism, and the same lack of a broad humanism meets us in other "Modern Studies," both at school and at college. The youths of both sexes who take the "Advanced Course" in modern languages, or English and one modern language, and then take a modern language course at a University, will read very little besides imaginative literature from sixteen to twenty or twenty-one, and even this literature is mostly read, not for its value as poetry and drama, but rather as specimens of the language at its best and as a means of studying language. Once again, linguistics occupy the bulk of the time of students of the humanities." Even in elementary schools in England there is visible that almost complete absence of books in the real sense; and training college students are taught to give oral lessons but not how to read books with a class.

Chronology in the Study of Literature.

Margaret Steppat in the *Conference Supplement to the Journal of Education and the School World* (Feb., 1921) considers that a knowledge of the outline of the most famous stories of the world is part of a good education. Without entering into the ideas of previous ages and generations the study of its literature becomes a purely artificial thing and is bound to result in the distaste which was once so general,

"We have begun to realize this. We have begun to say that historical novels that are accurate in external detail, but fail to give us a truthful psychological presentation of the times with which they deal, are of no use to us. They only create in our young people false ideas, not only of the life they actually do portray, but also of that present-day existence which is just opening out before them. We are more than ever determined to present to these young people, as far as they are capable of understanding it, material that is entirely truthful to life as we know it. Life, as viewed through literature, consists largely of a set of ideas, of a portrayal of emotions, and of human action in response to stimuli. Put in a nutshell, the content of literature is the stuff of life, as each succeeding age has conceived it. But life is to all our pupils not a theoretic thing of the past, but only that which is known to them now; and if we wish to proceed on that "vivifying principle of all modern educational reform, where the Particular must precede the General, the Concrete the Abstract, Practice Theory" ("The New Teaching," page 81), then we must first show our pupils the stuff of life in the ideas of this age. This will have to precede all theoretic knowledge of the ideas of other times. True we cannot carry out our acquaintance with the ideas of this age as we meet them in school, to their logical conclusions in living; but that amount of make-believe is only such as pervades all subjects of instruction at the school age. All teachers will be able to offer illustrations and examples that will make the ideas real."

We should so group our matter that no conflict of ideas between ages is represented and we can move slowly backward through ideas as they change.

The Punjab University Convocation Address.

On the 21st of December last, the Hon. Sir H. J. Maynard, Vice-Chancellor of the Punjab University, in the unavoidable absence of Sir Asutosh Mookerjee, delivered the Convocation Address, the theme being the steps which his own University has taken to convert itself into a real teaching University. It was only last

year that the University began to engage professors of its own, and to organise the selected teaching power of its constituent colleges to give post-graduate instruction in certain branches of study.

Speaking of the status of colleges, Sir H. J. Maynard tried to allay their apprehensions at this turn of the University's activities.

"But this very doubt proclaims the existence of a wider student world outside the precincts of the college: a wider world which asks for a share in the influences which have hitherto been concentrated on a single segment of it, and offers a greater seed-plot for their growth and dissemination. If a college loses the exclusive hold over some of its own ablest men, it extends itself through its teachers into relations with those of other colleges. The choice is between complete domination in a narrower sphere, and participation in a narrower sphere, and participation in activities which vitally affect a greater one. Which is the better ideal: the ideal of preserving in a self-contained isolation, the little leaven of enlightenment and moral principle: or to break down the barrier and allow the little leaven to leaven the lump? To make quite sure of the few, or to lavish greatly and generously upon many; to live apart, or to take, sharing your own possessions with others, and entering into participation with theirs?

"How infinitely richer is this University of ours, having the multiplicity of origin and impulse of its varying colleges, so many separate springs of energy and aspiration which have their confluence in her, than if she had issued, complete, homogeneous, and uniform from the brain of a Government have gone to the making of her; and how greatly has she yet to grow by the gifts of fresh life which these and the other colleges yet to come will confer upon her! May I add, how much poorer would each of the colleges be, if it did not help to constitute a whole—ampler and fuller than itself.

* * *

"Some of the colleges outside Lahore, I have said already, have grounds for anxiety. They

see the beginnings of an assemblage of University teachers, of the organisation of the best teaching power of the central nucleus of colleges, for the instruction of the ablest of the students who are near enough to reach what is offered. By the nature of things, this power must be concentrated: it would be wasted if scattered over a dozen centres; but those who are far from the centre cannot draw nourishment from the new sources. They see no gain to themselves in the improvement of instruction in the central nucleus, they may even fear the attractive force which may draw into a new orbit their more promising students. What of comfort or reassurance have we to offer to these distant colleges?

"Some of them, it is safe to say will become the seats of new local Universities. We may look forward with sure eyes to the narrowing of the territorial limits of our present University as new local or communal Universities—a Sikh University at Amritsar, a Metropolitan Indian University at Delhi, perhaps, some day, a N.-W. Frontier University at Peshawar—arise in the north and south. Some of the outside colleges will maintain their attraction by concentrating attention upon subjects for which their position gives special facilities or the accident of a special experience has qualified them: and some will hold their own, because they provide a necessary basis for their respective neighbourhoods."

Predicting a glorious future for the Lahore University, the address continued—

"In the rich variation of type in the manifold sources of inspiration and interest which our Colleges present, American, British, Islamic, Orthodox, Hindu, Sikh, Brahmo-Samaj, Anglo-Vedic, scientific, traditional, missionary, literary and practical, urban and rural; and in the interchange and interaction of the special qualities and characters of all of them: our University is potentially in possession of the widened horizon of an institution transcending provincial bound-

aries and reaching out to that amplitude of mutual understanding and tolerance which marks the citizen of the world. And is there not something specially appropriate to the Punjab in this broadness of vision which from the days of the Mahabharat onwards has been the target of orthodox reproach for the freedom of her ways and a too elastic large mindedness? As she grows rich by her rivers, may she grow wise by her differences!"

Students and Non-Co-operation.

We take the following extracts from Mr. G. S. Arundale's article on the above subject published in a recent number of *The Hindustan Review*:—

"I can quite understand the attitude of the student—of the older student—who, after anxious deliberation, after earnest consultation with his parents and elder friends, after seeking advice from his teachers, decides, perhaps against the advice of all, that he must cease attending an institution in touch with the Government. If he withdraws himself after earnest thought, and with a full sense of the difficulties in which he is likely to find himself in the future, there is no more to be said; especially if he asks help from no one. After all, with the older student, the active exercise of conscience must come first, however ill-informed, even before parents and teachers. But those who are advisers of Indian youth, or who are trusted by them, as Mr. Gandhi unfortunately is at present, are gravely failing in their duty if they do not guard those who trust them, or those who are placed in their charge, against action fraught with serious consequences taken without the necessary forethought. It is another matter as regards persons who have reached maturity. They ought to know their business. They are already face-to-face with the problems of life. They are settled down and have their convictions and their outlooks. But with students it is otherwise. They still belong to the emotional period of life. They

have yet to settle down. They are highly changeable as regards their opinions. It is almost certain that however radical they may be in immaturity, in maturity their radicalism is likely, under stress of difficult circumstances, to undergo definite and, perhaps, startling reaction. They have no business to be committed to an action which is likely seriously to hamper them in after life, unless and until they have been given the opportunity of weighing the judgment of their elders upon the course suggested. If, after weighing such judgments they decide to act, I, for one, could have little to say."

Again the public has shown quite clearly that it will not support largely private enterprise unless it is in some way connected with the recognised system of public education.

"I should like to make quite clear the fact that I do not regard the students as in the least degree to blame. On the contrary, while I regret their lack of political perspicuity—how many elders possess this quality to-day? I cannot but admire the eagerness which drives them to associate themselves with any scheme however mad, which seems in some extraordinary and miraculous way to promise the early emancipation of India from the sufferings which now she has to undergo. There has been, I am well aware, ample cause for the gravest dissatisfaction with the way in which Indian affairs have been handled during the last few years, and even before for the matter of that. I know a large amount of inter-racial hatred has been generated almost inevitably. The tragedies of last year in the Punjab have had their inevitable disruptive effect. And the Non-Co-operation movement has its source and origin, not in devotion to Mr. Gandhi, but in its apparent provision of an outlet for, and an expression of the acute dissatisfaction which prevails throughout the country. Mr. Gandhi has allowed himself to be carried on the crest of this wave."

The Power of Originality.

The world is now crying aloud for men of initiative, yet the rarest thing is independence of mind, a capacity for thinking and acting for oneself. The great mass only live as mimics. Mr. Jackson Coleman, writing in *The Indian Review*, has some very plain truths brought home to us.

"But why is it after all that so many men and women have so little push and go about them, no aim and no ambition of the right kind? Is it not because the tendency is so clearly in the direction of uniformity and standardisation? Among the democracy, for instance, we observe movements for the stabilisation of wages, the "minimum" wage, the "limitation of output." Little regard is paid to a "maximum" wage, increased output, greater efficiency.

"The educational powers will possibly be very angry when they are told that they are in a large measure often responsible, too, for the inane production that lacks initiative. In the lower type of schools in practically every country there is little chance, save in a few exceptional places, for the small child to think for itself. We must, however, blame the system, not the plucky teacher, who often labours under great difficulties. The child's teacher does the thinking and he agrees, but what he wants, if he is to develop his own wits, is how to do his own thinking.

"Then, in our workaday world, let us compare the lot of the mental worker with that of the manual labourer. By reason of associative effort we observe that the wages of the latter have enormously increased within recent years. Yet the brain-worker, who is equally feeling the increased cost of living, is often scarcely considered worthy of his hire. He is required to produce testimonials, diplomas and certificates and to prove the victim of all manner of "back-stair" influences, whereas the manual worker may almost without question transfer his labour as freely as he breathes."

The Changed Course of English Education.

Sir Michael Sadler, writing in *The Indian Education* (January) says that English education in the past preferred exceptional eminence to a high level of average competence, gave a more inspiring discipline for the *elite* than for the masses and did comparatively little for the improvement of elementary education of the masses of the people. "Proud of her great schools and Universities, England was cold towards elementary education. She thought that it was enough to give her best things to the select classes, just as in the schools where the select classes were trained she allowed a further selection to be made in favour of the exceptionally gifted and to the detriment of the rank and file."

"But it is evident that English education is now being borne along by a new current into a very different channel. All recent changes in the organisation of our secondary schools aim, however unconsciously, at raising the average level of intellectual competence. The needs of individuals of exceptional ability receive less attention. Less noticeably, but beyond doubt, the same change of educational direction is seen in the Universities. The educational methods which were characteristic of Central Europe before the war are steadily gaining ground in England to-day. We are only at the beginning of the change. As compared with pre-war Germany, England is still in these matters an amateur. But all the chief changes in the English secondary schools during the last decade point in the same direction. We find ourselves aiming at an all-round mental training for all children up to sixteen years of age. The days of early specialism in the classics or in science are nearly over. And in the steps which have now been taken to organise the staffs of secondary school teachers in grades with annual increments of salary, we see the direction in which we are moving. The

average pupil is to have more attention, and staffs of teachers trained for this work are to replace in time the less regularly organised teaching force of former days. Without knowing it, we are trying on the educational clothes which Germany seems inclined to discard."

"Changes of this kind always begin in the higher grades of education. In time they filter down to the primary schools. The latter are influenced, and rightly influenced, by the prevailing practice of the schools engaged in more advanced work. Consequently, we have at present in England rather a paradoxical position. The primary schools, though organised since 1870 upon the principle of raising the average level of their pupils' knowledge rather than upon the principle of making the most of exceptional minds, have aspired in their growing efficiency and power to imitate the characteristic achievements of the secondary schools. Their most active-minded teachers have tried their best to introduce the spirit of corporate life and also to give special opportunities to children of exceptional promise. For this reason, the new tendencies which are powerful in the organisation of the work of our secondary schools are not yet equally operative in the primary schools. In the latter, the battle for individuality is being fought against an inadequate tradition of mass-teaching. In the secondary schools the claims of the average pupil are being pressed against the habit of giving preferential treatment to exceptional ability. Elementary education is being inspired by a new spirit of individual freedom. Secondary education is beginning to learn the lesson of collectivism. In due time, what the secondary schools are now beginning to aim at will affect the primary schools also. But in the interval the primary schools will have been filled with a new life which will enable them to resist some of the evils of a more tightly fitting intellectual yoke."

"At present, therefore, English education is a

puzzling study. Inconsistent principles are in operation. Conflicting principles operate side by side. Secondary education and primary education alike are the scene of a confused struggle between opposing ideals. In the primary schools we see the survivals of a mechanical uniformity which has long been intellectually obsolete and is now being broken up, with the approval of the Board of Education and of the local authorities and by the energies of enterprising teachers. In the secondary schools we see the survivals of a disorderly individualism in the courses of study (marked and corrected by the restraints and uniformities of corporate life), but this individualism is giving way under the pressure of administrative and social requirements which demand cohesion and greater regard for the intellectual interests of the rank and file."

The new type of education will surely be effective and consolidating and through its influence the middle classes will become the core of the community. But the schools may not continue to be the source of new ideas and independent judgment. They will more likely produce efficient servants of the state.

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THE PROBLEM OF EDUCATION¹

"Then said I unto them, Ye see the evil case that we are in, how Jerusalem lieth waste, and the gates thereof are burned with fire; come and let us build up the wall of Jerusalem, that we be no more a reproach But when Sanballat the Horonite, Tobiah the servant, the Ammonite, and Geshem the Arabian heard it, they laughed us to scorn and despised us, and said, what is this thing that ye do? Will ye rebel against the king?"

A WELL-KNOWN Indian, in a memorandum laid before the Calcutta University Commission, summarised the purpose of ancient Indian education:—

"The Indian theory of education," he wrote, "was laid down in distinct and specific terms in the Indian scriptures; and this theory has ruled Indian life for thirty centuries at least, and it requires to be definitely stated. . . . I have carefully sifted the material at my disposal, and will use cautious and carefully-worded language. The Indian theory of education may be enunciated as follows:—

"Every man is born with certain moral obligations, *Rinas*, or debts as they are technically called:

- (a) Debts to the Higher Powers that govern his being.
- (b) Debts to his ancestors, including the fathers of his race.
- (c) Debts to his neighbours and fellow-men.
- (d) Debts to all sentient creatures that in any way minister to his life's needs.
- (e) And, above all, debts to the *Rishis* or the ancient founders of the particular type of culture to which his life must conform. . . . The debt to the *Rishis* is given, with absolute unanimity, the first and foremost place in the list of life's obligations, and the way to pay off the debt is by the cultivation of *Vidya*, the pursuit of knowledge for its own sake."

At the very outset of this paper we shall consider briefly the object of education as recognised in India. Defining education in its most general

¹ A paper read at the Y. M. C. A. National Convention, Nov. 24th, 1920.

² Nehemiah 2: 17-19.

terms, as the process whereby the individual is prepared for life, we recognize that we have to deal with three types of influences to which the child has been subjected. In the first place, under the ancient kings a system of temple or mosque schools was in existence at the time of the advent of British rule. It is true that, owing to the chaos of the 18th century, they were neither as numerous nor as efficient as they had been, but the system was a heritage of the past and was widespread all over the country. These schools are even existent to-day, and their prime purpose is religious instruction, reading, writing, grammar; the rules of prosody were taught as an introduction to the study of the sacred scriptures. These schools led up to colleges of learning in the sacred cities, such as Benares, Mattra, or Conjeevaram. The colleges were not institutions, but communities of teachers.

I. In essence this learning was culture and provided its students with a philosophy of life. Very largely this learning was monopolised by the Brahmin, but not wholly so. It did not exclusively train religious teachers, but from its products were also drawn the statesmen of the ancient kingdoms. It is an interesting fact that in Europe ecclesiastics provided the earliest civilized Christian governments with their statesmen. For example, in England we had the King and the Lords Spiritual: the Bishops in the Upper House to-day are a relic of those times.

Ruin has befallen the ancient system of education. Disintegration began with the fall of the Mogul Empire. This cultural learning was dependent on the patronage of the Emperor, feudatory rulers, viceroys, and other officials, but with the fall of the empire it was the strong who prevailed; bandits founded dynasties and they in their turn were supplanted by others. Nothing was permanent. Stable government, law, and order disappeared. The patronage, on which

this educational system depended, was impossible during those days and times. With the rise of British rule and its establishment the ancient education and culture was rendered valueless, and patronage to their support was not extended to them except for a short period.

Dr. Laitner, Registrar of the Punjab University, in a survey of education of the Panjab, demonstrated that, during the first thirty years of British rule in the Panjab, the number of schools of all kinds in the province had actually decreased. In other words, the old temple and mosque schools had disappeared more rapidly than modern schools had been established. It is true, the Court of Directors of the East India Company, after the Charter Act of 1813, reserved a sum of Rs. 100,000 for education, which for a space of fifteen years was used to stimulate the ancient learning, but the tide had already turned, and Indians were themselves unwilling to encourage a system of studies whose marketable value had gone for ever.

II. But cultural education did not exhaust the Indian system. India through the centuries has been justly famous for her industries, particularly among others her cotton fabrics, which found their way to every part of the civilized world. Calico, named after Calicut, a southern port of exportation, even as muslin attained its name from Mosul in Persia, the great clearing-house of Eastern trade—were both products of India. Now these handicrafts, scores of them, were taught in families and by a system of apprenticeship. The young were trained to a trade or profession. The caste was the occupation guild which, in a general way, had its rules and system of vocational education.

Here, too, as in cultural education, a disintegration set in, and India was pushed into economic servitude, with her industries ruined, and the millions who followed these industries were compelled to seek a precarious living on the land. The cause of this is not far to seek. It dates

from the time of the East India Company, with its officials, writers, factors, junior merchants, and senior merchants. In the first place, the Company became monopolists in fabrics by a system of loans made to the craftsmen; and in the second place it brought India, unprepared, into the competitive life of the new industrial order in Europe, with disastrous results. Many trades fell into desuetude and the knell of Indian industries was sounded. The second form of education thus died, or greatly diminished in value. It was not transformed, as in other countries; into an instrument of power which might have saved the country from depression and the depths of poverty. Germany was probably in a worse condition than contemporaneous India in the 18th century, yet when we consider the technical skill of the former in the latter half of the 19th century, we cannot but mournfully speculate on the loss that India suffered. To seek to apportion blame would be futile, and in this paper would be irrelevant, but it may be noted in passing that both internal and external causes were operative.

III. Apart from cultural and vocational education, the family has been a most powerful source of education. To distinguish it from the other types mentioned above, we consider the family as the source of a definite form of education—*Social Education*.

Have you never wondered why it was that the integrity of India as a whole was preserved—in spite of invasions, dynastic collapse, and decay of the central government—through her history? If you will examine conditions more closely, two institutions stand weather-beaten, but still extraordinarily strong—the village system and caste; and it is in the structure of the first that the significance of the second is revealed. Here, then, you have two stable institutions which it is generally recognized have preserved India from chaos. This stability could not have been brought about without very strong influences in

their favour ensuring their vitality. Behind them was the family, which indicated to each of its members from the days of childhood their duties, the relationship of man to man, responsibilities and rights—all that the Hindu includes in the term Dharma, or duty. The father taught the son, by precept and example, his trade or profession, the priest gave to him his culture, but to the mother fell the duty of training the boy in Dharma, and this last has been the most powerful factor in education.

But even here modern times make demands too strong to withstand. The ancient Dharma, with its sanctions and duties, is losing power as an effective force. The external world, as the child emerges into it, does not correspond to the teaching by example and precept imparted to him by his elders. Indeed, Dharma is outworn in this modern age of ours. Where this is recognised then, its place is not infrequently taken by a purely selfish outlook; the cult of success supplants it, the exception being the claims of family, which still provide a strong altruistic motive to the individual. It is possible to illustrate my meaning by many examples, but the more vivid examples are to be found in the products of our colleges, as the readers of the autobiography of Thillai Govindan will recognize. Personally, I believe that the explosion of the spring of last year may be viewed as illustrating the failure of Dharma to control individuals any longer. The Punjab was a storm centre, and was it not from that very province that large numbers of men had been sent overseas, either as soldiers or temporary colonists in Canada and the United States. The old education was insufficient in their case to cope with the new moral strain put on them. Ahmedabad as well as Bombay were other centres of trouble. Is it too far-fetched to believe that the lawless elements were the result of the drift to the cities of village folk, who had become industrial workers. In their case, too, their education had been

inadequate. To the reverent Hindu our modern cities and modern educated community must appear as agglomerations of social detritus.

We shall summarise at this stage the results of our enquiry:

(1) Education is wider, indeed very much wider, than the problem of literacy and the activities of the Department of Public Instruction.

(2) Ancient Indian education has served the threefold purpose of being cultural, vocational, and social.

(3) Indigenous Indian education as such has failed, owing to causes over which society has had no control.

II. Substitutes for education.

We have considered the breakdown in traditional education. What has been put in its place? For one thing, our modern system of education. With its most salient historical features most of those present here this evening are familiar, but still they will bear recapitulation.

In 1781 Warren Hastings founded the Calcutta Madrasah, and then years later Jonathan Duncan founded at Benares the Sanskrit College. Both these institutions were founded with the purpose of promoting Oriental learning. The situation remained almost unchanged until 1818, when, in the Parliamentary Act renewing the Company's Charter, a clause was inserted making it compulsory for the Government of India to spend a sum of Rs. 100,000 annually on the promotion of learning. This was the immediate cause of that famous controversy as to the type of instruction which was to be imparted. The controversy continued until 1835, and was decided owing to Macaulay's powerful advocacy in favour of modern learning as against the ancient classical learning. The Anglicists had won a victory as against the Orientalists. The significance of these events will be next considered.

(1) The Orientalists were themselves scholars, and admirers of the newly-discovered treasures of Indian learning. Instinctively they sought to preserve the harmony between cultural education and social education, the one propagated through institutions of learning and the other through the family. They sought harmony, and let us give them the fullest credit for that demand.

(2) They failed to realize that a new world order was at their very gates, and the destinies of the country were in its keeping. Economically and politically the Indian world was different, it was impossible to return to the past.

(3) The Anglicists were realists. The Government needed public servants with ideas common to the whole administration, members of which included both Europeans and Indians. Macaulay and his colleagues were clear that the old learning was valueless in producing efficient, capable, and moral men. To them the choice was clear. That there would be the disharmony foreseen by the Orientalists their practical and philanthropic minds failed to realize.

The Despatch of 1854 from the Board of Control to the Government of India laid down, for the first time, the broad outlines of a system of education from the elementary school to the University. Principal James, in his book, *Education and Statesmanship in India*, refers to the proposals as a complete system of "national education." That it was a system complete as far as the standards of the times went is true, but certainly it was not "national" in the meaning of the present day. National education is something more than a complete system.

In 1882 a Commission, under the Chairmanship of Sir W. Hunter was appointed to consider how far the recommendations of the Despatch of 1854 had been carried out. The Commission made recommendations, three of which we mention as they had an important bearing on the future: (1) The responsibility for higher education

tion was to be laid on private bodies, who were to be aided financially by Government. (2) This transfer to private bodies would, it was hoped, enable provision to be made for religious teaching which Government officers were prohibited from giving by the terms of their tenure. (3) That grants should be based partly on results obtained in examinations.

I think we are now in a position to enumerate the results of the educational policy inaugurated by Macaulay, and consistently carried out in its fullest amplitude—and at this point I take the opportunity of referring you to the Calcutta University Report, Chapters I to XIII, for an analysis of the present situation.

In the first place, the whole of modern education in India has been orientated towards the University. In the second place, it has restricted the economic value of the individual who submitted himself to modern education because of its literary bias. In the early years the products of the system could be absorbed into the ranks of the official hierarchy. That has been impossible now for nearly fifty years, and the learned professions, particularly the law, have also been overstocked. In the third place, institutions, often of little educative value, have been established all over the country, which have become what the Commission would call "coaching establishments," whose products only tend to swell the ranks of the badly employed. Fourthly, the curriculum followed is so restricted in its scope that it often proves useless to the student when he enters life. Fifthly, the use of a foreign language as the medium of instruction and the pressure of examinations rendered education lifeless, and indeed of little value. Sixthly, the disharmony between social education and cultural education is complete, bringing moral bankruptcy in its train.

To the moral issues involved I would suggest that my listeners should read with care Chapter XIII of Vol. VII of the Calcutta Univer-

sity Report. The chapter consists of general memoranda on the effects of Social and Religious conditions. Sir John Woodroffe in his statement summarises in vigorous language the evidence of many distinguished and thoughtful Indians.

"There are some," he says, "(the foremost of whom may be called missionaries of race), who, sincerely believing in the superiority of Western civilization, think that it will be for the benefit of India to impose it on the East. The drift of education has been in this direction. As my friend Mr. Havell has rightly said, the fault of the Anglo-Indian educational system is that, instead of harmonising with and supplementing national culture, it is antagonistic to and destructive of it. . . . As nothing is wholly evil, I personally believe that some benefits have been gained, though the education given has had baneful effects. What else can be expected from a position so unnatural. Wrong education is the cause of physical and mental strain and sapping of moral strength. It is productive of instability, leading in the case of some to violence, in the case of others to the paralysing inner conflict or a sense of intolerable oppression, and in a large number of ordinary and inferior natures to imitation, automatism and subservience."

III. To anyone who surveys the results of Indian education it is difficult to withstand feelings of pessimism.

(1) The youth of the country, even though educated, face the world utterly untrained, in hand, mind, and eye, and ear, impotent for the tasks in hand.

(2) The competition to live each year becomes increasingly strong, and bitterness is engendered in many hearts. "Then said the steward in himself, 'What shall I do? for my lord taketh away from me the stewardship: I cannot dig, to beg I am ashamed.'"

(3) The moral failure of the system is patent: it has been counteracted only partially.

But in spite of pessimism the failure, though obvious, is relieved by certain gains. Western education has contributed very greatly to the intellectual life of India. The knowledge of the English language has made available to thousands the thought and ideas of the most forward nations of the world. Thousands have benefited by this renaissance; above all, it has stimulated

nationalism, which, in spite of its defects, has been the most purifying moral influence in modern times.

IV. *Reconstruction.* 1. Every Indian demands a national system of education, which is not the same thing as an All-India system. Education is not merely a system, but an instrument with a purpose. The present purpose is to create a united self-governing India. That every child should have the opportunity to develop himself or herself to the fullest capacity is a corollary which none can deny. Mr. H. A. L. Fisher, President of the Board of Education, in 1917 used the following words when referring to education in England:—

"The province of education is to equip the men and women of this country for the tasks of citizenship. All are called upon to live, many are called upon to die, for the community of which they are a part. That they should be rescued from the dumb helplessness of ignorance is, if not a precept of the eternal conscience, at least an elementary part of political prudence, to which the prospective enfranchisement of several millions of new voters adds a singular emphasis. But the argument does not rest upon the right of human beings to be considered as ends in themselves, and to be entitled, so far as our imperfect social arrangements may permit, to know and to enjoy all the best that life can offer in the sphere of knowledge, emotion and hope."

2. Every Indian demands the abolition of illiteracy in the country: to recommend patience is a counsel of perfection. To convert India into a literate country will demand the fullest resources of the country. To accomplish it almost every Indian who is standing for the Councils has pledged himself. That the matter is not simple most of us agree, but it is impossible to discuss within the limits of this paper the problems which call for solution.

3. The main effort of a national system of education is to ensure that everyone learns how to earn his livelihood. Education must be given in view of the needs of the country. It is tragic that with the new industrialism, although the opportunities of livelihood are increasing every day, skilled workmen are needed, of every kind,

men who have been trained to use hand and eye with accuracy, and yet, due to ignorance, conservatism, physical defects, these opportunities are lost. To remedy this state of things we stand in need of a system of "vocational education." I would call the attention of those present to a book, which has just appeared, entitled *Village Education in India*, the report of the Commission of Enquiry of which the Rev. A. G. Fraser was chairman and Mr. K. T. Paul a member. While the book deals primarily with Christian education many of its recommendations have a far wider applicability.

"It is obvious, then, that if the ideal of a school within the reach of every village child is to be attained in any reasonable time, that school must continue to be of the very simplest character, giving to the pupil only the tools he needs, and asking from the teacher only that knowledge and skill with which his own education and training may be expected to have equipped him. We propose, therefore, that the child enter the primary school at the age of about five and a half years and remain for four or five years. The curriculum will include reading, writing, and arithmetic, nature study, hand-work and music, with attention to such physical exercises and games as are suited to young children. All instruction will, of course, be in the vernacular, and when the child leaves this school he will be expected to be able to read a simple letter, to write the same, to make calculations relative to ordinary bazaar operations, and to answer simple questions with regard to the habits and other characteristics of the plants, birds and beasts, with which his daily life may familiarise him. . . . The children are here too young for strictly vocational training. It is true, handwork should occupy a large part of the time, but merely for its educational value, its training in manipulative skill and resourcefulness, not for its economic value."

In recommending the establishment of vocational schools, the Commission urges—

"That the course should in its entirety consist of five classes. The vernacular will be the medium of instruction throughout, and in all classes industrial work will form an important part of the curriculum. This does not mean that English is to have no place in the school. On the contrary, we believe that the very widespread and

consistent demand of even the poorest for a knowledge of English is justified. There are economic reasons requiring a trade knowledge of some common language, but we wish our pupils to become rather English-understanding than English-speaking. Therefore, while we propose that all instruction shall still, as in the primary school, be in the vernacular, English should be taught as a second language by the direct method, with at first little attention to reading and writing of English text, but only to pronunciation and understanding. In the higher classes more time will be given to the reading and the writing of English. The industries to be introduced will naturally vary according to the locality, but as for the success of such schools the correct choice of the industries is vital, some general principles may be laid down. (1) The industries should be generally related to the indigenous products and to the hereditary proclivities of the locality. (2) There should be a ready market for the product, so that a constant and sufficient amount of work will pass through the school workshops to afford the pupils the necessary training. (3) There should be a sufficient labour market to absorb the pupils of the school when trained. . . . The industries will probably not be introduced at one time, but will develop as the scope of the institution declares itself. It is interesting to note that such schools seem to flourish best when they are many-sided, especially when they have developed organically, new industries being added as the old ones became established and remunerative. . . . In a land where about eighty per cent. of the population are engaged directly in agriculture it is obvious that this will frequently be the first industry introduced. . . . The studies on the academic side must be simple but not superficial. . . . The standard will be roughly the standard of the present middle school, but in the curriculum certain subjects preparing for community service should be substituted. Thus, to arithmetic, vernacular reading and writing, and simple instruction upon the trade or craft followed, will be added English, sanitation and hygiene, oral lessons on the local government of an Indian village, and on local geography, may be included. The whole atmosphere of the school should be Indian, and all that is good in the customs should be most carefully preserved. . . . The primary object, as is well pointed out, is not goods but goodness; not profit but personality. It is a development of the trade through the person, although, of course, the antitheses are not mutually exclusive."

These vocational schools will give admission

to technical and agriculture institutes, which ought to be open to all youths of promise.

In this connection it may be of interest to some members of this Convention to study the papers issued by the Calcutta University Problem Fund, under the direction of Captain Petavel, the first lecturer to be appointed by the University under the scheme. The Educational Colonies suggested there have attracted some attention in India.

4. Social Education. We shall not consider this problem, as the speaker, Mr. Paul, who is announced to speak on "Citizenship" on a subsequent evening, will deal with this subject.

The family, the home, must be re-made into a centre of education—without it national life will be a failure; every year its authority is lessened, due not to lack of reverence on the part of the young, but because its sanctions and prejudices are concerned with things whose validity is no longer recognised in this modern world of ours. Yet, in spite of these obvious drawbacks, the family continues to-day as the source of many ideals. It is extraordinary what the individual will suffer for the good of his family, the sacrifices that he will make to support his aged father and mother, his younger brothers and sisters. May this family loyalty never perish from our midst. But "Social Education" will have a broader base than the family, and will include all measures of "Community Service" and "Adult Education." Co-operative societies, the theatre, libraries, all make their contribution, if wisely used.

5. Cultural Education. The problem has been considered in very great detail by the Calcutta University Commission. We are sure the Commissioners are right when they urge that important avenues of training other than a University career should be opened up. We trust that definite steps will be taken in this direction by "Vocational Education."

University curricula will have to be liberalised,

the relation of the student to examinations adjusted, but the main endeavour ought to be to infuse a new spirit into the Universities.

6. We have at hand a great purifying and elevating force in nationalism. The ancient ideal that knowledge was a duty, that, as Professor Trivedi reminds us, a man who had failed to discharge this duty was not a recognised member of society. This ancient conception only nationalism can rehabilitate. We can never go back, however, to ancient learning for a complete philosophy of life in this age. If it were possible it would not be advisable: indeed, the age in which we live would deny us the right. It must be a new culture, the truth and discipline of the old with the truth and purpose of the new.

This very University of Calcutta, which has undergone such fierce criticism, has produced men of whom any nation would be proud, men who in their own lives have harmonised the new and the old. The readers of the *Young Men of India* will recollect that, from time to time, we have recorded the visits to the Y.M.C.A. Hostel in London of three great Indians, all products of the University of Calcutta—Sir J. C. Bose, Lord Sinha, and Dr. Rabindra Nath Tagore. There has also just come to the editor's table a short account—still to be published—of an address delivered at the Hostel by Sir P. C. Roy.

Let us consider for a moment their particular contribution, not merely to learning but to the life of the world. Bose has seen a vision of the unity of external things—a vision which came to our fathers, he has fashioned delicate instruments which demonstrate to men of science that reactions in all things, whether organic or inorganic, plants and animals, are essentially the same. Roy has brought to the elucidation of complex chemical problems the asceticism and devotion of ancient India. A Scottish professor of chemistry of great repute, after a visit to Roy's laboratory, came away impressed by the spectacle

of this investigator, who combined his ancient Indian discipline with the investigation of the most modern problems. Tagore¹, the poet, carries with him the conviction of an immanent God, whose attributes he describes with a capacity of expression which appeals to the ear, heart, and mind of East and West alike. He has been accused by the Parists of the Bengali language of being un-Indian. It is true, if "being Indian" simply means being an imitator of the past: he is an imitator neither of the past nor of the present, but he takes the ideals of the past and transmutes them into expressions of song understood by men of every civilized people, touching in their hearts the very deepest chords. Let us not be unduly cast down! These men are but the earnest of the future. Let us demand liberty for old and new and bring them together in harmony. To do this we need a new race of teachers, men who in their own lives have harmonised both, a race of students whose minds are not made sterile by the educational system of to-day.

Some of us are teachers, and we have grieved at the cruelty of an educational system imposed on the youth of this country. We have made slaves of men who should be free. This is one side of the picture. On the other side we have known young men whose minds have been lighted up, who have gone from strength to strength, but education is not a matter of the school-house alone, nor of the lecture-hall, it should permeate life. To the Association it is the privilege to minister, through hostels and student clubs, libraries, study groups. Here, then, no set curricula hindering us, let us make an attempt, as has been done so successfully in Calcutta and Madras, to educate men truly through our institutions and activities. Above all, it is contact with personality that is the strongest educative power.

There are others here, who though not teachers,

¹ Though not a graduate of the Calcutta University, he has been subjected to the influence of modern Indian education.

have your lot cast in the village, the army camp, or the factory. You have realized how hampering is ignorance. Yes, and the poorest in India are realizing this to-day, the educative value of the co-operative society and the co-operative store, the right place of the magic lantern lecture, are limitless if rightly used, and if behind each there is personality, human sympathy and a passionate

desire to help the poor and out-caste, while you and I will probably not have a definite place in a system of education, we are educative forces in India. To us is given, even as to Nehemiah the Prophet, the privilege of rebuilding the walls and gates of Jerusalem.—*The Young Men of India*, Jan. 1921.

S. K. DATTA.

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THE TANJORE DISTRICT TEACHERS' GUILD.

A meeting of the Tanjore District Teachers' Guild was held in the Victoria High School, Papanasam, on Sunday, the 27th instant, with Rao Bahadur S. Appu Sastriar Ayl. in the chair.

The following Resolutions were passed:—

1. This Guild, while feeling keenly disappointed that the Government have not so far made any provision in the Budget for 1921-2 for improving the pay and prospects of teachers in Secondary Schools, urge upon the Minister of Education that the efficiency of Secondary Education will be seriously jeopardised if sufficient grants or subsidies are not placed at the disposal of the Managers of Aided, Municipal and Board Secondary Schools, so as to enable them to pay the teachers in their employ at least the scale now recommended by the Salaries Committee for teachers in Government service.

2. That Government be requested (a) to organise one Provident Fund common to all recognised Secondary Schools, Aided, and Local and Municipal Boards and get the Provident Funds in such schools as have already started them absorbed into the common fund; (b) to rule that contributions to the Provident Fund be made obligatory on all the certificated teachers employed in recognised Secondary Schools; (c) to allow interest on all Provident Fund investments both already made and to be made at 5½ p. c. per annum; and (d) in the case of institutions that have already started Provident Funds and invested their money in Government 3½ per cent. securities, to take the Promissory Notes deposited by them with the Accountant-General at the price at which they were originally purchased.

3. (a) That one of the Joint Secretaries be requested to tour through the District with a view to organise a Teachers' Association attached to each Secondary School, Complete and Incomplete, and get it affiliated to the Guild.

(b) That the Guild may grant travelling allow-

ance to the Travelling Secretary and that the funds needed for the same be raised by subscriptions from the several affiliated Associations, the amount varying according to their strength.

(c) That the Travelling Secretary be requested to interview members of the Legislative Council of Tanjore, Trichinopoly and South Arcot Districts with a view to enlist their sympathy for the objects of the Guild.

(d) That the S. I. T. U. be requested to adopt similar resolutions and make similar arrangements for the better organisation of the profession in the other districts of the Presidency.

4. The Guild feels surprised that the Government did not deem it fit to include the Tanjore District Teachers' Guild as one of the constituencies to elect representatives to the District Educational Council and requests the Minister of Education to include in the newly-formed Council for the District at least two members to be elected by the Guild.

5. The Guild recommends that teachers be permitted to take up private tuition without prejudice to their legitimate school-work and that the departmental circular discouraging it in all Aided Schools and prohibiting it in all Government and Board schools be withdrawn.

6. That the Guild invite the S. I. T. U. to hold the Provincial Educational Conference of 1922 under its auspices at some place in the District to be decided later on.

7. That every Teachers' Association affiliated to the Guild arrange for the study of the Co-operative Movement in England and its possibilities in India by getting papers read on the 'Rochdale Pioneers' (by Sir Jacob Holyoake). In connection with the last Resolution Mr. K. S. Narayanaswami Aiyar made a thrilling speech giving an account of the work done by the Rochdale Pioneers. His ambition is to see the Guild develop a co-operative concern beginning with the writing of text-books for the Primary classes by the members of the Guild which may publish

the books and gradually build up a capital for larger undertakings and divert for the use of the members of the profession the enormous profits which now go into the pockets of English Publishing Firms. A text-book approved by an Expert Editorial Board cannot but be approved by the Text-Book Committee and if every school in the District adopts the book, there will be no difficulty about its sale. As it was, late in the evening, the discussion on the subject was postponed to the next meeting of the Guild.

Reviews and Notices.

ELEMENTARY BIOLOGY—AN INTRODUCTION TO THE SCIENCE OF LIFE—BY BENJAMIN C. GRUENBERG, JULIA RICHMAN HIGH SCHOOL, NEW YORK. (PUBLISHED BY GINN & CO.) INDIAN AGENTS: THE P.T.I. BOOK DEPOT, BANGALORE CITY. Price 7s. net.

We welcome with pleasure the small book on "Elementary Biology" by Gruenberg. General facts of interest in the field of Biology are not known to many among the educated men in this country. Biology is generally taken to be a science of long Latin names difficult to pronounce. The books on Biology we were having till now have been partly responsible for this unfortunate impression, and they have always laid more stress on dry uninteresting details about the anatomy of certain types. These books can never create any interest in the study of Natural History.

Biology is a growing young science which deals with problems of various kinds. It should be the desire of any educated man to acquaint himself with the general outline of the leading facts in Biology. The author of the book under review

has struck the right note when he states in the preface: "They (the materials, etc., in the book) represent what seems to me at present the kind of knowledge and the kind of attitude that are both needed and wanted, and the kind that it is desirable, from a social point of view, that all of our citizens should acquire sooner or later."

The book under review is a welcome departure in a new direction. It does not treat exclusively of types of animals and plants and it is fortunately free from technical jargon. It deals with the subject-matter in such a simple manner that any ordinary man can easily understand it. The subjects are amply illustrated with diagrams, graphs and figures. The book is at once popular and scientific, and a perusal of the book will certainly create an interest in the knowledge and study of living things.

The author has attempted to find a place in this small book for all the ideas and theories of biology, ancient and modern. Special attention is drawn to the modern researches in the study of genetics. The chief merit of the book is that the author has taken care to deal at length with problems such as food, public health, sanitation, temperance, etc., that concern human beings.

This book will prove invaluable to the teacher, who handles Elementary Science in our High Schools. Biology wearies the student if the facts be not properly presented. This book supplies plenty of useful and suitable material for instruction in the High School classes, and the mode of presentation adopted in this book is just the one that will be required to make the subject interesting. We do not exaggerate when we say that the book is interesting from cover to cover.

ANNOTATED SERIES OF SCHOOL ANTHOLOGIES ON ENGLISH POETRY.

Poetical Selections. Edited with Notes, etc., by P. C. WREN, M.A.

Contains the following selections:—The Burial of Sir John Moore at Corunna (Wolfe), She dwelt among the Untrodden Ways (Wordsworth), Lucy Gray (Wordsworth), Hohenlinden (Campbell), After Blenheim (Southey), The Destruction of Sennacherib (Byron), Solitude (Pope), Lochinvar (Scott), The Three Fishers (Kingsley), Barbara Frietchie (Whittier), A Wet Sheet and a Flowing Sea (Cunningham), We are Seven (Wordsworth), The Poet's Song (Tennyson), Incident of the French Camp (Browning), Abou Ben Adhem (Hunt), The Dog and the Water Lily (Cowper), The Soldier's Dream (Campbell), Yussouf (Lowell), The Parrot (Campbell), The Victim (Tennyson), Lullaby of an Infant Chief (Scott), Lord Ullin's Daughter (Campbell), Black-eyed Susan (Gay), The Well of St. Keyne (Southey), The Hair with Many Friends (Gay).

Poetical Selections. Ed. with Notes, etc. by C. J. SISSON, M.A., & A. DARBY, M.A.

Contains the following selections:—The Beggar Maid (Tennyson), Alice Fell (Wordsworth), The Inchcape Rock (Southey), Fidelity (Wordsworth), Rosabelle (Scott), The Wreck of the Hesperus (Longfellow), The Sands of Dee (Kingsley), The Slave's Dream (Longfellow), The Forsaken Merman (Arnold), The Charge of the Light Brigade (Tennyson), Ye Mariners of England (Campbell), The Tiger (Blake), To Lucasta, on going to the Wars (Lovelace), I Remember, I Remember (Hood), The Deserted Village (Goldsmith), The Daffodils (Wordsworth), To the Cuckoo (Wordsworth), Rose Aylmer (Landon), O Captain! My Captain! (Whitman), To Blossoms (Herrick), To Daffodils (Herrick), Evening (Cowper), Breathes there the Man with Soul so Dead (Scott), Home-Thoughts from the Sea (Browning), How Sleep the Brave (Collins), A Jacobite's Epitaph (Macaulay), Unmanifest Destiny (Hovey), The Noble Nature (Jonson), Character of a Happy Life (Wotton), Say not the Struggle Naught Availeth (Clough), A Vista (Symonds).

Poetical Selections. Edited with Notes, etc., by T. C. JONES, B.A.

Contains the following selections:—The Maid of Nendpath (Scott), The Loss of the Birkenhead (Doyle), The Scholar (Southey), To a Skylark (Wordsworth), The Charge of the Light Brigade (Tennyson), "O Captain! My Captain!" (Whitman), Columbus (Miller), The Daffodils (Wordsworth), "Say not the Struggle Naught Availeth" (Clough), "I Remember, I Remember" (Hood), The Red Thread of Honour (Doyle), The Last Man (Campbell).

Poetical Selections. Edited with Notes, etc., by J. C. SCRIMGEOUR, M.A.

Contains the following selections:—Before Hamlet (Shakespeare), Arthur and Hubert (Shakespeare), The Vicissitudes of Life (Shakespeare), Wolsey's Farewell to Cromwell (Shakespeare), The Trial Scene (Shakespeare), Flowers without Fruit (Newman), The Death Bed (Hood), Character of a Happy Life (Wotton), To a Skylark (Snelley), Yarrow Unvisited (Wordsworth), Ode on a Distant Prospect of Eton College (Gray), The Private of the Buffs (Doyle), The Eve of Waterloo (Byron), Petra (Burgon).

Poetical Selections. Edited with Notes, etc., by R. SCOTT, M.A., D.D., and W. H. SHARP, M.A.

Contains the following selections:—Incident of the French Camp (Browning), The Three Fishers (Kingsley), The Solitary Reaper (Wordsworth), The Traveller, ll. 317—348 (Goldsmith), Elegy written in a Country Churchyard (Gray), The Curse of Minerva, ll. 1—32 (Byron), "The World is too much with Us" (Wordsworth), Paradise Lost, Book IV, ll. 32—113 (Milton), Romeo and Juliet, Act II, Scene II (Shakespeare), Julius Caesar, Act III, Scene II (Shakespeare), King Henry VI, Part III, Act V, Scene V (Shakespeare).

COOPER, Publishers, BOMBAY.

The Educational Review.

We welcome the announcement that special efforts are to be made for providing educational facilities to the Indian sepoy even when he is actually serving in the Army. Provision was made sometime back for the establishment of educational facilities for European soldiers in India and it is now proposed to extend them to the Indian ranks also. An Indian Army Educational Corps, similar to the newly-formed Army Educational Corps of the British Service, is about to be established as recommended by the Esher Committee. The Corps will consist entirely of Indian officers and Non-Commissioned officers, who will comprise the specialist personnel to be attached to all units of the Indian Army. This personnel, will, as far as possible, be selected from the Indian Army and will be trained for its duties in an Indian Army School of Education similar to the School of Education recently established in England for training the educational personnel for the British Army. The numerous advantages of this scheme must be obvious to every body. The sepoy will have the benefits of education and when discharged from the army, he will come back to civil life with some intellectual enlightenment and breadth of sympathies and also probably with increased capacity for getting on in some walks of life. He should also prove a very much more useful citizen than would otherwise be the case.

Two resolutions of educational interest were placed before the Council of State and the Indian Legislative Assembly at recent meetings. They were well-intentioned and contained recommendations worthy of acceptance, though owing to certain unfortunate circumstances in each case, the resolutions could not be passed. The Hon'ble Mr. Bhurgri moved that steps be taken to introduce legislation in order to place the Universities of India on more democratic lines. There is the curious anomaly that the older Universities in India which by their long record of successful work are entitled to greater privileges than the newly-started ones, have conservative constitutions which are not popular in any effective sense. The only serious objection that was urged against the acceptance of the resolution was that education was a "transferred" subject, coming within the jurisdiction of the Provincial Councils, and it was no use the Council of State interfering in the matter. Provincial legislatures enjoyed the power of amending the constitutions of the Universities concerned, so as to bring them into line with the Universities of Aligarh and Benares. Another resolution of similar interest to education was the one moved by Sardar Gulab Singh in the Legislative Assembly, "that at least one Government Model High School for Indian girls with a suitable boarding-house be started in each province, that a definite portion of the education budget, say one-

fourth, be allotted and spent on the education of girls and that a special Imperial Grant-in-Aid be sanctioned for the object." Mr. Sharp, on behalf of Government, sympathised with the object of the mover, but was naturally not inclined to support such proposed interference with the discretion of Local Governments. We are not surprised the resolution was lost and the Secretary went to the extent of informing the Council that such latitude of discussing subjects which did not really come within the province of the Imperial Legislative Assembly will not be allowed in future. We wish that resolutions are brought before such Imperial bodies as the Council of State and the Legislative Assembly with greater care and reasonableness and consequential possibility of acceptance.

Our fears about the futility of appointing Indian Ministers and the "transferring" of education to them without a full control of the nation's purse and without added resources for the improvement of education, are already getting to be realised, from a survey of the budgets which are being introduced into the various Councils. The educational budget of the Province of Bengal is not exactly of the kind calculated to inspire the heart of the educationist with hope and delight. There is the magnificent additional sum of a single lakh of rupees provided for increased grants-in-aid to schools and colleges and only one lakh of rupees for increased grants towards the expansion of Elementary Education! As

the *Patrika* points out in the course of an able analysis of the budget, there is one lakh of rupees provided for elementary education in a vast Presidency where 90% of the population is illiterate. The figures are more interesting in relation to certain other items in the budget. While Primary Education is to have only a lakh of rupees, European Education in the Province is to have 1 lakh and 99 thousand rupees, or nearly double the sum. While a building grant of only one lakh of rupees is provided for all the Indian Educational institutions in the Province, a sum of Rs. 50,000 is to be paid to the handful of European schools. While only one lakh of rupees has been set apart for increased grants-in-aid to all the schools and colleges in Bengal, a sum of Rs. 80,000 has been assigned for one European institution alone, the St. Andrew's Colonial Home, Kalimpong! Is it any wonder that there is "Non-Cooperation" in the country and the friends of the British connection with India are finding it harder and harder to combat the growing bitterness of feeling spreading like wild-fire? Is it any consolation in these circumstances that an Indian Minister is in charge of the Department?

We congratulate the Aligarh Muslim University on the appointment of Her Highness Nawab Sultan Jehan Begum, G.C.S.I., of Bhopal, as the first Chancellor of the University. This is probably the first instance in the history of the Universities of the world, of a lady

being appointed the Chancellor of a University and we are glad that the honour belongs to the Muslim University of having paid such a high tribute to womanhood. Her Highness is eminently fit to be appointed to the high office, in view of her distinguished record of statesmanship in the past, since her succession to the *gaddi* of Bhopal in 1901 and her position in the Muslim world of India as the ruler of the second biggest Muslim State in the country. Her Highness has always taken the keenest interest in education and has been a generous supporter of the M. A. O. College as well as of the Muslim University ever since the inception of the scheme. We beg to offer our good wishes and congratulations to Her Highness and hope that her period of office will be productive of great good to the Muslim University, now beginning its work as a regular, full-blown University at Aligarh.

For the teacher who has eyes to see, there is wisdom to be gleaned from the most unsuspected quarters.

A novel is not exactly the place where one would expect the ideals of education defined and expounded with profundity of outlook. But here is a passage from the *Crime of Sylvestre Bonnard* by the well-known French novelist, Anatole France, which sums up the ideal of a good education for a girl: "It is only by amusing oneself that one can learn. The whole art of teaching is only the art of awakening the natural curiosity of young minds for the purpose of satisfy-

ing it afterwards; and curiosity itself can be vivid and wholesome only in proportion as the mind is contented and happy. Those acquirements crammed by force into the minds of children simply clog and stifle intelligence: In order that knowledge be properly digested, it must have been 'swallowed with a good appetite. I know Jeanne! If that child were entrusted to my care, I should make of her—not a learned woman, for, I would look to her future happiness only—but a child full of bright intelligence and full of life, in whom everything beautiful in art or nature would awaken some gentle responsive thrill. I would teach her to live in sympathy with all that is beautiful—country-landscapes, the ideal scenes of poetry and history, the emotional charm of noble music. I would make loveable to her everything I would wish her to love. Even her needle-work, I would make pleasurable to her, by a proper choice of the fabrics; the style of embroideries, the designs of lace. I would give her a beautiful dog and a pony, to teach her how to manage animals. I would give her birds to take care of, so that she could learn the value of even a drop of water and a crumb of bread. And in order that she should have a still higher pleasure, I would train her to find delight in exercising charity. And inasmuch as none of us may escape pain, I should teach her that Christian wisdom which elevates us above all suffering and gives a beauty even to grief itself. That is my idea of the right way to educate a young girl."

Thanks to the energy of H. E. Sir Harcourt Butler, the movement for University reform is being pushed forward rapidly in the United Provinces. The Senate of the Allahabad University has approved at its last sittings, of the proposals to re-organise the University, the effect of which will be to separate the Intermediate classes from the University and to establish a residential and teaching University at Allahabad, with provision for a separate section in charge of mofussil colleges. The Senate has approved of the draft legislation prepared for the constitution of a Board of Intermediate Education in the Provinces. The Intermediate Board of the United Provinces will thus be the first Board to come into existence in India in accordance with the recommendations of the Calcutta University Commission Report. The Intermediate Board will consist of:

(a) The Director of Public Instruction (*ex-officio* Chairman).

(b) The Principals of Intermediate Colleges, maintained by Government, appointed by the Minister.

(c) Four Principals of Intermediate Colleges, not maintained by Government, appointed by the Minister.

(d) Two Headmasters of High Schools, appointed by the Minister.

(e) A representative of Engineering, appointed by the Minister.

(f) A representative of Agriculture, appointed by the Minister.

(g) A member of the Medical profession, appointed by the United Provinces Council of Medical Education.

(h) A representative of Industries, appointed by the Minister.

(i) Representatives elected by Universities established by law in the United Provinces, whose number shall be as nearly as possible, one-third of the total number of the other members of the Board.

(j) Two members elected by the Non-official members of the Legislative Council.

(k) One member each appointed by the Cawnpore Chamber of Commerce and the United Provinces Indian Chamber of Commerce.

(l) The Secretary of the Board (*ex-officio*).

(m) Persons, not exceeding three in number, co-opted by the Board, on account of their possessing expert knowledge in subjects of study included in the courses prescribed by the Board.

It will be seen from the proposed draft that an attempt has been made to have adequate representation of most of the elements interested in Intermediate Education, but we are afraid the Board has been made somewhat unwieldy, especially when we contemplate the numerous executive powers which are intended to be entrusted to the Board. We hope that before the Bill is formally passed through the Legislative Council into law, the proposals will be so modified as to make the constitution more suited

to the actual *working* of the scheme. One of the weak points of the Calcutta University Commission Report is the clumsy and elaborate constitution which has been provided for the Intermediate Board, but we are afraid the weakness has been made worse in these proposals accepted by the Allahabad University.

Considerable business was got through at the last meeting of the Senate of the University of Madras. Mr.

Satyamurthi elicited valuable information about the working of the University in several branches by a series of interpellations. Attention was drawn once more to the bungling of the Tamil Lexicon Scheme and we are sorry the University has done nothing in the matter of remedying the discreditable state of affairs in connection with that venture. The original estimate for the whole concern was a lakh of rupees, but thanks to the large number of appointments and the provision of sinecure allowances to some, the Committee has reported that the modest sum of another 1,16,000 Rs. will be required to complete the work. And all this in spite of the preliminary warning of the Secretary of State that the "heavy" estimate of one lakh of rupees should in no case be exceeded. It was also announced at the meeting that the Lexicon will not be ready before 1927, though the original estimated time was only five years, and we presume the period has already passed. The Senate of the Madras University will probably

derive consolation in the thought that it is producing the Lexicon during a period less than that taken by the French Academy for producing a similar compilation! We will leave it to such or similar complacency, though we cannot help pitying its position of helplessness. We are glad that Mr. Satyamurthi drew attention to the need of increasing the salaries of the University staff. Justice demanded that the salary of the University Professor of Indian History should be made equal to that of the Professor of Economics and we confess that the addition of two increments to the former's salary is not a proper solution of the matter. While we do not object to the University's making arrangements for special lectures by Dr. Craigie of Oxford and Mr. Nicholls, we confess we cannot go into raptures over the proposals. While the University of Calcutta has done much for giving scope to Indian talent and getting lectures by a number of distinguished Indians, the University of Madras would always seem to have a sneaking fondness for the European, preferably of the cold-weather-tourist variety. We do not know when this state of affairs will end, though we are glad that the propositions did not at least pass unchallenged. The Senate could probably have passed the proposal about holding examinations twice a year, without the unnecessary delay of the appointment of a Committee. If the general principle had been accepted by the Senate, the details could have been worked out by the Syndicate. We

are glad that with regard to Intermediate Education, the Madras University has proceeded on the right principle of reforming the courses, without laying the flattering unction to its soul, as is happening elsewhere, that it would achieve something wonderful by merely separating the Intermediate and B. A. courses. We are not sorry that the University does not propose giving up its control over Intermediate Education. There is no reason why almost all the work contemplated under the Intermediate Board proposed by the Calcutta University Commission, cannot be done under the auspices of the University itself as has been pointed out in one of the special articles on the report by Prof. Seshadri which have appeared in this Review. We are glad the Senate approves of the idea of giving the option to the student at the present Matriculation stage of answering questions in non-language subjects in the vernacular, though from the experience gained in Bombay in recent years, it may probably be said that the option will not probably be availed of to any large extent. The Senate by a majority resolved upon abolishing the fifteen-year age-limit for the Matriculation and the decision seems to be in consonance with what is beginning to happen elsewhere in India, the Legislative Council of the United Provinces and the Senate of the Patna University having recently passed similar resolutions. Rao Bahadur Ramanathan's motion that no officer or servant of the University should accept nomination or election as

Fellow of the University was probably not well-advised, even if it had not been irregular, as it is often desirable to have those who have acquired experience in the service of the University available for help at the deliberations of the Senate. We are sorry that Mr. Satyamurthi's resolution about the undesirability of members of the Syndicate accepting any remuneration from the University except travelling and halting allowances was not accepted, but we hope the Syndicate will benefit by all that was said on the occasion and conduct itself in such a way as not even to occasion such proposals in the future. It is significant that such a proposal should have been made before the Senate. The past history of the registration of graduates shows that the reduction of the fee sanctioned at the last meeting will be an advantage.

We must express our agreement with most of the resolutions regarding the reconstruction of the University, though we feel that the University is showing unnecessary nervousness in the matter of having the Governor-General as Visitor. The recommendation about the Governor-General being the Visitor is one to which the members of the Calcutta University Commission "attach great importance," to quote their own words. Referring to the functions which should be exercised by the Government of India, the Commissioners write: "The first of these is the function of visitation. Hitherto there has been no attempt at a systematic and periodic survey of the work of the Indian Universities. We submit that the visitation

power over all Universities, which is in fact inherent in the government of all countries..... should be exercised by a regular visitation of the Universities at intervals of (say) five years. The Visiting Committee should include at least one distinguished scholar from overseas with experience of University methods and organisation in various countries; its other members should be men of Indian experience. They should take a comparative view of the work of the Universities and their report should include not only detailed criticisms but a broad survey and appreciation of good work wherever accomplished." The somewhat allied function of the co-ordination of the work of Universities will be facilitated by the Governor-General being the Visitor of all the Universities in India and we see no justification for the University of Madras being so anxious not to fall into line with such an excellent arrangement, unless it be that it is due to the unpopularity of the present incumbent of the office, Lord Chelmsford—not a satisfactory reason indeed to injure an excellent feature of University reform. To quote the Report again: "It might help to facilitate the interchange of students (within reasonable limits), and still more of teachers between the various Universities. It might, above all, help to avoid overlapping, and the waste which is apt to result from it, by encouraging Universities, while making adequate provision for the general education which it is the duty of all to afford, to specialise

in various kinds of work; and by making it easy for students to resort to those Universities in which the kind of work they need was specially cultivated."

We are particularly pleased with the recommendation that there should be a Department of Education in the University and also with the numerous recommendations tending to give a more prominent place to the vernaculars and oriental studies in the University. We have a feeling that the University can be popularised by widening the constitution of the Senate, without resorting to the creation of new bodies like Courts and Councils, but it does not seem to be any use resisting the distinct trend of movement in that direction everywhere. After the October meeting at which some more matters relating to the reconstruction of the University will be considered, we propose surveying as a whole the altered circumstances of the University.

With Ministers chosen on the sole qualification of not belonging to a certain caste and a Council indulging in petty squabbles, viewing even such questions as the separation of the Executive and Judicial functions or extending the franchise of electing Presidents to District Boards from the standpoint of caste, one does not expect much enlightenment and progress in matters of education from the present Legislative Council of the Madras Presidency. A study of the proceedings of recent sessions confirms this impression. While there was feverish anxiety for

ministerial salaries to be on the same level as those of Executive Councillors and even more feeling for creating comfortable berths for the benefit of the henchmen and the camp-followers of the Ministers, one looked in vain for the impetus to educational matters which was looked forward to, by the "transfer" of the subject to popular hands. In fact, the subject of education was not very much in evidence at all, not even to the extent to which it was even under the so-called bureaucratic councils of old. Mr. Sivasankaram Pillai's resolution asking for increased salaries to elementary school teachers had to be withdrawn. One of the accepted resolutions was the one moved by a Muhammadan member: "That this Council recommends to the Government to take early steps for enabling Muhammadan and backward class pupils and students to study in all private aided institutions (including technical schools) other than elementary schools on half fees as is the case in all Government institutions, the Government undertaking to make good the loss which the management would sustain on account of this concession." Two excellent resolutions of Rao Bahadur K. S. Venkatarama Iyer had to be withdrawn. One was a request for an Agricultural School at Tanjore, a centre eminently suited to the purpose, and the other for the opening of Industrial Schools at certain centres. The Ministers and the party in power did not welcome them for reasons best known to themselves.

We congratulate Rao Bahadur T. Vijiaraaghava ch a r y a, the Dewan of Cochin, on the attention he is bestowing on the subject of education. About 70% of children of the school-going age are already under instruction in the State and the percentage of literacy there is higher than in the most advanced parts of British India, but it is satisfactory to note the State does not propose resting on its oars and is anxious to advance even to a higher stage. An Education Committee has just made certain recommendations which in the main, seem to be very sound. It is proposed that the quality of elementary education should be improved in various ways, by the introduction of moral education, increased attention to games, periodical medical inspection of children, and the adjustment of the curriculum as far as possible, to the special needs of each locality. The expansion of the educational system is to be in the direction of making elementary education free throughout the State, but not compulsory as yet. But the most interesting aspect of the Committee's report is the recommendation relating to the means for executing the programme. The remedy suggested is not additional taxation—advocated somewhat over-readily in British India—but retrenchment, retrenchment through standardised buildings, with economic materials and also in other directions. The Dewan carries our best wishes with him in his attempts at improving the condition of educational

affairs even in a State in which it is already highly advanced.

Many wrong notions prevail in this country about the license supposed to be enjoyed by students in English schools and colleges in the matter of discipline and interference with politics. Strikes have been an unfortunate feature of school-life in India during the last few months owing to the Non-co-operation movement, but it is desirable that every effort should be made to prevent the student from getting into the notion that he has the right to attend school or stay away from it as he likes, without the consent of his parents or guardians. Sir John Hewett, visiting the old scenes of his labour in the

United Provinces the other day, took occasion to speak to the students of a High School in Benares on the subject: "To one who like myself," he said, "was educated at a public school in England, the idea of school-boys absenting themselves from attendance at their school at their own will, and without the authority of their parents is abhorrent. Any one who took such a step at a public school in England would find himself promptly expelled with the full approval of his parents, his fellow-students and the public." This is a fact which must be impressed on our students as often as possible, especially in view of the increasing readiness to-day on their part to take up such matters entirely into their own hands.

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An Incorporated Accountant of London, and late Principal of the Byramjee Jeejeebhoy
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EDITED WITH INTRODUCTION AND NOTES

BY

E. H. ELLIOT, B.A.
late of the Presidency College, Madras.

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**CONTEMPORARY ENGLISH
POETRY.***

BY

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I.

IN a well-known passage of the *Biographia Literaria*, Coleridge writes: "The great works of past ages seem to a young man, things of another race in respect of which his faculties must remain passive and submissive, even as to the stars and mountains. But the writings of a contemporary, perhaps not many years older than himself, surrounded by the same circumstances and disciplined by the same manners, possess a reality for him and inspire an actual friendship as of a man for a man. His very admiration is the wind which feeds and fans his hope. The poems themselves assume the properties of flesh and blood. To recite, to extol, to contend for them is but the

payment of a debt due to one who exists to receive it."† But these do not exhaust the considerations, which invest contemporary poetry with special interest to the student of literature. It is obvious that if his knowledge and appreciation of a literature are to be adequate and comprehensive, he must get into touch with its latest developments and enter into an energetic realisation of the best of contemporary writers. His intimate and living knowledge of the environment in which their work is produced adds considerably to his capacity for sympathetic understanding and the confidence born of its qualities of excellence is also an inspiration for the future.

Facilities for such an appreciation of contemporary poetry have unfortunately not existed in our Universities, and judged by the syllabuses and curricula of studies even in the advanced courses, it would appear, they proceeded on the assumption, as Sir Quiller

* A contribution to the Sir Ashutosh Mukherjee Silver Jubilee Volumes of the Calcutta University.

† *Biographia Literaria*: Chapter I.

Couch puts it, * "that English literature took to its bed and expired and was beatified," on a certain date, for instance, with the death of Tennyson and Browning. It is often taken for granted, without even the faintest acquaintance with recent and contemporary poetry, that the Muse has been silent in English or that her utterances, if any, are devoid of the true inspiration of song. Where this wrong belief is not due to actual ignorance, it is probably due to the widespread and perennial failing of man to be a blind *laudator temporis acti*.† The best refutation of this pessimistic and essentially incorrect outlook is in a lively appreciation of the achievements of English poetry in our own times. They lend support to Matthew Arnold's fervent hope expressed years ago: "In poetry, where it is worthy of its high destinies, our race as time goes on, will find an ever surer and surer stay."‡

Before proceeding further, it may be pointed out that an examination of the work of contemporary poets would naturally fall under two heads; it would, in the first place, embrace the work of an older generation of writers who are still happily with us, but whose work has practically finished, and, secondly it would deal with poets of a younger generation who are our *contemporaries* in the real sense. The limitations imposed by the title would at the same time exclude poets who have died in recent years, like Swinburne and Meredith, or Francis Thompson and Stephen Phillips and even Rupert Brooke who closed only the other day his intensely hopeful career of less than

thirty years, amidst the din of the recent war.

Prominent among the surviving Victorian veterans and belonging to the older generation of writers is Thomas Hardy who has practically closed his work as a writer of fiction and has now been busy producing volumes of poetry, though some of the pieces can be traced to much earlier dates of composition. Referring to the position occupied by Browning and Tennyson in the nineteenth century in the world of poetry in England, the late Rev. Stopford Brooke wrote: "Parnassus, Apollo's mount, has two peaks and on these for sixty years, from 1830 to 1890, two poets sat till their rights to these lofty peaks became unchallenged. Beneath them during these years, on the lower knolls of the mount of song, many new poets sang; with diverse instruments, on various subjects and in manifold ways. They had their listeners; the Muses were also their visitants but none of them ventured seriously to dispute the royal summits where Browning and Tennyson sat, and smiled at one another across the vales between."§ The position of Thomas Hardy in the world of contemporary poetry is not one of similar unchallenged supremacy, but his seat is undoubtedly on one of the loftier peaks and there are not many who can approach him either in profundity of philosophic outlook or in depth of tragic emotion. The Napoleonic drama of the *Dynasts*, with its epic proportions and strange innovations of dramatic form and spirit, may have some difficulty in finding its way into general appreciation, but his *Wessex Poems*, *Poems of the Past and Present*, *Time's Laughing Stocks*, *Satires of*

§ Rev. Stopford Brooke: *Browning*, Chapter I.

† Sir Arthur Quiller Couch: *Studies in Literature*.

‡ Horace: *Ars Poetica*.

§ *Essays in Criticism*: Second Series.

Circumstance and *Moments of Vision*, which have all appeared within the last twenty years, have won a permanent and abiding place in literature. It would be a serious mistake to imagine that the excellence of Thomas Hardy's poetry consists only in the tragic intensity of its spirit, it deserves no less appreciation for its vigour of poetic diction, vividness of feeling and refinement of lyric workmanship.

There will, however, always be a section of people who will confess to a feeling of disappointment with Hardy's poetry—even as with his novels,—on account of its depressing and pessimistic outlook on life. It is probably no adequate answer to maintain that, as Byron said of Crabbe he is "Nature's sternest painter yet the best,"* and the representation is true to life, with its sordid elements of vice and sorrow. Even if the latter assumption were true, it would furnish little excuse for a continual indulgence in the deepest spirit of pessimism, especially for embodiment in art. May we not appeal to the singer inclined in that direction, in the words of another distinguished living English poet:

Since life is rough,
Sing smoothly, O bard! †

But the lyrics are full of the elements of Aristotelian "pity and terror" and are calculated to chasten the spirit like some of the sublimest productions of tragedy.

The peculiar nature of the poetic work of our present Poet-Laureate, Robert Bridges, will always prevent him from carrying popular enthusiasm with him, for he only aims at finding "fit audience though few." ‡

* *English Bards and Scotch Reviewers*.

† Sir William Watson.

‡ *Paradise Lost*: Bk. VII, 81.

With close classical affinities on one side carrying the mind back to the literatures of Greece and Rome and a high and scrupulous sense of poetic purity on the other imposing a certain restraint on emotion, he gladdens the heart of the scholar and the serious student more than that of the man in the street. A generous meed of praise has, however, to be offered for the various distinguishing qualities of his poetic work, the felicities of verbal ordering, the beautiful descriptions of landscape and the essentially wholesome and vital atmosphere of his song. He has scattered with prodigal hand over all his works, sketches of many a purple patch on the broad bosom of Nature, and as he has also sung of them in language of clear and haunting melody, his position is as secure in the world of poetry as that of some of the most distinguished occupants of his office in the past. § He knows, "There is a hill beside the silver Thames," but he knows of numerous other charmed spots too, and he is ungrudging as well as alluring, in his invitations to people to share in their enjoyment:

There is a hill beside the silver Thames,
Shady with birch and beech and odorous pine:
And brilliant underfoot with thousand gems
Steeply the thickets to his floods decline.

Straight trees in every place
Their thick tops interlace,
And pendant branches trail their foliage fine
Upon his watery face;
Swift from the swelling pasturage he flows;
His stream, alert to seek the pleasant shade,
Pictures his gentle purpose, as he goes
Straight to the caverned pool his toil has made,
His winter floods lay bare
The stout roots in the air;
His summer streams are cool, when they have
Among their fibrous hair,
A rushy island guards the sacred bower
And hides it from the meadow, where in peace

[played

§ They would be, by common consent, Dryden, Wordsworth and Tennyson.

The lazy cows wrench many a scented flower,
Robbing the golden market of the bees
And laden barges float
By banks of myosote;
And scented flag and golden fleur-de-lis
Delay the loitering boat.

His landscapes are always touched with living human associations, for to this very stream,

Sometimes an angler comes, and drops his hook
Within its hidden depths, and 'gainst a tree
Leaving his rod, reads in some pleasant book
Forgetting soon his pride of fishery;
And dreams or falls asleep.
While curious fishes peep
About his nibbled bait, or scornfully
Dart off and rise and leap.

The concluding touch of an interest in the life of the animal world is another indication of the poet's wide sympathies.

In the course of an inspiring essay on *The Poet's Place in the Scheme of Life*, Sir William Watson defines the function of the poet to be, "to see the world through a kind of ecstasy; to heighten and emphasise its lineaments, though without distorting them; to see vividly, to paint nobly and to feel romantically, whatever in this universe is to be seen and felt and painted."* He is the next poet deserving of consideration and it may be said at the outset that he has lived up admirably in his work to his own high ideal. It is no ordinary compliment to a poet to say that he has realised with great success and in a very effective manner, all these noble aims and Sir William's work continues to be distinguished by loftiness of purpose and sound inspiration. At a time when the dignity of poetic composition is seriously threatened by over-zealous ideas of freedom from convention and poetry would like to revel in aspects of life which had better not be over-emphasized

in art, it is delightful to be entertained by one who is a great believer in the best masters of song and whose constant endeavour is to see that "the ancient ancestral lineaments re-appear"* in his work and "the noble tradition in which he was nurtured is being nobly perpetuated."† He is not one of those who dislike and resent sound and solid workmanship; who think it one of the signs of genius to be careless of finish and scornful of technique; who fail to comprehend that real inspiration can work hand in hand with careful craftsmanship, not extinguished or hampered by it, but informing and ennobling what would otherwise be scarcely better than dull, mechanic toil. He will fashion his verse with the minutest care and the most scrupulous sense of self-criticism, in the wake of the great traditions of singers like Virgil and Tennyson, that he may have in the end, the very legitimate and proud satisfaction of declaring to the world:

I too, with constant heart,
And with no light or careless ministry
Have served what seemed the Voice; and unprophane
Have dedicated to melodious ends
All of myself that least ignoble was.
For though of faulty and of erring work
I have not suffered aught in me of frail
To blur my song; I have not paid the world
The evil and the insolent courtesy
Of offering it my baseness for a gift.‡

In any case, it is hardly possible to expect anything more of an individual.

Considerations of space prevent detailed reference to the numerous aspects of excellence in his work, the beauty of epigrammatic expression, the delicacy and refinement of poetic feeling, the spotless purity of vocabulary and the general atmosphere of finished workmanship. Special reference must how-

ever, be made to the somewhat novel feature found in his work—for the first time on any effective scale in English poetry—of the poetic treatment of poets themselves, of the vivid description of their work in verse. Sir William Watson has no hesitation in saying that poets and their works are among the most beautiful objects of the world and he has therefore sung of them with great affection and enthusiasm:

I have full oft
In singers' selves found me a theme of song,
Holding these also to be very part
Of Nature's greatness, and accounting not
Their descants least heroic of deeds.*

The capacity to render into verse the facts of literary criticism is seen not only in such occasional expressions as the "frugal note of Gray," "the lonely vesper-chime" of Collins, but also in longer passages occurring mainly in the course of his admirable elegiac poems on Burns, Wordsworth, Tennyson and Matthew Arnold† and in poems like *Shelley's Centenary*. Here is a vivid characterisation of the poetry of the Age of Pope, more informing and calculated to make a more lively impression on the mind of the student, than all the sombre passages of prose found in the numerous histories of English literature, written by professional experts:

Song from celestial heights had wandered down,
Put off her robe of sunlight, dew and flame,
And donned a modish dress to charm the town.
Thenceforth she but festooned the porch of things;
Apt at life's lore, incurious what life meant,
Dexterous of hand, she struck her lute's few strings
Ignobly perfect, barrenly content,
Unflushed with ardour, and unblanched with awe,
Her lips in profitless derision curled,
She saw with dull emotion—if she saw—

* Sir William Watson; "Apologia."

† "The Tomb of Burns," "Wordsworth's Grave,"
"Lachrymæ Musarum," "In Laleham Churchyard."

The vision of the glory of the world,
The human masque she watched, with dreamless eyes
In whose clear shallows lurked no trembling shade;
The stars unkennd by her might set and rise,
Unmarked by her the daisies bloom and fade.
The age grew sated with her sterile wit,
Herself waxed weary on her loveless throne,
Men felt life's tide, the sweep and surge of it,
And craved a living voice, a natural tone.‡

The poet's characterisation of the part played by those who heralded the Romantic Movement, each in his own small measure, even before the appearance of Wordsworth and Coleridge, is not less vivid, in spite of the increased complication of literary ideas involved in the sketch:

In sad stern verse, the rugged scholar-sage
Bemoaned his toil unvalued, youth uncheered,
His numbers wore the vesture of the age,
But, 'neath it beating, the great heart was heard.

From dewy pastures, uplands sweet with thyme,
A virgin breeze freshened the jaded day.
It wafted Collins' lonely vesper-chime,
It breathed abroad the frugal note of Gray.

It fluttered here and there, nor swept in vain
The dusty haunts where futile echoes dwell,—
Then in a cadence, soft as summer rain,
And sad from Auburn voiceless, drooped and fell,

It drooped and fell, and one 'neath northern skies,
With southern heart, who tilled his father's field
Found poesy a-dying, bade her rise
And touch quick Nature's hem and go forth healed!

On life's broad plain, the ploughman's conquering
Upturned the fallow lands of truth anew, [share
And o'er the formal garden's trim parterre
The peasant's team a ruthless furrow drew.

Bright was his going forth, but clouds ere long
Whelmed him, in gloom his radiance set, and those
Twin morning stars of the century's song
Those morning stars that sang together rose,

In elvish speech the *Dreamer* told his tale
Of marvellous oceans swept by fateful wings—
The *Seer* strayed not from earth's human pale,
But the mysterious face of human things

He mirrored as the moon in Rydal Mere
Is mirrored, when the breathless night hangs low

‡ "Wordsworth's Grave."

* "The Muse in Exile."

† Ibid. † Ibid. ‡ Sir William Watson: "Apologia."

Strangely remote she seems; and wondrous near,
And by some nameless difference born anew.*

The shrill and boisterous imperialism of Rudyard Kipling has raised such a wall of adverse prejudice against him in India, that it seems almost a hopeless task to secure any recognition of his real poetic qualities, at least in this country. But even the most hypercritical judge of his poetic work, must pay a tribute of praise to his astonishing poetic energy, freedom of movement, vividness of description, sense of humour, though with occasional lapses into violence, and imaginative power ranging from scene to scene with meteoric speed and brilliance. Nor is he entirely bereft of the more delicate touches of lyric song, though he is essentially a poet of action and movement in their more energetic aspects.

When allowance is made for the fact that Kipling is a satirist and his verse must sometimes necessarily offend the susceptibilities of his readers,—he has not spared his own countrymen in India—it should be possible for the Indian student to look upon his work with less than the usual prejudice. It is necessary to draw attention to the fact that there are numerous poems in his work in which he has expressed his warm and intimate sympathy with aspects of Indian life and civilisation. This element may appear somewhat inconsistent with his unqualified approval of the Englishman's work in India, but it exists in him, as one can see from his successful attempts at dealing with the emotional workings of the Indian mind, or describing with enthusiasm, the Indian background of his poems. There is truth in Chesterton's

* "Wordsworth's Grave." The poets referred to are recognised easily as Dr. Johnson, Collins, Goldsmith, Burns, Coleridge and Wordsworth.

paradoxical remark that "he has an Indian element which makes him exquisitely sympathetic with the Indian; a vague Jingo influence which makes him sympathetic with the man that crushes the Indian; a vague journalistic sympathy with the man that misrepresents everything that has happened to the Indian."†

Rudyard Kipling was born in India and it is due to the poet to remember the real affection for the land of his birth which he has expressed on more than one occasion, in verse as well as in prose.

In his dedicatory lines to his *Seven Seas*, he is proud of claiming Bombay as his mother:

Surely in toil or fray
Under an alien sky,
Comfort it is to say
Of no mean city am I,
Neither by service nor fee
Come I to mine estate,—
Mother of cities to me,
For I was born in her gate
Between the palms and the sea
Where the world-end steamers wait.

The injustice has also been done to him of representing him as a prophet of disunion, anxious to emphasise the differences of the two races which have met in India. His oft-quoted couplet, "East is East and West is West and never the twain shall meet" occurs, as is unfortunately not generally known, in a passage intended to emphasise the common nature of humanity, for the next lines run:

But there is neither East nor West,
Border nor breed, nor birth,
When two strong men stand face to face,
Though they come from the ends of the earth.‡

With Edmund Gosse, we pass on to a poet of an entirely different kind, a scholar of perfect literary taste, keen delicacy of

† "The Victorian Age in Literature."
‡ "Barrack Room Ballads."

refinement and consummate mastery of versification. In the course of a highly complimentary address which was presented to him about this time last year, on the occasion of his seventieth birthday, by a number of distinguished men of letters among his contemporaries, it was rightly observed that he made the dim and dusty passages of the Board of Trade, where he served for nearly thirty years, the amazing "haunt of singing birds" and his poems *On Viol and Flute* and *Firdausi in Exile*, and other Poems produced during this period have taken an abiding place in English literature. The reputation of Mr. Edmund Gosse as a poet has been somewhat overshadowed by his splendid work as a critic and prose-writer, but justice demands that the fine and faultless lyric pieces of these volumes should receive adequate recognition. It should gladden every sincere lover of poetry to follow him in his poetic excursions: to bask in sunshine on the grassy slopes, watching the mowers sweeping their brawny arms in harmony, the lovers meeting in the dark green beech-wood behind, their very broken words a prayer, and the rosy children coming to romp and play with the new-mown grass; * take flight with him and behold,

Far away, by the sea in the south,
The hills of olive and slopes of fern
Whiten and glow in the sun's long drouth,
Under the heavens that beam and burn;
And all the swallows were gathered there
Flitting about in the fragrant air,
And heard no sound from the larks, but flew
Flashing under the blinding blue;†

stand by the grave of the Maenad, where poplars wave their sad gray foliage all day long and the river murmurs near her grave a soothing song; ‡ be suddenly transported

* "Lying in the Grass." † The Return of the Swallows.
‡ "The Maenad's Grave."

to some distant icebound land in the North, where the reindeer champs the ghostly moss and over the sparkling peak that crowns the dim ravine, the sky is violet-blue; * and even dare accompany the sailors of Devon in the wonderful adventures of the *Rover* on the high seas.‡

Before passing on to a consideration of the poets who belong to a comparatively younger generation, or who have come into prominence in more recent years, it may be convenient to make a brief reference to the Irish School of English Poets, worthily headed by Mr. W.B. Yeats, though it must be confessed at the outset, that he is destined to leave a more lasting impression on the world of drama than on that of song. It would be the language of unpardonable exaggeration to speak of him, as one of his American admirers has done "as the greatest poet in the English language that Ireland has ever produced", ‡ a remark which cannot be made with any knowledge and recollection of the work of Moore "the sweetest lyrist of her saddest wrong" ** who dedicated all the chords of his national harp to "light, freedom and song."†† But Mr. Yeats is the embodiment of the spirit of pure poetry, a denizen of elfinland and a singer of mystic vision whose passionate worship of the muses knows no distraction. It is probably enough to say of his poetry that there are few more peaceful havens in contemporary literature, offering refuge to readers from the feverish excitement of modern civilisation. There will be wide yearning for the poet's ideal:

* Sunshine before Sunrise.

† "The Cruise of the Rover."

‡ W. L. Phelps: "The Advance of English Poetry in the Twentieth Century."

** Adonais. †† Moore: "Dear Harp of My Country."

I will arise and go now, and go to Innisfree,
 And a small cabin build there, of clay and wattles
 made;
 Nine bean rows will I have there, a hive for the honey-
 bee,
 And live alone in the bee-land glade,
 And I shall have some peace there, for peace comes
 dropping slow,
 Dropping from the veils of the morning, to where the
 cricket sings;
 There midnight's all a glimmer, and noon a purple
 glow,
 And evening full of the linnet's wings,
 I will arise and go now, for always night and day,
 I hear lake water lapping with low sounds by the shore;
 While I stand on the roadway or on the pavements
 gray.

I hear it in the deep heart's core.*

He will always be of special interest to
 Indians as it was his discriminating and
 enthusiastic praise of the *Gitanjali*, ushered
 into the English language with his introduc-
 tion, that began Rabindranath Tagore's
 recognition in the West.

A fuller treatment of the subject of
 contemporary poetry would include an
 account of the work of A. E. (George Russell),
 not only because of the intrinsic merit of his
 own work, but also on account of the profound
 influence he has exercised on the other
 followers of the Irish School of contemporary
 English verse.

The difficulties of estimating contemporary
 poetry are complicated in the case of the
 younger poets, by the circumstance that they
 are bewilderingly numerous and their work
 is in no case even fairly complete and the
 time is not yet for a comprehensive examina-
 tion. But it is gratifying to note that in
 several instances, they have already challenged
 the supremacy of the older generation and
 have begun to take honoured places in the
 world of English song and reference may be
 made to at least a few typical examples.

* *The Lake Isle of Innisfree*.

John Masefield is easily the most popular
 of contemporary English poets among the
 younger generation and the great vogue of
 his brilliant tales in verse, *The Everlasting
 Mercy*, *The Widow of the Bye-Street*, *Dauber*
 and *Daffodil Fields* is recalling the halcyon
 days of Byron's popularity, though it is not
 necessarily in itself an index of high poetic
 excellence. In the case of no other contem-
 porary poet is the impress of autobiographical
 vicissitudes so deeply marked as in that of
 Masefield. He has passed through strange
 experiences, tramped his way across countries,
 lived by manual labour of various kinds,
 served as a waiter in American hotels, and
 been on the sea as a cabin-boy and sailor and
 it is surprising that his capacity for poetry
 should have survived all those phases of
 life—it is in itself a tribute to the reality of
 his poetic inspiration. The whole story may
 be read in his own words in the stirring lines
 of his *Biography* and every reader of his
 poetry will recognise this strenuous back-
 ground of toil and suffering to all his work.
 He is no poet for the drawing-room, enter-
 taining some fair listener with stories of
 knights and fairies and long-spun romances
 of love, but one who sings of the grim
 tragedies of life, of domestic happiness
 marred by vice, of legitimate ambitions
 frustrated by the perversities of fate, of
 boisterous passions awakened by strange
 happenings and of terrible conflicts of mind
 and soul. It is probably some index of the
 trend of modern literary taste that tales of
 this kind should command such wide audience
 and the discerning student will probably
 notice a similar phenomenon in other
 branches of literature and art. This is the
 necessary reaction from the easy and graceful

sentimentality of some of the productions of
 Victorian verse, a correction of the decadence
 in taste characterised by Lord Morley in the
 words: "The truth is, we have for long been
 so debilitated by pastorals, by graceful pre-
 sentations of the Arthurian legend for
 drawing-rooms, by idyll not robust and
 Theocritean, by verse directly didactic, that a
 rude blast of air from the outside welter of
 human realities is apt to give a shock; that
 might well show in what Simpleton's paradise
 we have been living. The ethics of the
 rectory parlour set to music, the respectable
 aspirations of the sentimental curate married
 to exquisite verse, the everlasting glorifica-
 tion of domestic sentiment in blameless
 princes and others, as if that were the poet's
 single province and the divinely appointed
 end of all art, as if domestic sentiment
 included and summed up the whole throng of
 passions, emotions, strife and desire; all this
 might seem to be making valetudinarians of
 us all. Our public is beginning to measure
 the right and possible in art by the superficial
 probabilities of life and manners within a ten
 mile radius of Charing Cross."

Besides vividness of poetic description and
 intense vigour of diction the most distin-
 guishing quality of John Masefield is prob-
 ably his wonderful capacity for rapid
 narrative which has suggested com-
 parisons with Chaucer, though the parallel
 should not be pushed too far and must not of
 course be understood as implying equality
 of powers. Masefield cannot lay claim to the
 broad humanity, the soul-refreshing buoyancy
 of humour and wonderful variety of theme of
 the illustrious Father of English Poetry, but
 he is undoubtedly of the same descent as
 William Morris and other followers of Chau-

cer in the art of narrative song. He could
 exclaim with Morris:

Would that I
 Had but some portion of that mastery
 That from the rose-hung lanes of woody Kent
 Through these five hundred years such songs have sent
 To us, who meshed within the smoky net
 Of unrejoicing labour, love them yet:
 And thou, O Master!—Yea my master still,
 Whatever feet have scaled Parnassus' hill,*

That Masefield has "some portion of that
 mastery" of Chaucer will be evident from
 any random examination of the tales in verse.
 He plunges into the narration with all the
 directness and self-confidence of Chaucer:

Down Bye-Street, in a little Shropshire town,
 There lived a widow with her only son:
 She had no wealth nor title to renown,
 Nor any joyous hours, never one,
 She rose from ragged mattresses before the Sun
 And stitched all day until her eyes were red,
 And had to stitch, because her man was dead.†

There are numerous other aspects of
 excellence which must be left to the enjoy-
 ment of the prospective reader and cannot be
 illustrated here by reference or example.

It is however necessary to enter an empha-
 tic protest against two features of Masefield's
 work which if allowed to develop into wide-
 spread literary tendencies will bode no good
 to the future of English or of any other
 poetry. One is his intense gloom of outlook
 having an eye only for the seamy side of life
 almost unrelieved by aspects of happiness.
 The representation of the realities of life is
 proper enough ambition for the poet or
 dramatist, but life is not all darkness and to
 those who have eyes to see, "the poetry of
 earth is never dead"‡ even in realms other
 than mere beauties of Nature, in the very
 lives of the human soul around us. Another

* *Life and Death of Jason*, Book XVII, lines 5-12.

† *The Widow in the Bye-Street*.

‡ Keats: *The Poetry of Earth is Never Dead*.

is the extreme unconventionality of poetic diction, running riot to license in places, or lapsing into the mere trivialities of prose. He outdoes even Walt Whitman, in spite of his careful adherence to the principles of metre, and if serious poetry can deteriorate into verse such as this :

Come, Ma'am, a cup of tea would do you good;
There's nothing like a nice, hot cup of tea
After the crowd and all the time you've stood : *

It is time to cry "halt!" and call upon people to go back to the masters of the past, in spite of any risks that may be involved in the way of propitiating the conventional too much in poetry.

Sir Henry Newbolt is another poet whose work makes a wide appeal all over the Empire by his fine sense of patriotism and his energetic rendering of heroic episodes in British history. It is difficult to say if occasionally there are not lapses into moods which are dangerously near national insolence, but he celebrates the great events of history with an eloquence and energetic realisation of vivid detail, which more than compensate for such failings. We can still hear in his verse the drum of Drake sounding in the Channel, or join in his greeting to *Admirals All*

Admirals all, for England's sake.
Honour be yours and fame!
And honour as long as waves shall break,
To Nelson's peerless name!

Sir Henry Newbolt has exhibited a strong Indian interest in his poems and there are several of them dealing with themes relating to this country, furnishing a vivid verse-comment on some events which have made a difference to the course of Indian history: *Gillespie, Seringapatam, the Ballad of John*

* *The Widow in the Bye-Street.*

Nicholson and the Guides at Kabul. The Indian interest continues to be sustained in his work as in the fine *Ballad of Sir Pratab Singh*, he wrote the other day, on the kinship of all the bold soldiers of the earth, whatever their caste or creed :

Wide as the world; free as the air,
Pure as the pool of death—
The caste of all earth's noble hearts
Is the right soldier's faith.†

It is however when we come to the work of Alfred Noyes that we are filled with the greatest confidence with regard to the work of the younger generation of poets. Mr. Noyes is just completing his fortieth year, but he has already to his credit a considerable volume of verse of great merit and of even greater promise, and English readers are not likely to let die the numerous lyrics and narrative poems with which he has enriched the language. The poet is toiling away as a Professor of English at one of the American Universities, but his kinship is really with the Elizabethans of the past and he has in him noble longings for which the only parallel is probably in the lives of some of the early singers. His verse is enriched with the spirit of adventure and awakened to the noble enthusiasm of high endeavour; but it is at the same time deeply rooted in the primary emotions of man and he is also conversant in his imagination with numerous worlds of imperishable beauty. He will continue to live in the fairy world of his boyhood, in spite of the busy environments of modern life :

I am weary of disbelieving: why should I wound my love
To pleasure a sophist's pride in a graven image of truth?
I will go back to my home, with the clouds and the stars above

† *The Soldier's Faith.*

And the Heaven I used to know, and the God of
my buried youth.
Books? I have read the books, the books that we
write ourselves
Extolling our love of an abstract truth and our
pride of debate:
I will go back to the love of the cotter who sings as
he delves,
To the childish infinite love and the God above
fact and date.*

If the element of the pure imaginative poet has found beautiful expression in *the Loom of Years, the Flower of Old Japan, the Forest of Wild Thyme, the Enchanted Island* and so on, the sturdy patriotism of the poet and his glowing enthusiasm for the achievements of the Anglo-Saxon race to which he is proud to belong, are embodied in the epic poem of *Drake*. It was the deep conviction of the historian Froude, that the great naval heroes of the Elizabethan period deserved commemoration in epic song, and it is interesting to see that it has been done by Alfred Noyes at least with regard to the greatest of them, Francis Drake. The epic is marred in places by diffusion of treatment and the narrative has not the fire and energy associated with epics of the Homeric type, but it will probably not be grudged in the long run a place of permanent interest in English literature.

Mr. Noyes has, in addition, deep scholarship and fine culture and his *Tales of the Mermaid Tavern* bring back the "spacious times" of Elizabeth before us and we are inspired by the presence, in flesh and blood, of the great writers at the altar of whose song the student of literature has learnt to worship from his early youth. We have again the wonderful old pageant before us of wit and song and love, presented with great elaborateness of detail :

Souls of poets dead and gone,
What elysium have ye known,

* *The Old Scapto.*

Happy field or mossy cavern,
Choicer than the Mermaid Tavern †

And here is the Elysium, still in existence for us and welcoming us to share in its revelries. There is also a strong classical element which illumines his work with pleasant reminiscence of all that is bright in the literature of Greece and Rome.

For obvious reasons, a study of this kind cannot be comprehensive and attention is not drawn here to the work of a number of other living poets: Mr. Laurence Binyon whose verse has keen susceptibility to all that is beautiful in life and in nature; Mr. A. C. Benson whose workmanship is equally chaste and finished in poetry as well as in prose; Mr. Walter de la Mare whose poems are an eloquent commentary on the poetry and romance of childhood and a number of others whose work is represented by typical examples, fortunately for the student of poetry, in the series of volumes of *Georgian Poetry* issued under the auspices of the Poetry Book Shop. ‡ Lascelles Abercrombie, W. H. Davies, Wilfred W. Gibson, D. H. Lawrence, J. C. Squire and Rose Macaulay are names which cannot be ignored in any sympathetic appreciation of contemporary poetry. Nothing is more gratifying to the student of literature than the almost exuberant outburst of song in England to-day. Far from interfering with the progress of poetry, as was feared, the war has intensified the love of poetry all round, a phenomenon which was perceived by discerning eyes even during the progress of the struggle. The immediate presence of the great problems of life and death and the mighty questions of right and wrong involved in the war, opened the lips of those gifted

† Keats: *The Mermaid Tavern.*

‡ 1911-12; 1913-15; 1916-17; 1918-19.

with poetic utterance, while even the ordinary soldier in the trenches exhibited striking appreciation of the imperishable elements of true literature. From the sorrow and excitement of the war, people turned once again to the eternal consolations of song. The tendencies towards increased interest in poetry, visible immediately before the war, have strengthened and there is much that is hopeful in the productions of even the youngest generation of contemporary poets. No fuller treatment is possible here, but it is hoped that the achievement of the present, with its consequent promise of the future has been amply demonstrated. Is further inducement needed for entry into the world of contemporary poetry and should not the student who has till now been indifferent to its beauties begin to "sit in the meadow", in the exquisite words of Euripides, "and pluck with glad heart the spoil of the flowers, gathering them one by one?" *

* *Fragments.*

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THE NEW SOUTH INDIAN FEVER*

RAJARAM was a student of the Senior Intermediate class. He was of a happy go-lucky temperament and he invariably left his studies to take care of themselves. He was a tall, well-built youth who was proud of his position in the college eleven. He was sure to distinguish himself wherever pluck and courage were wanted and as became a stalwart boy of five foot eleven, with profuse curly black hair parted impartially in the middle, he was a well-known scoutmaster. He never knew what headache or fever was, nor was he at any time irregular either at college or in the playground. But what was more remarkable still was that in spite of his seeming carelessness in his studies, he invariably managed to secure passing marks in the various college examinations.

But, all on a sudden the proverbially fickle fortune seemed to frown on him. It was the month of November and the college selection examination was just over. But unhappily the period of examination almost coincided with the period of cup-matches and our Rajaram found he had not to his credit even as many marks in certain subjects as the number of cups he had won for his college. However, the Principal happened to be a noble soul and according to the good old well honoured English custom, added up our hero's marks in games and sports to his marks in the various subjects and declared him "eligible" for being sent up. Later in the same day, Rajaram was just coming out of the Principal's room, gay as a lark, when an envious member of the College staff, respectfully stout in spite of his envy, accosted him. Unluckily our hero of many medals had

* Reproduced from the *Mangalore Government College Magazine* for April 1921.

somehow or other, full confidence in that round specimen of the spectacled species, and quietly followed him into his private room. When a few minutes later he emerged from that room, he was no longer the old Rajaram.

Rajaram was completely transformed. He never more was gay. He never more laughed. He became grave and profoundly sad. The inexpressibly sweet smile which used to play about his lips under his thin but promising moustaches became conspicuous by its absence. The loud, hearty laughter, indicative of good digestion, which hitherto used to show to advantage his fine, well-set rows of ivory teeth, was never more heard. He was still regular at college but was never more seen in the playground. His friends noticed the sudden change and interrogated him. His indulgent parent queried and worried him—Had he ever been denied anything he wanted? The kind-hearted Principal did his best to cheer him up. But Rajaram was silent and serious like the irresponsive heaven to which we sometimes lift up our hands in prayers.

But whether people were grave or gay, whether they grew fatter like our lecturer or thinner like our Rajaram, the planets did not stop in their course. The earth moved on unmindful whether our hero was happy or miserable. January and February passed. Early and late, Rajaram was at work. He now looked taller. His garments were becoming too loose for him. He was growing paler and paler. His loving father became anxious about his only son. He took privilege leave, then furlough on medical certificate, and personally looked after the comforts of his son. He advised, entreated, even begged, his son not to appear for the University examination that year. He even hid away, but in,

effectually, some of his books and note-books. But he could not persuade Rajaram to leave off his studies, nor even to take some rest.

The end of March came and went and with it the Intermediate examination—the revolving planet would not stop even for the Intermediate examination. After Rajaram had finished his last paper, he almost collapsed in his seat. He was at once taken home and expert medical help was summoned. There was not one doctor in the Presidency who was left unconsulted. There was not one patent medicine advertised which was left untried. There was not one kind of fever which was left unsuspected of. For two months and more did the doctors flurry and fret themselves to find what this new fever was. For two months and more did they go on prescribing new doses, so much so they came perilously near to the end of their Latin vocabulary for impure *agua*. A research enthusiast among them had already formed plans to found his fortune on the discovery and to set up a special laboratory, of course at some wise philanthropist's expense. *Only the discovery remained to be made.* As for medicine bottles; they would form a respectable nucleus for the projected laboratory—they made a mile-long show. The patient was very closely observed. At least half-a-dozen doctors were always in attendance, who were carefully watching him, frequently feeling his pulse, scrupulously registering even the infinitesimal rise and fall in his temperature, often exchanging doubtful glances, but above all keeping such a close watch over him that he could not even whisper what he very often attempted to say. At length Rajaram became resigned, but though there were traces of a mild decay such as Oliver Wendel Holmes alludes to in the description of his wonderful "One-hundred years poshay," the patient was not sinking as fast as the doctors predicted. Still this surely could not

prevent these zealous custodians of health from fixing a time limit for their victim's earthly sojourn. The Germany-returned throat-specialist solemnly opined: "five days." The American-trained heart-specialist pronounced: "five weeks." The English-degreed lung-specialist declared: "five months." But most of the Madras-medicos wished it were "five years"—for then they could be sure of their custom for that period at least.

The eventful June—the month of joys and sorrows for boys, joys for some and sorrows for the rest—came. Rajaram had long before this time ceased to protest against his enforced captivity: for, whenever he tried to say anything his voice was drowned by the full-mouthed chorus of the medical champions. And who could believe Rajaram who had not yet passed even the Intermediate examination against the unanimous verdict of the learned doctors? Even his father and his little sister whom he loved dearly were scarcely admitted into the room. And that particular morning in June, Rajaram was more than usual cast down and his attending physicians were grouped round him in a full circle. But

"Two telegrams?"

"For whom?"

"From where?"

"Both of them from Madras?"

The research enthusiast's plans were in an instant mounting up to the sky; was it not possible that at least one of the two telegrams was to tell him that his schemes had been approved in the proper quarters? So he ran out and met Rajaram's little sister rushing in with a telegram in her hand. It must be for him—was he not on the tiptoe of expectation? But when he tried to intercept her, he found the little girl was too nimble for him.

She was too quick even for the other doctors and after dodging them, she safely placed the telegram in her brother's hand, in spite of medical vigilance. The doctors around stood aghast: For the first time in his new life Rajaram smiled the old smile.

Just then his father walked into the room and saw him kissing his dear little sister. But before he could utter a single syllable, the research enthusiast was upon him; he pulled out the other telegram from the parent's hand, but instantaneously pulled a very very long face. The message read:

"Heartily congratulate you and Rajaram on his deserved first class—"

Immediately rang out all the assembled doctors' voices in one loud chorus: "Permit me, sir, to congratulate you on..." "Hang your congratulations," roared out the undeceived father, "my boy of seventeen is nearer seventy, thanks to this d—d examination. If I should ever catch that old mount of flesh of a pedagogue who has spoiled my child, or you, doctors, who have eaten away my thirteen years' savings in less than three months, without being able even to diagnose this simple examination fever....."

The rest of his sentence was lost in the stampede of the disappearing doctors.

T. A. RAMAIA.

CLOUD MESSENGER.

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EDUCATION: ITS SCOPE AND ASPECTS.

EDUCATION is the burning topic of the day in all the countries and all the world over; chiefly "National" as it is called, and thanks to the Great War. This desire for national education is a manifestation of the awakening of the intense feeling of Nationality inherent in every country and nation.

But the word National has to be correctly understood and interpreted so as to avoid any narrowness of ideal or outlook and activities. A time has now arrived in the progress of man, when the world as a whole may be looked upon as a unit on account of the powers of steam and electricity, etc., pressed into the service of man and utilised for a variety of purposes beyond the ken of man at an earlier stage of progress in his evolution. I am aware, though not fully, and proud of the great achievements and glory, of ancient India and also of the rich heritage she has not only left behind but kept alive in a vigour which no other country has been able to do.

But that "history repeats itself" is a truism not inconsistent with the progress, well-ordered progress, of man. The realisation and attainment of the highest type of spiritual development being the aim of all true progress, the same has to be accomplished and reached not as if by a ladder but by a spire. This implies points of similarity, the plane of attainment each time being higher. Now the unfolding of the highest truths of the universe and of spiritualism and the attainment thereof afford processes through which man has to struggle and constitute the educational effort; and education in its fulfilment marks the success. The time involved is perhaps eternity and the space, the whole universe.

Then comes the question of how far it is consistent with pursuits relating to this world, Materialism or in Indian parlance "Aihikam" and what should be our attitude to it. The answer in some measure is furnished by the Indian theory of the four kinds of the use of life or "Purusharthas," namely, duty, economics, desires and aspirations and annihilation or freedom from Aihikaism and complete spiritualisation. The first two are entirely connected with and to be attained during this life. The third gives a pointed direction to the first two by exercise and to the fourth by abstinence. Man, in spite of any amount of dissection leading to specialisation, is an indivisible one. Unlike the four Asramas coming one after another, these four utilities run concurrent and have to be pursued simultaneously; though in varying degrees from age to age, nation to nation, and even man to man. The comparatively predominant element determines the ideal for the age, nation or man. Education is intended to afford the training necessary for the attainment of this ideal and is therefore susceptible of changes from age to age, nation to nation and even man to man. Hence the questions of the ideal and aim, and also a perfect knowledge of the living forces of the past are essential for the educational reformer. But taking the world as a whole, a well-ordered progress by the spiral process seems to me to constitute the evolution of man. The men of extinct tribes or even nations are perhaps living now in our very houses or, better off. Progress is to be measured by leaps long enough in respect of time and areas large enough in respect of space.

Talking of Indian Education and its system these questions of ideal and method and even

of organisation have to be clearly understood in the light of the above remarks.

Indian culture and even feeling have been essentially of a spiritual nature, in the sense that every manifestation of the human activity was directed to the realisation of the ultimate goal and that the life was to be subjected to definite processes of discipline based on the results of long experience and deep thought, and well suited to the times. From the details of town-planning and house-building, society was organised to satisfy the needs of Here and Hereafter. Every man or woman had a place, a training, a duty and an aim in life. Education was provided for on the theoretical and practical sides in conformity with these aims. Nor was the tendency to spiritualisation a mere refuge sought in view of inexplicable or ill-understood vicissitudes of life. A chain of philosophical thought and conscious effort supports it. It is this distinguishing feature that has kept this ancient civilisation strongly alive to this day and made it the admiration of the world. Though remote, it serves to thrill the Indian's body with feelings of pride and patriotism.

But conditions to-day are quite changed, and aspects of life, neglected or unknown then, beam on us. India in itself a continent then, circumscribed the vision of the average Indian; while now he sees in it, a country which serves to intensify the feeling of Nationality. Life in ancient times went by groups,—the tribe, the clan, and the joint family; while in modern times the tendency is towards individualism in life. Rule by select men was the order then, while equality of opportunity and self-determination are the ruling principles and watchwords now-a-days. Intensity of life and feeling gives way

to expansion and diffusion: restraints of dogmatism yielding place to the exercise of the individual will. Learning is now secularised and as in labour, admits of division. Even the method has passed from the empirical and intuitive to the scientific. And though this has not yet added to positive knowledge, it has raised the average of general knowledge and opened new gates for further research. The sea which formerly separated diverse climates with facilities for diverse productions, has now become the high road of commerce, which if carried on on principles of strict morality, binds the world into one brotherhood. These changes are essential for a fuller expansion of life and the realisation of a larger self.

Then how comes it that life should be felt a misery? In pursuing the principles of "struggle for existence" and "natural selection" which enhance the vigour of life, man has not been yet successful and happy. Hence arises also his degeneracy. Various have been the efforts to ensure success in these lines, to avoid degeneracy and to make them help the growth of the fuller life now in view. My plea therefore is for Nationalisation of Education unless "National" connotes the same idea.

Truth in its highest aspects is the same everywhere, nature around us providing only the glass through which we discern it. Thus the highest type of education is of a universal character; and University education is perhaps intended to lead to this uncoloured truth. We nationalise these truths when they are adjusted to our surroundings on the principle of natural selection and intensify the national aspects of education. Human nature in its essentials being the same all

over, Literature that really ennobles and cultures the mind is welcome from whatever source. In the application of these truths to nature around us we nationalise education. That part of it which is true strictly with reference to India alone in respect of either the truth or its application is "National," the rest being universal. Further it is neither possible nor desirable to circumscribe our activities by the limits of National Education in its narrower sense. The storied past cannot be completely effaced. It lives in and among us as truly as the remoter past. Adaptation and not extinction is the order of growth. Man does not court misery or degeneracy. He even tries to get off the weeds though in the trial he may not succeed as well as he ought

to. Here lies the function of the true educationist who should help man in these struggles and enable him to revel in the growth to fuller realisation and by his contribution to help his brother elsewhere to such growth.

Only the general principles are touched upon that the thoughts underlying them may appeal to the thoughtful that are about the work of reconstruction.

D. V. JAGANNADHAN.

P. S.—Thoughtful readers of the above article are advised to go through Matthew Arnold's 'Anarchy and Culture' which I had not the pleasure of reading before the article was written.

D. V. J.

In the Press.

SELECT ESSAYS

FROM

ADDISON'S SPECTATOR

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FOR THE MADRAS INTERMEDIATE EXAMINATION, 1922

EDITED WITH INTRODUCTION AND NOTES

BY

E. H. ELLIOT, B.A.

late of the Presidency College, Madras.

SRINIVASA VARADACHARI & CO., TRIPPLICANE, MADRAS.

ANCIENT HINDU MATHEMATICS.*

INDIA has been, and perhaps still is, more a land of philosophy and metaphysics than a land of materialism and scientific research. India therefore had no professional mathematicians. Mathematics was brought up only as a handmaid to astronomy which was itself a handmaid to the study of the Vedas and the performance of daily rituals and sacrifices enjoined in the Vedas to please the gods. Thus the very few mathematical writers which India has produced can be counted on one's fingers.

Before dealing with each of the Indian writers in some detail, let me point out two important characteristics of Hindu mathematical treatises, which are the real cause of much imperfect knowledge, misapprehension and consequent misinterpretation on the part of the Western Oriental scholars. The Hindu writers of note, as is usual with them, write in verse, whatever be the subject matter and the poetic license they thus get is responsible for much obscurity in language. The next point is that the Hindu writers give simply the rules, the results, and a number of questions for solution but very rarely a fully-worked out mathematical argument.

The earliest age of Hindu mathematics is the period of the *Sulva Sutras* (about 200 A.D.) which deal with the construction of sacrificial altars. As they have purely a religious purpose in view no proofs are given but bare results treating with the construction of squares, and rectangles, the ratio of the diagonal of a square to a side, equal rectangles, squares and circles. The approximation given for $\sqrt{2}$ is $1 + \frac{1}{3} + \frac{1}{3.4} - \frac{1}{3.4.34}$. There is also an indication of the formation of successive squares by the addition of gnomons.

* Communicated by Mr. A. A. Krishnaswamy Aiyangar, M.A., and read before a meeting of the Elementary Mathematics Association.

The lengths of the sides of rational right-angled triangles are also tabulated, e.g., 3, 4, 5; 5, 12, 13; 8, 15, 17; 12, 35, 37. Several approximations for the ratio of the side of a square to the diameter 'd' of an equal circle are also dealt with, e.g., $\frac{a}{d} = \frac{\sqrt{\pi}}{2} = 1 - \frac{1}{8} + \frac{1}{8.29} - \frac{1}{8.29.6} + \frac{1}{8.29.6.8} - \frac{.41}{8.2.6.8.1393}$. The above expression is certainly a very remarkable one and G. R. Kaye and Thibaut would take it for an interpolation from Greek mathematics, for they find that the later Indian mathematicians have not utilized it elsewhere, nor have they showed anywhere any acquaintance with the process of converting a fraction into a series of partial fractions with unit numerators. These orientalists fail to note that there is such a thing as intuitive perception and the sages of Ancient India had too much of it and so could work out and get results but could not logically explain the why and wherefore of the working. The late Mr. S. Ramanujan, B.A., F.R.S., by whose demise India has lost one of her greatest mathematicians, was a typical Indian mathematical genius. He was remarkable for his empirical formulæ obtained by his strong intuition which could have its parallel only among the sages of Ancient India. The occidental orientalists who have no insight into the nature of the Indian mind, no insight to discover the peculiarity of Indian genius either forget this fact or knowing it, would not believe it, and still persist in some Greek or Roman origin for all that is indigenous, ingenious and original in India. Ball in his 'Short Account of the History of Mathematics' writes: "The Hindoos, like the Chinese, have pretended that they are the most ancient people on the face of the earth, and that to them all sciences owe their creation. But it would appear from all recent investigations that these pretensions have no foundation, and in fact no science or useful art (except a rather fantastic architecture and sculpture) can be traced back to the inhabitants of the Indian

peninsula prior to the Aryan invasion. This invasion seems to have taken place at some time in the latter half of the 5th century, or in the 6th century, when a tribe of the Aryans entered India by the North-West frontier, and established themselves as rulers over a large part of the country. Their descendants, wherever they have kept their blood 'pure, may' still be recognised by their superiority over the races they originally conquered; but as is the case with the modern Europeans, they found the climate trying and gradually degenerated. For the first two or three centuries they, however, retained their intellectual vigour, and produced one or two writers of great ability. These writers are the writers who come long after the *Sulva-Sutra* period. The famous mathematicians of this period, i.e. 400—600 A. D. are only three: (i) The unknown author of the *Surya Siddhanta*; (ii) *Varaha Mihira*; (iii) *Arya Bhatta*.

The Surya Siddhanta:—This is one of the oldest treatises on Hindu astronomy. According to Thibaut this work evinces a fundamental dependence on Greek astronomy but shows unmistakable traces of originality in numerous details, remaining indeed in by far the greater number of cases inferior to the (Roman or Greek) original, yet hitting here and there on new devices and methods of undeniable merit and ingenuity. In the *Surya Siddhanta* there occurs the formula $\sin(n+1)\theta = \sin n\theta + \{\sin n\theta - \sin(n-1)\theta\} - 2\sin n\theta \text{ vers } \theta$, with which the values of sines are tabulated at intervals of $3\frac{1}{4}^\circ$. This formula is exceedingly ingenious and has excited the wonder of Western mathematicians. Delambre says: "That process is extremely curious. One finds nothing like it in the Trigonometry of Ptolemy, and in order to find some vestige of it, one must, after having vainly pored over all the authors on Trigonometry come to Briggs who knew that divisor, etc."

Varaha Mihira:—His famous work is the *Pancha Siddhantika* which is a review of the

five then current systems of astronomy, the *Poulisa*, the *Romaka*, the *Vasishtha*, the *Soura*, and the *Paitamaha*. Of these, the author recommends the *Soura*, or the system advocated in the *Surya Siddhanta*, as the most accurate, and the *Poulisa* and the *Romaka* (which are identified with the Greek systems of astronomy) as the next best. The mathematical section of the *Pancha Siddhantika* contains rules which, translated in the modern notation, are $\pi = \sqrt{10}$; $\sin 30^\circ = \frac{1}{2}$; $\sin 60^\circ = \sqrt{1 - \frac{1}{4}}$; $\sin^2 \gamma = \left(\frac{\sin 2\gamma}{2}\right)^2 + \left(\frac{1 - \sin(90^\circ - 2\gamma)}{2}\right)^2$. There is also a table of sines progressing by intervals of $3^\circ 45'$. Thus the earliest known record of a sine function occurs in the Indian astronomical works of this period.

Aryabhatta. He is unaccountably (according to Thibaut) placed by tradition at the head of the Indian mathematicians. His *Aryabhattiyam*, which mainly deals with astronomy, treats incidentally also of progressions, circle and shadow problems, continued fractions, and indeterminate equations. It contains a very accurate value of $\pi = 3\frac{1}{7}$ and the remarkably inaccurate mensuration formulæ: volume of a sphere = product of the area of a great circle and the square root of this area, etc. *Aryabhatta's* importance in the history of Hindu Mathematics is mainly due to the impetus he gave to the subsequent development of Mathematics.

The next group of noted mathematicians we have to deal with are *Brahmagupta* (598 A.D.), *Mahavira Acharya* of Mysore (probably 9th century A.D.), *Sridhara* (10th century A.D.) and *Bhaskara* (1114 A.D.) This closes the list of the famous ancient Hindu mathematicians known to us at present. *Bhaskara* is the most renowned of this school but much of his credit should go to *Brahmagupta* whose work is sounder mathematically and more important historically.

All these writers treat of the quadratic equation, the indeterminate equations, the

rational right-angled triangle and indifferently with the geometry of the triangle and the quadrilateral. *Brahmagupta* flourished in the first quarter of the 7th century A.D. One of his immortal works is his *Brahma Sphuta Siddhanta*, primarily an astronomical work, portions of which, however, treat of general mathematics. He has well summed up the amount of mathematical knowledge expected in a mathematician in his time thus:—"He who distinctly knows addition and the rest of the twenty operations and the eight processes including measurement by shadows is a mathematician." He works out the fundamental propositions connected with an Arithmetic Progression and solves a quadratic equation giving, of course, the positive value of the radical. He also finds integral solutions of several indeterminate equations of the first and second degrees, e.g., the general solution for $ax^2 + 1 = by^2$. It is rather interesting to note how far the Hindu mathematician was in advance of the occidental one when it is seen that the above equation was Fermat's challenge to Wallis and Lord Brouncker, who in the 17th century gave the same solution as Brahmagupta's.

In Geometry, under the name of Brahmagupta, there are two noteworthy rules regarding the area and the length of the diagonals of a cyclic quadrilateral. He was also the author of the formula $\frac{a}{\sin A} = 2R$, the theorem that the rectangle contained by two sides of a triangle is equal to the rectangle contained by the altitude to the third side and the circum-diameter, and the problem that if $a^2 + b^2 = c^2$, $\alpha^2 + \beta^2 = \gamma^2$ then $\alpha, \beta, \gamma, \alpha, \beta, \gamma$ give the sides of a cyclic quadrilateral whose diagonals cut at right angles, (this figure is known as Brahmagupta's trapezium). His commentator Ganaka gives the quadrilateral of sides 39, 60, 52, 25 with diagonals 63, 56 as an example of Brahmagupta's quadrilateral. In fact the same example was given by Diophantus. But this does not prove that he copied it from the Greeks.

It is interesting to see how Bhaskara, not understanding the rationale of Brahmagupta's rational cyclic quadrilateral, condemns it thus: "How can a person neither specifying one of the perpendiculars nor either of the diagonals, ask the rest? Such a questioner is a blundering devil and still more so is he who answers the question."

[These words of Bhaskara were made capital of by Mr. G. R. Kaye in his book 'Indian Mathematics' and he makes out a case that not only Bhaskara but also others could not understand the theorem because of its being a Greek extraction and not an indigenous one. This at least suggests and implies, that the little mathematics that is understood by these Hindu mathematicians must have been indigenous. But even this he would not grant for he totally denies anything indigenous in Indian mathematics. Thus his argument reduces itself to a *reductio ad absurdum* and is thereby falsified.]

About Brahmagupta's personal life little is known except what we can gather from Alberuni's writings. He says that Brahmagupta is very rude in his criticisms especially of poor Aryabhata whom he compares to a worm, which eating the wood, by chance describes certain characters in it, without intending to draw them, and adds 'I, for my part, am inclined to the belief that that which made Brahmagupta speak the abovementioned words (which involve a sin against conscience) was something of a calamitous fate, like that of Socrates, which had befallen him, notwithstanding the abundance of his knowledge and the sharpness of his intellect, and notwithstanding his extreme youth at the time. For he wrote his Brahmagupta Siddhanta when he was only 30 years of age. If this indeed is his excuse, we accept it and drop the matter' Mahaviracharya is the next great Hindu algebraist. He seems to belong to Mysore and it is supposed that he flourished towards the close of the 9th century. The only extant work of his which has come down to us is the '*Ganitasara Sangraha*' recently published by the Madras Government with the translation by M. Rangacharya. In Chapter I, v. 13-14, he gives us an idea of the universal application of Mathematics.

He says, 'The number, the diameter, and the circumference of islands, oceans, and mountains; the extensive dimensions of the rows of habitations and halls belonging to the inhabitants of the world, of the interspace, of the world of light, of the world of the gods and to the dwellers in hell, and miscellaneous measurements of all sorts—all these are made out by means of computation.' The same idea has been echoed by Mr. A. N. Whitehead in one of his Presidential Addresses in London, for he has said: 'Thro' and thro the world is infected with quantity. To talk sense is to talk in quantities. You cannot evade quantity.'

Mahavira Charya's work is fuller than the works of his predecessors but more elementary. He treats of the ordinary operations (for which he uses no symbols) more completely and introduces geometrical progressions. Problems on indeterminate equations are also given and solved but no mention is made of the cyclic method. He does not deal with formal algebra. His is the only Indian treatise dealing with ellipses.

Sridhara is the next mathematician we have to consider. His date is fixed somewhere about the close of the 10th century. His work *Trisataka* is a compendium of calculation covering much the same ground as *Lilavati*, i.e., arithmetic, algebra and mensuration of our S.S.L.C. Optional Mathematics Syllabus. Sridhara's method of solving a quadratic equation, should be fairly familiar to all mathematics teachers. Multiply both the sides of the equation by a number equal to 4 times the coefficient of the square and add to them a number equal to the square of the original coefficient of the unknown quantity.

To find the cube of a number, his rule is: 'Suppose the given number is the last term, the first term being zero, and the common difference 1. Add 1 to 3 times the product of the last term with the previous term and this added to the cube of the previous term is the cube required.' According to Kaye this rule is obscure and indi-

cates an attempt to connect the cube of a number with an Arithmetic series and suggests the rule given by Nicomachus, an Arabian, i.e., $n^3 = (n^2 - n + 1) + (n^2 - n + 3) + \dots$ to n terms. He suggests that the rule should probably read: 'Add 1 and 3 and so on to the product of the last term, etc.' In fact, the rule is quite simple. It gives the law connecting two successive cubes, viz., $n^3 = (n-1)^3 + 3n(n-1) + 1$, so that we may calculate successively the cubes of 1, 2, 3, up to the required number. This law also leads to the following series for n^3 , viz., $n + 3\sum n(n-1)$.

Sridhara gives also some mensuration formulae relating to triangles, quadrilaterals, and segments of circles. He refers to a trapezium with two sides parallel as a quadrilateral with face straight. As a rule, Hindu mathematicians make no mention of parallel straight lines. This is not strange in view of the two following facts: (i) The Hindus never professed to write on Theoretical Geometry like the Greeks; (ii) even Euclid's theory of parallels is nothing but a bold guess as the study of the modern non-Euclidean geometries will show. * * *

The last great mathematician before the beginning of the manifestation of the European influence is Bhaskara who is supposed to have flourished in the 12th century. He is the lineal successor of Brahmagupta as head of the astronomical observatory at Ujjain. He is famous for his two great mathematical treatises '*Lilavati*' and '*Bija Ganita*,' and also an astronomical work '*Siddhanta Ciromani*' or 'the diadem of an astronomical system.' In the opening verse of his *Lilavati*, he characterises his work as an easy process of calculation, delightful by its elegance, perspicuous with concise terms, soft and correct and pleasing to the learned. The contents of *Lilavati* are very much similar to those of Sridhara's *Trisataka* with additional chapters on permutations and combinations, geometrical progressions, rational right-angled triangles, and algebra. A fuller treatment of algebra is found

in his Bijaganita which is based on Brahmagupta's work. Bhaskara's conception of the nature of mathematical operations, of the scope of arithmetic and algebra and the excellence of his own treatise is set forth in vs. 170, 224, 225 of his Bijaganita, thus:

"In the like suppositions, when the operation, owing to restriction, disappoints, the knower must by the intelligent be discovered by the exercise of ingenuity. Accordingly it is said: 'The conditions—a clear intellect, assumption of unknown quantities, equation, and the rule of three are the means of operation in analysis.'"

"The rule of three is arithmetic; clear common sense vision is algebra. What is there unknown to the intelligent. Therefore for the dull alone it is written."

"To increase wisdom and strengthen confidence, read, read *Mathematician*, this abridgment elegant in style, easily intelligible to young students, containing the whole essence of calculation and containing the proof of its principles—all excellence and no defect."

NOTE.—With respect to notation, algebra can be divided into 3 classes:—

1. *Rhetoric*: where no symbol is used and everything is written in words.

2. *Syncopated*: where abbreviations are used at least for the constantly recurring ideas and operations:

3. *Symbolic*: in which all forms and operations are represented by a developed symbolism.

Vide Young's Fundamental Concepts of Algebra and Geometry.

The algebra of Bhaskara is *syncopated* and almost symbolic; but the equations are written out mostly in full. To represent several unknown quantities, he resorts to the colours; black, blue, yellow, red, etc. It is said that the early Chinese were calculating with pieces of two colours to represent positive and negative numbers. We now have recourse to opposite directions to represent the same. Bhaskara also deals

with the binomial quadratic surds and gives formulae for the square root of $a \pm \sqrt{b}$. In the solution of quadratic equations he has made a distinct advance on the earlier Greek and Hindu writers. He has recognised the existence of the negative, the irrational, and the imaginary roots of a quadratic equation, though he never seriously tackles the new classes of numbers. He quietly assumes that these new numbers can be operated upon like the common numbers and gets results intuitively thus greatly aiding the progress of mathematics. *Hankel* says: "If one understands by algebra the application of arithmetical operations to complex magnitudes of all sorts, whether rational or irrational numbers, or space magnitudes, then the learned Brahmans of Hindustan are the real inventors of algebra." I shall quote below a single example from Bijaganita to show the extent to which algebra was developed in Bhaskara's time.

Tell me quickly, mathematician, two numbers such that the cubic root of half the sum of their product and the smaller number, and the square root of the sum of their squares, and those extracted from the sum and difference increased by two, and that extracted from the difference of their squares added to eight, being all five added together may yield a square root—except however 6 and 8? or

Solve $\sqrt[3]{(xy+y)/2} + \sqrt{x^2+y^2} + \sqrt{x+y+2} + \sqrt{x-y+2} + \sqrt{x^2-y^2+8} = t^2$ in rational numbers.

In the astronomical work of Bhaskara occur the formulae which correspond to our $\sin(A \pm B) = \sin A \cos B \pm \sin B \cos A$ and $d(\sin \theta) = \cos \theta d\theta$. The last differential formula makes one conjecture that Bhaskara may even have vaguely dreamed of the differential calculus also.

Of Bhaskara's personal life little is known to us except what we may gather from an inscription found in a ruined temple at Patna. The inscription praises him to the skies and refers to him as very learned, famous, religious, the root

of the creeper of true knowledge of the Veda, an omniscient seat of learning, etc. . . . According to the inscription, Bhaskara's grandson Changa-deva, chief astrologer of King Simghana, founded a college to expound the doctrines of his famous ancestor.

W. W. Ball gives an anecdote about Bhaskara's daughter Lilavati, how Bhaskara learnt through his astrology that he would die if his daughter should marry and how therefore he kept her unmarried until his death, offering her the poor consolation of writing a work in her name. Such stories have no historical basis. Nothing can be inferred from the fact that his problems are addressed to fawn-eyed damsels. Addressing verses to imaginary fair ladies is a very common feature in Hindu literature.

After Bhaskara, mathematics ceased to develop in India because mathematics was never seriously taught or learnt systematically and scientifically. So though the science managed to flourish under geniuses of the first rank such as Brahmagupta or Bhaskara, it died a natural death when there were no more sparks to light it up. This only illustrates historically the danger of the irrational thumb-rule method of instruction and learning.

There is, however, one good feature in our ancient mathematical treatises, which our modern text-books lack. The old treatises give us a good deal of information regarding the social and economic condition of the country and the times in which they were written. For example, Sridhara says with regard to living beings, that their price is inversely proportional to the age; Mahavira says regarding the means of communication and the wages of carriers that 20 men have to carry a palanquin, two yojanas and 720 dinaras are their wages; Chatur Veda says regarding the rations of elephants that two elephants which are 10 in. length 9 in. breadth, 36 in. girth, 7 in. height, consume one drona of grain (1 drona = 16 prasthas = 64 kudavas); Bhaskara makes us

understand that 5% or 6% per month is the usual rate of interest at which money was borrowed or lent, for all his questions on finding interest, rate %, etc., deal with a constant 5% per month rate; there is also reference to payment of heavy octroi duty on goods imported, in the recently discovered Bakshali Arithmetic.

The greatest contribution that India has ever made to the world in mathematics is its *place-value notation*. The number-symbols we use to-day are derived from the Devanagari symbols and it is no boast to say that the importance of the Hindu notation can never be over-estimated. Our mathematics would not have advanced beyond addition and subtraction but for the happy discovery of the place-value system and the decimal scale. The miraculous powers of modern calculation are due to three inventions—the Hindu notation, the decimal fractions and logarithms. About the importance of notation Philip E. B. Jourdain says: 'It is important to realise that the long and strenuous work of the most gifted minds was necessary to provide us with simple and expressive notation which, in nearly all parts of mathematics, enables even the less-gifted of us to reproduce theorems which needed the greatest genius to discover. Each improvement in notation seems, to the uninitiated, but a small thing; and yet, in a calculation, the pen sometimes seems to be more intelligent than the user. Our notation is an instance of the great spirit of economy which spares waste of labour on what is already systematised, so that all our strength can be concentrated either upon what is known but un-systematised, or upon what is unknown.'

The other contributions of India to mathematics are in algebra and cyclometry. India is the birth-place of algebra. The science of algebra was brought among the Arabs by Muhammad Ben Musa better known as Alkarismi in a work of about 830 A. D. and as P. E. B. Jourdain remarks, was certainly derived from the Hindus. It was thro' this algebra that the Indian notation and symbolism in algebra were introduced into the West. Regarding the researches of the Hindus in cyclometry, Hermann

Schubert remarks that the merit belongs to the Hindus of having carried the Archimedean method of computing several stages further, and of having obtained in this way a much more exact value for it—a circumstance that is explainable when we consider that the Hindus were the inventors of our present system of numeral notation, possessing which they easily outdid Archimedes, who employed the awkward Greek system.

Thus, it has been an admitted fact that the Hindus developed a system of mathematics in India in very early times and in some branches of mathematics such as algebra and astronomy even to a degree far beyond anything ever achieved by the Greeks and so became the benefactors of the rest of mankind.

[In an article on "The Source of Hindu Mathematics," J. R. A. S. 1910, Mr. Kaye denies the indigenous and independent development of Ancient Hindu Mathematics and assures us that our Hindu mathematical works definitely indicate a foreign source or a strong foreign influence.

Three of the several postulates explicit and implicit on which Mr. Kaye builds up his latest theory are:—

(i) That the evolution of mathematical ideas cannot proceed *per saltum*, but must proceed in an orderly manner.

(ii) That while mathematical systems of independent growth will naturally have many points of similarity, yet differences are certain to occur and it is indeed impossible for two systems to grow up independently in exactly the same manner.

(iii) That priority of statement of a proposition does not necessarily imply its discovery.

In postulate (iii), Mr. Kaye has unconsciously prepared a rod for his own back, for all his arguments when analysed, can be ultimately reduced just to a contrary postulate; for example, Aryabhata's table of sines (200 A.D.) is the same as Ptolemy's (an earlier production) and so must have been copied from the Greeks; Brahmagupta of 600 A.D. could not have discovered the rule $\sqrt{s(s-a)(s-b)(s-c)}$ for Heron of Alexandria had already given it in 100 B.C.

In examining Mr. Kaye's postulate (i) we have to remember two facts, namely, (a) that the ancient Hindus were a very conservative people having too much self-respect, self-confidence, and self-sufficiency to go and borrow a paltry figure from a foreign work, and (b) the problems in mathematics were set and solved by them merely as a sort of recreation and social amusement or in connec-

tion with their daily practical needs (temporal and spiritual). Brahmagupta well remarks: "These questions are stated merely for pleasure. The proficient may devise a thousand others or may solve the problems of others by the rules given here. As the stars are obscured by the sun, so does the expert eclipse the glory of other astronomers in an assembly of people by proposing algebraic problems, and still more by their solution." Thus the ancient Hindus never pretended to build ostensibly any science of mathematics and so the test of postulate (i) is irrelevant in this connection. Such a test merely shows a gross misconception of the evolution of Indian mathematics.

It is interesting to examine how Mr. Kaye disposes of some of the undisputedly Indian contributions as either trivial and insignificant or loans from the Chinese. The discovery of the irrational by the Hindus at an early period is according to Mr. Kaye a humbug, for, according to Dr. Heath (from whom Mr. Kaye quotes), it is a far cry from the calculation of an approximate value such as $\sqrt{10}$, $\sqrt{2}$ to the discovery of the irrational. Mr. Kaye has evidently misunderstood and consequently misapplied Dr. Heath's words and of course it is impossible that the ancient Hindus could have even dreamed of the modern theory of irrationals. But credit is certainly due to them for discovering at least the existence of such a thing as $\sqrt{2}$ and $\sqrt{10}$ and also dimly perceiving that the ratio of the circumference of a circle to its diameter must be some number like $\sqrt{10}$, i.e., an irrational number.

Regarding the really remarkable solution given at a very early date by Bhaskara to the indeterminate problem $Dx^2 - 1 = y^2$, Mr. Kaye says "Possibly the fact that Fermat, Walter, Bromicker, Euler, Lagrange and others paid considerable attention to the problem, gave the discovery of it in Hindu works a somewhat fictitious value and goes on to search for such equations in earlier Chinese works.

When Mr. Kaye cannot trace some portions of Indian mathematics to any extant Greek or any other foreign source, he finds gratification in holding these portions were certainly to be found in some lost foreign works! Bhaskara's reference to 'ancient authorities' has been interpreted to be Greek for the reference cannot be traced to Hindu mathematicians. It does not strike Mr. Kaye's imagination, however, that such mathematicians may yet be undiscovered or may have written works which are now lost.

In examining the evidence for the Hindu's invention of our modern place-value system, Mr. Kaye remarks that though epigraphical evidence is the most important, yet it is the most unreliable so far as India is concerned. This is probably because such evidences inconveniently

give the direct lie to certain pet theories about India and the ancient Hindus. The inscriptions of the twelfth century especially are considered either forgeries or otherwise untrustworthy. So, our Anglo-Indian orientologists would pursue their researches directly by *a priori* methods suggested by the dictates of their whims and fancies.

Another point in favour of Mr. Kaye's view is the supposed existence of numerous inconsistencies and errors in the Hindu works that are unexplainable if the hypothesis of an indigenous origin and an independent development is accepted. But it is possible that these inconsistencies and errors may be due to our not having yet met with the correct originals or may be merely some later interpolations by less eminent men. It is likely also that some of the inconsistencies and errors are apparently due to the obscurity of the language. The most obvious errors are quite few and trivial and are not of sufficient

strength therefore to support a theory. Further, I may add that as regards errors even in current mathematical literature, there are plenty and they are committed by even men of such eminence as Ampere, Abel, Charles Legendre, Bertrand and Laplace. In fact, such errors are being daily pointed out in 'L'Intermédiaire des mathématiciens. In answer to Question No. 2856 proposed in 1904 to make a list of the errors committed by prominent deceased mathematicians.

Thus Mr. Kaye's theory about the source of Hindu mathematics needs a thorough over-hauling. Whatever may be the apparent tendency of the modern orientologists, it will not be quite impossible to admit the greatness of the achievement of the ancient Hindus in mathematics and its great influence on the development of the later European Mathematics.]

A. A. KRISHNASWAMI AIVANGAR.

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ORGANIZATION OF ENGLISH TEACHING IN HIGH SCHOOLS.

ORGANIZATION can be said to be the best part of method. This is as much true of the methods of teaching special subjects in schools, as it is of the whole process of the teaching art. Much of the failure in the teaching of English in our schools is more the result of bad organization than bad method. The 'direct method' has largely been used in some schools; free composition and conversation are much insisted upon; pupils are to some extent trained in rapid and independent reading. Still, it is complained that there is only a widespread smattering of English and the average standard does not seem to be much raised. Pupils trained according to this method, pupils of now-a-days in general look smarter and more responsive, but are really less sound than their brethren in the past. The results, on the whole, are so far from being satisfactory, that a reaction against the use of the 'new method' seems to be setting in, and driving it fast to its original strongholds, the training and model schools. But it should be understood that such criticisms as are levelled against it, lose their value when directed against the psychology of the 'rational method.' There is something else to be found fault with; the root of the evil lies elsewhere. It should be sought in the practical working of classes, in their size and grouping, in the teachers that handle the subject, in the nature of supervision they are subjected to, in the media of instruction, the text-books, and in proper co-ordination of work in the various classes. A study of the actual conditions that prevail in our schools will thus give us more insight into the causes of our pupils' bad English, than a discussion of the psychological basis of this or that method.

And a few suggestions towards their betterment, made in the light of experience and practice are more welcome than a new publication on the theory of teaching. In short good organisation of teaching work in any subject is the first and the last thing that ensures success in it.

Our pupils form the nucleus of this organization. They are our material, our starting point as well as our goal. In grouping them into classes or sections, a certain uniformity of mental capacity, development, and attainments should be aimed at. Where they are huddled together into sections promiscuously the teacher is seriously handicapped. In teaching a class of 30 boys, consisting of 4 bright boys, 10 boys of average intellect and understanding, 6 boys a little below this average, and 10 mere dullards, a teacher can have no method which meets the requirements of all. Add to this the difference in age, social status, and the number of places and schools from which some of them come. Some of them, in the lowest classes, come from unrecognised schools, some direct from home where they were receiving private coaching, and some seeking admission in the middle of the term, all these equally poor in attainments, but cursorily examined, found fit and admitted into classes far above their heads. "The late comers, the new comers, taught on very different systems, if taught at all, cripple our work and ruin our forms." In language teaching where oral practice and correction of written work should form a constant feature of the class routine, what a hindrance do the large sizes of classes place in the teacher's way! Let the management supply sufficient number of hands that our souls may not groan with despair under the crush-

ing weight of our unwieldy sections, and that our boys may receive the proper amount and the right sort of our care and attention.

So much for the pupils. Let me next pass on to the teacher. English teachers should be as much specialists as the teachers of mathematics, science and history. English teaching should no longer become a general topic on which any member of the school staff may dogmatise, but as a special branch of teaching in which the English teacher alone, in virtue of his special interests, his special knowledge, his special training, and special experience is the acknowledged expert. And in view of the fact that the teaching in the lower grades implies care and responsibility, secondary teachers, no less than those of the collegiate grade, should get special training in the methods of teaching English.

The next point in the organization deals with the aids to the study and the teaching of the subject. It also includes such topics as the time-table, the syllabuses of work, the teacher's notes of lesson and other records of the teacher pertaining to his work. That the various branches of English, such as prose, poetry, oral composition and written work, reading and grammar, should not be treated exclusively and in rigid compartments in the time-table, that they do not admit of such an exclusion and that in the lower classes all English work should partake the nature of oral composition lessons, these are recognised facts and cannot be over-emphasized. The more the teacher understands the necessary relation of the text (reading-book), grammar and composition, the better for him and his pupils. As for the teacher's records, besides his notes of lessons, where in each case he should state the aim of the lesson as clearly and definitely, as possible, he should keep a

monthly record of the progress of his class. Such a record can easily be prepared by going through the 'aim' in the notes for each lesson. It should definitely show a list of all the new words and phrases taught to his pupils in the course of the month, types of sentences or expressions drilled, written work done by the boys during the month and anything else incidentally taught. This record should enable an outside examiner to know what the boys are taught, and thus provide him with a clear basis for his question paper. Syllabuses of work in grammar and composition, lists of lessons to be taught in the course of a term should be drawn up at the outset.

In this connection the following words of a modern language teacher should be borne in mind. "Let English teachers plan out the work of the school from the lowest to the highest so that every detail of every year shall contribute to the one great aim. Not a patch work, where the work of forms is thought out year by year and the result is overlapping here, gaps and weak places there, one aim in one form, a totally different aim in forms above and below. No; it is a great art we have in hand, this mastery of a foreign tongue and of the secrets of its literature. Not without dust and toil will the goal be attained. See to it, you specialists and heads of schools that from the Kindergarten to the 6th Form, every detail of every year is planned out to achieve at last the great reward."

This brings us to a serious defect of English teaching in our schools, viz., the lack of proper co-ordination of the work done in various classes. How often have we not seen the same grammatical mistakes committed by the boys of all the forms from 1st to the 6th? The uses of different tenses in

grammar are taught in the 3rd Form, forgotten in the 4th, again retaught in the 5th, and yet elaborately taught and taught, drilled and drilled again in the 6th Form. What is done in one class is not at all taken into account in the higher class next to it. The result is waste of time and energies of both the teacher and the pupils, and sometimes positive injury to the latter. Useful co-ordination can be effected by the following means: (1) Use of a single series of well-graded reading books (such as Yates: Reformed Readers) throughout the school course. One book is the continuation of another in regard to linguistic material, and forms a suitable stepping-stone to the next higher book. (2) Syllabuses in grammar and composition should be framed in such a way that each item of the subject is given its due place not only in the class course of a certain year, but in the whole course for the school. The plan of the work should be in a way concentric. (3) An English teacher, before starting his work for the year should go through the note-books and text-books of the pupils who are newly promoted to his class. (4) Teachers should have a spirit of co-operation among them. Meeting together periodically, they may discuss the results of their work. They are to realise clearly that there is a point at which different constructions in grammar and language must be introduced. To attempt to teach conditional sentences and their shades of meaning in the 3rd Form would be absurd, while to devote full periods in the 5th Form to the teaching of the analysis of a simple sentence would be merely ludicrous. He is a good English teacher, who, given a certain passage in literature, will be able to see at once in which class it can be suitably taught, and in case the same

is suitable in two or more classes, to say definitely what linguistic points should be emphasized in each.

To effect good co-ordination, to assist the young and untrained teachers in their work by practical suggestions as well as model lessons, to stimulate the old teachers that they may be ever fresh and abreast of their times, are the aims of teaching supervision by the head teacher or by a specialist in the subject. Without going too frequently in his rounds of supervision he should impress upon the young teachers the necessity of slow enunciation, distinct articulation, of systematic questioning with due attention to the grammar and idiom of the interrogative sentence, proper method of correcting written work, and the indispensable part that oral drill plays in language lessons. Discussions on topics relating to methods of English teaching may profitably be organized and conducted, each discussion followed by a demonstration lesson illustrating the topic on hand. Teachers will therefore be led to see that nothing can be final and dogmatic in the case of teaching methods, and that there is and for ever will be vast room for experiment and initiative. Stagnation is impossible under brisk, lively, disinterested and constructive supervision. The enthusiasm of an individual here and there does not suffice. It should be seen that such a teacher does not remain self-contained but lends his spark of zeal and earnestness to his colleagues.

Besides the control within the school the teacher has two outside agencies which have a vast influence upon his work. These two forces are inspection and public examination. Not only the individual teacher but the school as a whole and its head teacher feel the weight of these. But they should never be

regarded as the true goal of our work. No special preparation is needed for either if each day's work in the well-planned syllabus is properly discharged. Though we cannot but admit that these two largely interfere with the class work, yet, the less we keep them in mind the freer will be our work.

In setting examination papers on their text-books for high school classes, questions on mere composition (as it is called) can never be an adequate test of mastery over language. The question paper may not be over-crowded with questions of the type, Write what you know of, Write the story of, Tell in your words, etc., Questions on the Elements of English Grammar and Idiom, the use of the right form of noun, pronoun and verb, the place and order of words in the sentence, the use of adjectives and adverbs of the right type in the right place, the order of the sentences in the paragraph, and the place of the paragraph in the essay or story—a knowledge of all these should be tested by suitable questions. Accuracy and answering to the point must be cultivated through oral questioning in class. For every secondary school, there should be a special set of teachers for conducting the English examination. Every question and bit of a question should be based on some principle of language, grammar, idiom, expression or reading.

Next to examinations come promotions. "Normally if the instruction has been satisfactory following graduated courses of studies a pupil should be fit after a year's instruction to profit by the instruction of the class above. The exceptions due to continued absence through illness or some other cause, should be very few. Detention a second year in the same class with little or no change of work is more liable to kill interest than to increase knowledge." (Suggestions to Managers and Teachers of Secondary Schools). The above extract well indicates

the attitude of the educational authorities towards class promotions. But in reading it let us duly emphasize the words "if the instruction has been satisfactory following graduated courses of studies." That means much. Laxity of promotions in the lower classes are irreparably injuring the vitality of our schools. We are feeling this very painfully. High schools are popular in proportion to the strictness of promotions in the lower classes and production of good results in the S.S.L.C. and Matriculation public examinations. As we saw in the beginning of this paper, the poverty of materials in classes due to laxity of promotions is the highest stumbling block in the way of the English teacher's success.

There are other factors in English teaching which can only be mentioned in passing here, and which require separate treatment by themselves. The English room, its equipment, the library and organization of reading work, the school debating society, these are some of them.

Such are the problems that 'come home to the business and bosoms' of all English teachers in this country. It will be easy to understand, now, why the reform method has not produced in our schools the beneficial results which its adherents claim for it. Surely no method, however psychologically sound, can lead our pupils to success if the teaching is entrusted to untrained and unqualified teachers, if there is no proper co-ordination of work, if there is no good supervision of a constructive nature, if pupils are promoted even when they don't deserve it, if they are not classified rightly, if aids to teaching are few and not easily commanded, and if teachers never care to know what goes on in the school outside their own classrooms. Now that secondary schools are being multiplied in the country, the organization of English teaching should receive adequate consideration, if schools are to be run on proper lines.

M. KOTILINGAM.

THE TEACHER.

EDUCATION now-a-days has become, to apply an economic law, a matter of increasing cost and decreasing returns. It is that branch of human activity, which undertakes to equip him for the battle of life, and set him on the proper path for a glorious future. The teacher is the master-hand of this department, and he is the pivot around which all the future of any country turns. The off-shoots of the present educational policy fall far short of our expectations, for while greater attention is paid to making the course rigorous and costly, the needs and capacities of the students are overlooked, and the Educational deities gloat over the thousands of 'Plucked candidates' whose laments echo in the hearts of every one year by year. A promising student, hardly prepared for any disappointment in his career, has to hear the ghastly tale, that he is one of the sheep butchered mercilessly. We have reason to hope that at least now, that Education has been made a Transferred subject, and is in the hands of Indian Ministers, that better days are not far off, and speedy arrangements will be made to bridge over the troubles that multitudes are a victim to.

From the earliest days the profession of the teacher has been receiving the greatest reverence. There has been a special sanctity attached to it. Cheiron, the Centaur-Pedagogue of Greek legend, is revered as the foster-parent of Jason and many other Greek heroes, and he was more sacred than even the father, since in him lay the future of the youth. Even in our own history, we have seen how sacred were Vasishtha, and Viswamitra, and how it was their training that gave Rama and Lakshmana, their immortal success.

It was Valmiki that gave to Lava and his twin brother, Kusa, the strength to over-master even their own fathers. But for Bishma the Mahabharatha heroes would have dwindled away into oblivion. They have been the chief constructive element in all past history, and are, and will be so always.

Of all the professions that man has a fascination for, and is attracted by, there is nothing so peaceful but powerless, so fruitful but silent, so healthy but remote from all the bustle and turmoil of worldly strife, so supreme and holy as that of the teacher. He is more than a parent, and he rules the realm of the book and the birch with the solitary weapon of his personality, his tongue, and in a few cases the rod. He is one that least participates in local animosities, but yet forms an integral and significant unit in the body-politic of the village. On account of 'Indefinite lore,' and 'extra-ordinary erudition' the rural teacher is most conspicuous and exacts unalloyed adoration, the 'Guardian Angel' of the village.

The teacher, in the village as elsewhere, is the exact counterpart of the Pastor in the Scriptures, and he has as much pastoral care over his flock of school-children as Jesus is ascribed to have had, over his flock of men in Jerusalem. He bestows all his affection over them and works heart and soul for their good. From the supreme college professor, down to the rural school-master, this feeling of responsibility and interest is visible, men in charge of bringing up youths to be upright and famous in their time. Many a teacher in recent days has been the idol of the student and not to speak of multitudes of 'roses who have blushed unseen' we may aptly refer to the late Dr. Arnold of Rugby and Dr.

Miller and Skinner of the Madras Christian College.

Dr. Arnold was the most popular Headmaster of the Rugby School and in the words of his more famous son he was:—

"Oh; faithful shepherd, to come
Bringing thy sheep in thy hand,

Ye move through the ranks, recall,
The stragglers, refresh the outworn
Praise and re-inspire the brave,
Strengthen the wavering line,

* * * Our march
On to the city of God.

Such is the esteem that Matthew Arnold has for his great father, to whom was vouchsafed the special privilege of guiding the destinies of many a promising youth and who has been the standing monument of all that is admirable and worthy of imitation in a teacher.

Dr. Miller and Dr. Skinner have endeared themselves to all by their simplicity and parental care and interest they evinced in their youngsters, their profound knowledge of science and literature and their majestic personality which enforced mute obedience and discipline. Such is the attitude one has for a good teacher.

Far from the regular course of things it yet stands a stubborn fact that the responsibilities of teachers in charge of higher education, are less pronounced and palpable, and their task less difficult, than that of the lower classes teacher. It is the stage in the life of the lad between 6 and 18, that is the formative period and that has to be taken particular care of. The lower class teacher knows little when compared to the Professor in a college, but his work, that of implanting the seeds of

knowledge, the preparatory stage of the youth's life, and the guiding of the immature intellect of the youth is far more significant and appeals to our better judgment, than that of the professor who prepares for a lecture in the class, repeats it to the indifferent or at least half-willing class, paying the least attention to the fact whether the student understands him or not, but particularly careful to be mercilessly stringent in the award of marks, in time of examinations. By this, we do not mean to decry the value of the work done by the Professor. He works on a more mature brain, and their genius is devoted to development, while that of the lower man aims at a strong foundation for the edifice of the citizen body. The value of each is equally sacred and important.

The calling offers few chances for the aspiring youth, since sufficient emolument is hardly found co-eval with the work expected of him. Some idle brains have said that the teacher's life is only fit for old men since it is after all routine, and the intellect of youth, utilized on this profession is after all a waste. This is too silly and sinister an opinion. It is the vigorous youngster that is wanted for teacher, though the wisdom and experience and managing capacity of elders is also necessary. The higher demi-gods in the hierarchy of educational officialdom, manipulate all Government resources to themselves while it is the lower circle that trembles in the balance.

The S.S.L.C. trained teacher, in most cases a smart young man, has always been an object of special rigour at the hands of the authorities. The old Matriculates have made the best of a bad bargain and they are now far better in the position as either Sessional school-masters, or High School assistants. The training that the S.S.L.C. man undergoes

is hard for its course, and after he has escaped the common filter he enters some school as a teacher on a small start of Rs. 25 which considering the work he does and responsibilities he bears, is evidently too little. He has to move heaven and earth on to gain a sustenance on his limited income, and the honest penny that he earns as an un-ambitious pedagogue, is hardly enough for him. The fact that he occupies a lower rung in the ladder of educational officialdom does not afford an argument to fix the ratio of his income as compared with that in the higher circle, as 25:500. By the time that he can successfully work himself into the favour of the authorities which is next to impossible, he will have either resigned his job, care-worn, or have retired from service. To add to this, comes as a gratuitous insult, the abnormal rise in the cost of living, which stares the impecunious school-master in the face. The total neglect that the authorities treat them with, has made their lot more deplorable. The question of remuneration for the occupants of the lower rung in the ladder, has been engaging the minds of many a politician, and the Government have a legitimate task to fulfil, to accord satisfactory stimulus to the teacher, that he may be induced to apply himself to

his work and achieve the glorious aspirations and traditions of his noble profession.

More clearly romantic and valuable is the life of the rural and elementary school teacher. He is the demi-god of village society, a member of the administrative body, the most respected in the village but least paid by those who govern his sphere, but well-fed by the grateful and willing public for his benevolent work. An Elementary school teacher who has under his care about 60 infants to be brought up, is paid a 'ration allowance' of Rs. 12 which can hardly feed one mouth for a month. Simple yet unassuming, contented yet orthodox, timid yet useful, he fills a place that is silent, but a significant force in the reconstruction of the country. Whatever men may say on the point, the schoolmaster has run the gauntlet of public criticism and has emerged a glorious man from all the trials to which such men are subject. It is thus the teacher who needs the legitimate attention of the rulers and it must be the prime object in the enunciation of the educational policy of our Minister to improve the lot of the teacher, before attempts are made to work upon things of far less immediate importance.

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P. VENKATESIAH.

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SECONDARY GRADE TRAINING.

SOME time back there was an article in the columns of your valuable Journal regarding Secondary Grade Teachers, under training. It is really a pity that qualified S. S. L. C.'s, Matrics, Intermediates, who have chosen the teaching profession for some reason or other are huddled in, to undergo the severe internment for a training covering a dull period of 21 months. Their lot is found worse on an examination of the work they are forced to do, such as to read set-books of literature, in English and Tamil, affording little chance for the improvement and a reiteration of what was read in the S.S.L.C. of the portions of Mathematics, Science, History, and Geography. Drawing and Drill do play no less part. However, the ordeal is gone through by the few settled persons taken to the profession.

The worst feature of all these is, that even the tedious hardships undergone by the poor training students being in an inconsiderably low economic status. They are not the direct recruits from student-life but most of them are married men with families to support come up for the training after not less than one or two years of service and they have to live in a new costly place on the low amount of Rs. 12 which is paid to them in the names of Stipends. By having entered the Training School they not only lose about Rs 30, which they would otherwise be earning being employed elsewhere but also have in addition to their stipends to spend at least Rs. 10 a month extra.

We need not dilate much on the wisdom of having raised the period of training from 9 to 21 months, as it has been fully dealt with in the previous article. Equal care has not been

taken by the authorities responsible, to provide for their better future prospects.

The question of salaries has now come up for the consideration of the Government. What guided the policy of Mr. A. R. Knapp to suggest a starting of Rs. 30 for the Secondary grade trained teachers, while he recommends for their compeers—clerks who undergo no initial training, to start with at least Rs. 35 is beyond one's comprehension. The Salaries Committee has been more reasonable, a minimum of at least Rs. 50 should have been fixed at. Since it is not final it is hoped that the Government would be doing full justice in the matter.

But regarding the stipends paid for the training students, neither the Director of Public Instruction to whom memorials have been submitted, nor any other responsible officer, has paid any attention. The period being long at least the stipends should be raised to a minimum of Rs. 30 per mensem for the Secondary grade. In the absence of either the increase in stipends or the reduction in the period of the course, it is doubtful if there would be any more men to choose the profession, and resign themselves to undergo the punishment of the two years' training on the low stipends and for the poor prospects ahead. Let no one be led away. This is a warning to the authorities to mend matters, and also to those that may enter the Training School to keep off in the absence of better conditions.

A. K. VISVANATHAN.

15.

ELEMENTARY MATHEMATICS ASSOCIATION.

A meeting of the Elementary Mathematics Association was held at the Madras Christian College on 30-10-20, when Mr. V. Thiruvengkatachari, M.A., L.T., Teachers' College, Saidapet, read a paper on "The Parallel Postulate in its relation to School Teaching." M.R.Ry. P. V. Seshu Ayyar Avergal presided.

Abstract: The science of Geometry is based upon axioms and postulates, which cannot be proved by simpler propositions. Euclid's Geometry is based upon five axioms and five postulates of which the Parallel Postulate is the last, viz.:

If a straight line falling on two straight lines makes the interior angles on the same side of it less than two right angles, the straight lines if produced indefinitely, will meet on that side on which are the angles less than two right angles.

This was considered by Euclid as self-evident. Succeeding geometers did not take it to be so, and their attempts to prove the parallel postulate but vindicated Euclid's decision to place it among independent self-evident assumptions on which geometry is built up, and in addition have through a critical examination of the fundamentals of the subject led to the creation of the modern "Non-Euclidean," the Elliptic and Hyperbolic Geometries.

The history of this department of research is brilliant with the names of eminent mathematicians—Sir Henry Savile, Wallis, Bertrand. Many substitutes have been proposed and examined.

1) *Playfair's axiom:* Through a given point outside a given straight line one and only one parallel can be drawn to the straight line. This does not hold in hyperbolic geometry, where two such lines are possible.

(2) *The sum of the angles of a triangle is equal to two right angles.* Many attempts were made to

hit at an intuitive proof of this and then to prove the parallel postulate with it. A proof which has crept into our text-books is the rotation proof. The objections are that in this proof, in going round the triangle we not only turn through an angle equal to the sum of the exterior angles, but also go over a distance equal to the perimeter. This proof is equally valid for triangles on a spherical surface with a ruler bent in the form of a great circle. But the sum of the angles of a spherical triangle is not equal to two triangles.

(3) *Similar figures exist:—Wallis.* This involves an assumption of the parallel postulate, and in Non-Euclidean geometries similar figures do not exist.

(4) *Bertrand's proof by means of infinite areas.* Now considered illogical and therefore unacceptable.

(5) *Proofs based upon idea of direction.* The "direction" theory of parallels was originated by Liebnitz. The text-books which employ these methods use the idea not as a derivative but as a primary one, since no definition of direction is given. The origin of the 'direction' definition of parallels might be due to the definition of an angle as the difference in the direction of two lines and the sameness in the direction of parallels to the fact that "the difference of direction" which they exhibit with reference to a third line are the same. To make this theory complete we have to assume that "straight lines which make equal corresponding angles with a certain transversal do so with every transversal."

This naturally leads us to the definitions of an angle, and Schotten's classification of them into three groups representing the following views:—

(1) An angle is a difference in direction of two straight lines that meet.

(2) An angle is the amount of rotation necessary to bring one of its arms from its own posi-

tion to that of the other, without its moving out of the plane containing both.

(3) An angle is the portion of the plane included between two straight lines in the same plane, meeting at a point. Of these, No. (2) seems to be much in use and supposed to be easily understood by the boys, and is the only one useful in the early stages. In this connection the remarks of F. Dodgson are interesting.

The conception of parallels as equidistant straight lines has been largely adopted in modern times. Here we have to prove that the locus of points equidistant from a straight line is a straight line. In hyperbolic geometry this need not be a straight line, and equi-distance and parallelism are independent properties. It is only a happy coincidence that these two are related in Euclidean Geometry.

To a teacher of geometry, a sound knowledge of the investigation of the parallel postulate is highly useful, and will enable him to keep clear before his mind the relative merits of rigour and clear exposition through intuition and the practical.

A treatment of the parallel postulate without reference to Non-Euclidean Geometry will be incomplete. The researches of Saccheri, Lambert, Gauss, Lobatchewsky, Reimann and Bolyai have built up these stupendous branches of pure mathematics, which are standing monuments of the creative genius of man in the abstract realms of thought.

16.

At a meeting of the Elementary Mathematics Association held on Saturday, the 29th January, 1921, a discussion was opened on 'Organization in School Mathematics' by Mr. V. Raghunatha Aiyar, B.A., L.T. Mr. S. Ramachandra Aiyar, B.A., L.T., Perambur, was in the chair.

*Organization in School Mathematics:—*The term organization includes the consideration of everything conducive to efficient work, the curri-

culum, library, laboratory, accommodation, equipment and staff.

*Stock-taking:—*It is a well-known fact that during the past decade improvements on a vast scale were effected in the curriculum and in bringing about realistic teaching. The treatment of arithmetic, algebra and geometry in water-tight compartments was recommended to be put a stop to, the concurrent treatment of practical and theoretical geometry and the correlation of mathematics with allied subjects such as physics have been advocated with a view to mutual illumination, the extensive use of graphs and diagrammatic illustrations brought into practice, the importance of caring for the rationale of mathematical principles insisted on instead of the once prevalent system of caring only for mechanical example grinding, questions involving the calculation of the time of passing of the n th and the $(n+1)$ th trains or the conversion of 3.78085 miles into 3 miles 6 furlongs 9 poles 4 yards 2 feet and 4.656 inches no more appear in examination papers and, in short, the suggestions of the Perry movement have been advantageously introduced though with demur by some of the ultra-conservatives who were for the full maintenance of the older traditions and who hence felt sorry at the initial stages that their good old admirable hobbies were pooh-poohed. As the old order changed, yielding place to the new, the teachers were given the benefit of a course of University lectures on the new ideas. To avoid the criticism that syllabuses issued departmentally do not provide for individuality being developed, latitude of treatment was given scope to. Also, provision was made in the curriculum for a general course as well as for the specialists' course.

In spite of the reforms contemplated, it appears there is room for further improvement as certain defects are still said to persist. *Orthodoxy:—*

Many still do not go even a hair's breadth

beyond the examination syllabus, the treatment of interesting topics like variation, important trigonometrical ratios, etc., is least attempted, problems of an ingenuous nature and involving long simplifications and continued fractions are still kept on as a hobby and considerable time continues to be superfluously spent on topics which may better be omitted both in the interests of the teacher and the taught, e.g., on G.C.F. by long division in Form I, etc.

Practical work.—Out-door lessons are rarely conducted in connection with practical work and the formulae in mensuration are learnt without their application in practical life being understood, so much so that the person who knows how to manipulate on paper problems on heights and distances or those on areas and volumes of walls does not know how to calculate in practice the height of a tower or the quantity of masonry required to build his own house. Practical work in in-door lessons is often rendered dry and monotonous because of their repetition in both the Middle School and in the High School courses and also because of the work being indifferently conducted owing to teachers being over-worked. It is a matter for consideration if provision could not be made for useful practical work in out-door lessons, e.g., surveying, etc., and thereby render problems on drawing to scale, heights and distances practical, instead of assuming that such work should be relegated only to Engineering schools and colleges. [In this connection a confession was made by one of the audience present that even though he was quite good at solving problems on heights and distances he got—2 feet as the height of the Trichy Rock Fort when making calculations with the help of measurements taken.]

Teaching of principle versus example-grinding.—In some places, intelligent methods of teaching are known to be attempted whenever such a show is necessary, but in the ordinary working, intelligent teaching is substituted by mechanical

example-grinding and thus mechanical drill is given precedence to every other form of mathematical training, it being believed that only then the pupils would score a high percentage of marks in public examinations. This belief is likely to be tenaciously held by orthodox teachers, parents and managers, as the work of teachers and the prestige of an institution happen to be judged solely by the percentage of eligibles or the school average in public examinations.

There is also a tendency of the pendulum swinging to the other extreme. In an attempt to teach mathematical principles intelligently, too much of time is being spent in such teaching much to the sacrifice of the drill required. Some go to the extremity of expecting young pupils to prove the rationale for processes like $\frac{3}{4} \div \frac{2}{3} = \frac{3}{4} \times \frac{3}{2}$. The pupils need no doubt be made to accept rules only after adequate reasons are pointed out to them for their formulation but when questions of that type are allowed to appear in examination papers the pupils are expected to remember logical reasoning which is beyond their powers to remember and reproduce. Again, in some schools, in spite of the so-called short-cuts being taught with the requisite rationale, practice in oral drill is far from sufficient. The result is that the pupils of such schools are unable to work quickly and orally problems they meet with in making purchases in the local market, etc.

Graphs.—Graphs are at times badly done and the graphical solution attempted in working problems which may more easily be solved otherwise, so that the accusation is still launched against their use by some laymen who say that thereby pupils only get $8 \times 6 = 47$ or 49.

Solid geometry and astronomy.—Elementary portions of solid geometry, the great and small circles, Mercator sailing, etc., which hitherto were attempted with great enthusiasm by the geography teachers are being given up by them because they think it more essential to deal with

the human aspect and thus neglect what used to be styled 'the astronomical portion.' Hence to make up for this portion of knowledge given up, provision may be arranged to be made in the Elementary Mathematics Syllabus of High Schools towards teaching the concerned fundamentals in solid geometry and astronomy.

Co-ordination of work.—Certain portions which may be easily attempted as practical work in mathematics are attempted with great grandeur as practical work in physics, especially long after the theory and practice of the principle involved are sufficiently dealt with in the mathematics class, e.g. the value of $\odot^{\circ}$. It is a question for consideration whether sufficient co-ordination of work in mathematics and physics could not be arranged for so as to save unnecessary reduplication of work and time as well.

Drudgery of treatment.—Some topics still continue to receive a routine or drudgery treatment. Much work in algebra continues to be attempted as an unintelligent manipulation with symbols. The analogy between arithmetic and algebra is in some cases pushed too far in wrong directions, e.g. in deriving the arithmetical G.C.F. from the algebraic H.C.F. Variation has been taken to refer to a signal for the performance of some gymnastics with 'k'. Extended application of functionality with reference to the objects around us and the permanence of algebraic form have not had the requisite intelligent consideration, the necessity for irrationals and the laws governing them are not well impressed, deductive reasoning is neglected as a sin in Elementary Mathematics inasmuch as the syllabus requires only the experimental verification of the properties of certain figures, portions of financial arithmetic are not treated with their appropriate bearings on practical life, approximate or 'contracted methods' are attempted in some cases without their application in practical work being shown. The methods of saving labour in working to a required degree of approximation exercises like $a \times b$, $a \div b$,

$a \times b \times c$, $a \times b \times c \times d$, $\frac{a \times b}{c}$, $\frac{a \times b}{c \times d}$ etc.

where a , b , c , etc. denote numbers with several decimal places are being dinned with most expenditure of time and energy but not without confusion amongst teachers and pupils. That both of them forget the methods about a month or so after they are done reveals the fact that something is wrong somewhere. Some of the important laws underlying such approximations and which have useful applications in physics and mechanics are mostly neglected. The pupils find the rules of procedure adopted by the teacher to be troublesome and generally prefer to do a tedious straightforward piece of work. It is high time for consideration whether what appears to be valueless work should be eliminated or retained with necessary prunings.

Matter in publications and utility of apparatus.—Without bestowing independent thinking, some take to the mathematical matter appearing in printed books as faultless. As this leads to the imbibing of incorrect ideas a caution may be given here against such acceptance. (Please see the pillory portions of the E. M. A. bulletins.) Similarly, apparatus and appliances are gone in for whose use in illustrating the truth they pretend to is open to question, e.g. the hollow rubber discs to show that the area of the surface of a sphere $= 4\pi R^2$, the obtuse-angled set squares, etc. It is a point to be considered whether teachers could not devise cheaper and more suitable apparatus and appliances for school use.

Equipment and accommodation.—Very often the complaint is heard that suitable books are not to be had in a school library nor journals and that as there is very little scope for exchange of ideas the teacher's knowledge of the subject remains more or less stagnant.

Institutions are at times poorly equipped and of inadequate accommodation so that no provision is made for a mathematical laboratory.

The staff and its qualifications:—At times, a mistake is committed in the distribution of mathematical work to teachers, e.g. in the drawing-master being asked to teach Practical Geometry and the teacher who took to the profession because he was a failure in the Sub-Overseer's class is credited with superior power to teach Mathematics effectively. In spite of Jacotot's principle that that man should teach a subject who knows nothing about it and of the fact that now and then teachers with nominally poor qualifications may from their personal power render the teaching highly effective and efficient while those credited with a high degree of scholarship because of their academical degrees may be failures as teachers, it appears to be an accepted principle in these days that the lack of brilliant academical qualifications in the teacher would seriously affect the character of his teaching and as efficiency is the general ory of the present day such teachers of brilliant academical qualifications alone would appear to deserve entry into the teaching profession. Not to be stigmatized for want of real scholarship and efficiency, though these need not be borne out only by University hall-marks it is imperative on the part of teachers to keep themselves up to the mark by making an intensive and extensive study of mathematics and of the correlated portions of allied subjects especially physics.

The specialist and the non-specialist pupils:—In the organization of work it is recommended as a fundamental principle that the more nearly the pupils of a group are on the same intellectual level both of ability and attainments, the more perfectly can the instruction be suited to their needs, the greater will be the power of emulation and the larger the number which can be taught together with success. The marked dissimilarities in the Group A Mathematics class between the Group C pupils and the rest have culminated, in the former handicapping the progress of the latter and looking upon the Gr. A class with in-

difference and as a tedious one. It is also asserted that the Gr. C. pupils—no doubt with some exceptions—contribute to the raising of the Presidency and school averages in the S. S. L. C. Public Examinations and thereby stand in the way of a larger number among the rest being declared eligibles. Besides, some useful and interesting portions of mathematics have been put in under Practical Mathematics Gr. C. Very few schools give a course of instruction in that subject. It is also alleged that the Intermediate Classes do not welcome students taking up that subject for Group C in the S. S. L. C. on the plea that they have not a firm grounding in the sequence of propositions. There appears to be little scope in the present state of education in the Presidency for an industrial or a technical study as a continuation course. To set right the above state of affairs it deserves to be considered whether the Group C pupils should continue to sit along with Group A pupils for instruction in Mathematics, whether provision could not be made for students desiring to specialise in mathematics to have a course in algebra and geometry and practical geometry as contemplated in the present syllabuses on the subjects and in all those portions of the Group A Mathematics syllabus of 1910 which are not contained in the syllabuses for the first two subjects and whether any change should be made in the present Group A Mathematics syllabus which would form a compulsory course for the non-specialists. The necessary time would also be gained thereby to help the specialists study the subject intensively, the classification into specialists and non-specialists would be effected without mutual detriment but rather with mutual benefit and the corresponding changes also could be made in the calculation of the school averages, etc.

Reform and reorganization in the light of the circumstances represented above appear to be necessary. It behoves all teachers of mathematics to demand for good equipment of their school in regard to library, apparatus, appliances and

accommodation for a mathematical laboratory and for improved conditions which would keep them from fatigue and from auxiliary wants so that they may be in a position to do effective work, and to make a rigorous, intensive study of mathematics and of physics. Arrangements may also be made for frequent conferences of inter-school mathematics teachers, for the institution of a central lending library, for the circulation of up-to-date information by means of a journal issued by an effective central body, etc. The Elementary Mathematics Association may be worked as the means for carrying out most of the above objects.

The opinions of the members are invited on the topics considered above.

17

M.R.Ry. T. K. Venkata Rama Aiyar Avergal, Inspector of Schools, Salem, presided over a gathering of the Mathematics masters of Trichinopoly and places near by on 4-3-21. The objects of the Elementary Mathematics Association (Madras) were explained by the Chairman and a lively discussion followed. As a result, we have great pleasure in announcing the formation of a Branch of the Elementary Mathematics Association at Trichinopoly with nearly 30 members. Mr. S. Krishnaswamy Aiyangar, M.A., L.T., Lecturer in Mathematics, Training Section, St. Joseph's College, is to be congratulated on the success of his efforts in bringing together gentlemen interested in the subject and forming the branch of the Elementary Mathematics Association.

We are desired to publish the following:—

NOTICE.

TATA EDUCATION SCHEME.

Two studentships, enabling the recipients to proceed to Europe for the acquirement of special knowledge in any department of Science, Art or Engineering, or for fitting themselves to enter the higher branches of Government Service, are open for competition, by selection only, to graduates who have displayed marked ability throughout their University career. Though both the studentships, this year, are primarily available only for Parsee students, application from any other pure native of India, including Native Christian, will also be considered. Applications will be received not later than 15th June 1921, addressed to the Secretary of the Scheme, Navsari Buildings, Fort, Bombay, with copies only of certificates as to the applicant's Age, Nationality, Character, Physical

Fitness, and Educational Qualifications. No application, unaccompanied by satisfactory evidence of age, will be considered. Consent of parents or guardians to the candidate's proceeding to Europe for the prosecution of his studies should also be annexed to the application, and a copy of his photograph enclosed. A copy of the terms and conditions of the Scheme will, if required, be forwarded to all duly qualified candidates.

Bombay, 10th April 1921.

CORRESPONDENCE.

To

The Editor,

"THE EDUCATIONAL REVIEW."

Madras.

DEAR SIR,

I request that you will kindly allow some space in your valuable and esteemed journal for publishing the following few lines:—

It is rather surprising and pitiable to note that the Salaries Committee's interim report has altogether ignored the claims of Under-graduate teachers (F. A.'s and Intermediates) and given the same scale of salaries for all teachers of Secondary grade which is not all commensurate with that of his compeers in other departments. While there is a distinction made between the Elementary Lower grade and Higher grade teachers, no such distinction is made between the S. S. L. C. trained teachers or Matriculates and the F. A.'s or Intermediates who form the connecting link between the L. T.'s on the one hand and the S. S. L. C. holders or Matriculates on the other.

There are many trained F. A.'s, Incomplete Graduates and Intermediates who are working both in High and Middle Schools whose work is no less important than the work of his compeers the L. T.'s. It is but sheer injustice and heart-burning to all the Intermediates and F. A.'s not to speak of Incomplete Graduates that they were not at all recognised as teachers, and their emoluments were not considered at all. When the L. T.'s are started on a scale of Rs. 100-5-150-10-250, it is but just and fair that the trained F. A.'s or Intermediates should be started on a salary of not less than Rs. 75 and his scale should be fixed (Rs. 75-4-95-95-5-120) or the cadre of senior clerks 80-4-120. I request that all F. A.'s and Intermediates in the Teaching profession shall rise up and demand for their just claims and rights. "Awake, arise or be for ever fallen." I hope my words will not be a cry in the wilderness.

AN UNDER-GRADUATE TEACHER.

EDUCATIONAL TOPICS.

American Education that Educates.

In America the elementary school is the basis of the whole educational system where the pupils are instructed in those subjects which are essential to the work of all other schools. The programme is comprehensive, including in the major portion reading, spelling, language and arithmetic, and also geography, history civics, drawing, science and manual training. Children are also taught art in the last two of the primary classes.

"Children in the last two classes are encouraged," you will be told, "in making things with their hands, except the representation of nature forms by means of drawings, painting, and paper-cutting.

"They model in clay to stimulate observation of things in three dimensions. The purpose of this plan for the first two years is to avoid habits of symbolizing nature forms, a habit which is radically opposed to that direct and real observation of nature which is essential in representation drawing which is the foundation of all graphic and plastic art expression.

"Practice is given in construction drawing, lettering, clay modelling and color theory. Construction drawing is given in a manner that will not be confused with representation drawing. It is applied to things of interests to the pupils. Lettering, while it is good training for the eye and the hand, makes a desirable approach to harmonious space-filling and design.

"Clay modelling, construction drawing, lettering and color theory are continued in upper classes. Freehand drawing and coloring from natural objects are introduced, using lead pencil, charcoal and pastel crayons. It tends to cultivate a greater consciousness of real vision and realistic representation, while avoiding symbolic interpretation."

The secondary schools are divided into general and vocational institutions and offer a rich variety

of elective courses. The great majority of pupils here learn some trade or industry; but one of the main purposes is to train people for the University.

The higher education, like the secondary, is also of two kinds: general and professional. The general education is designed chiefly to furnish a broad preparation for life, though it may also secure a basis for professional training. The successful completion of the course leads to the degree of Bachelor of Arts. The professional education is intensely practical, rather than theoretical or scholastic. It teaches a man a profession, whether that be of an engineer, agriculture, or medicine.

The higher education, as is imparted in an up-to-date American University, is as efficient as it is varied. A large University is divided into a series of colleges, schools, or divisions, and each sub-divided into a number of departments. They are all usually on one campus and always under one administration, the head of which is styled the President or Provost.

The Extension System is very curious and valuable. The Extension Division is an agency through which the University strives to extend the advantages of higher education to those who have not the time or the means to enter a higher institution of learning. This it tries to accomplish by lecture courses, by technical instruction at convenient centres, by short courses at select public schools, by travelling libraries and exhibits, and also by correspondence study. The Extension Division of the University of Wisconsin, whose unofficial motto seems to be to extend the opportunity for education "to the whole body of the people, to the whole period of life and to all the vital interests of life" offers over 254 courses in its correspondence-study department. In one of its recent announcements on correspondence courses in mechanical and industrial subjects, I find among others the following listed: shop drawing, sheet metal drafting, mechanics, mechanism, principles of steam engineering, steam engines, foundry

metallurgy, hydraulics, electric wiring, telephony, gas and oil engines. What is being done by vocational correspondence in machine shops and draughting rooms is also being attempted successfully at Wisconsin in the science and practice of modern agriculture. Among agriculture correspondence courses are, included dairying, animal husbandry, poultry, crops and crop rotation, soil management, bee culture, farm book-keeping, and marketing.

The Bureau of Education is a fine feature—the apex of the whole system. The Federal Government's control is instructive and advisory. Sound physical health is the foundation of all education.

The writer of the above article, Mr. Sudhindra Bose, Lecturer in America, would, in imitation of the American system, give a programme of educational construction in India which is as follows:—

1. Universal free elementary education.
2. Free text-books.
3. A fund to provide poor children with lunches and needed clothing.
4. School physicians.
5. Teachers who have close personal touch with students and their parents.
6. More vocational education.
7. The doors of the college open to all.
8. A large number of free scholarships.
9. Aid to worthy students to complete their education abroad.
10. Academic freedom of discussion in schools and colleges.
11. The abolition of mischievous government control of education.
12. An educational system which shall be "of the people and for the people."

From the Modern Review (February 1921.)

The Tagore Type of Play.

The Editor of *The Mysore University Magazine* in a recent issue of his journal asks us, in thinking of the plays of Rabindranath Tagore to forsake almost all the dramatic tests which we have been

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accustomed to apply, whether to Greek or English drama. Tagore is the inheritor of the Indian dramatic tradition and however wide be the gulf between his thought and manner and those of the great Sanskrit dramatists of the past, yet his plays are in the direct line of descent from theirs. In the West the dramatist presents life in its variety, its movements and contradictions, whether seen from the humorous or tragic point of view, its impulse and its joy, its mystery and its sadness. It is not his concern to explain it by the application of any philosophic theory.

In India the case has been altogether different. The Indian dramatist too knows the delight of life. But he conceives that in his philosophy, in his religion, he holds the key to its meaning. This has several results. First, it means that his personality is much more prominent in his work. His task is not merely to mirror life, but, in the light of his intimate religious knowledge, to interpret it. Naturally such drama tends to become lyrical, for the poet, being now interpreter, will seek expression for the sorrow and the rapture that this interpretive vision arouses in his own heart. He cannot represent life's contradictions without revealing the truth that, to his mind, reconciles them. He has solved life's problems, and cannot but offer his solution. Western drama reveals its greatest power in the presentation of conflict, but a conflict ceases to absorb the dramatist who has arrived at its full reconciliation. The conflict will always be present, but the certainty of reconciliation will be felt from the beginning. This means the loss of one kind of dramatic power and the gain of another. Again, the idea of God, and of man's relation to Him, is so prominent in Indian drama that, to a certain extent, it loses that interest in the human for the human's sake that means so much in western drama. When the religion that moulds all the thoughts of a dramatist insists that absorption in the divine is man's highest hope, and the subduing of desire his prime virtue, that dramatist will

not give us such studies, say, of human love and ambition as are among the most potent things in Shakespeare. The strife of mortal with mortal will not interest one to whom man's relation to God is everything; and contrast of individual with individual will appear of less moment than the judging of character by an ideal standard. Ups and downs of worldly fortune will mean little in a play deliberately devoted to nobler fortunes and relationships. It is no wonder, then, that Indian drama knows no tragedy in our sense of the word.

Another thoroughly eastern element in Tagore's plays is their symbolism—a very disturbing thing in drama, and, on the whole, an undramatic thing. In these plays there is always something of this element, and sometimes it is the essence of the play, as in the case of *The King of the Dark Chamber*.

In Tagore's symbols we find suggestions which are very various and also not definable or capable of analysis. They are not equivalents of something symbolised, but are of the type of music whose import defies any sort of verbal expression.

The Rabindranath symbol represents a truth so central that words may reveal this aspect of it, or that, but can never express the whole. He is dealing, as it were, less with life's definite fabrics than with the stuff of which life is made; and his symbolism is a method, incomparably superior to any literal method, of revealing the unity of life. Light—darkness—there is no figure that is closer to the heart of things. And this play is not a translation into symbolic language of truth that is first literally conceived. It is a process of thinking, and apprehending, in symbols. Of course, this is injurious dramatically. Such work is best judged as poetry, lyrical in its nature though dramatic in form. Some of Tagore's plays act excellently, but a stage-presentation of *The King of the Dark Chamber* could not succeed except (and this is what no dramatist must demand) with an audience that had already studied the play. And while we

must allow symbolism its place in Indian drama, we would contend that the *universal* quality of drama, namely, its capacity to impress itself upon an audience in a theatre, demands (1) that where symbolism is present its place shall be such that the play is duly significant without it, and (2) that the symbolism itself shall be interpretable by the enlightened spectator from moment to moment during the play's performance.

Dr. Miller on the Calcutta Commission Report.

The Rev. Dr. W. Miller, C.I.E., writing in the last number of *The Christian College Magazine*, touches on a few points on which he differs from the recommendations of the Report. The first respect in which he strongly differs is about the status of the Intermediate Colleges:—

"In one important respect, I differ greatly from what the Commission has recommended concerning Intermediate Colleges. No such institutions ought to hold a place in the training of students, who are to have a truly liberal University education. They may be extremely beneficial to students who, after a sound school education, look forward to devoting their lives to some form of technical or industrial pursuit. A training, however, that is to be liberal in the widest sense, ought to begin as soon as College students have left their years of school life behind them. The longer continuance of what would, in their case, infallibly, become a couple of years more under conditions of school discipline would have a cramping effect on their further course of study, and on their whole subsequent careers. Those who are to be liberally educated in any real sense ought to be gifted with some amount of freedom as soon as the healthy restraints of school discipline are relaxed. They ought to be in contact with competent and sympathetic professors and with those who are two or three years ahead of them along the path that leads to their becoming liberally educated men. For such as are to become so in the end, the right

course is that their school life should be terminated by an examination, which an ordinarily intelligent and properly trained pupil, may be expected to pass at the age of seventeen or thereabout. Some two years more in the comparative freedom of a College, in contact both with professors and fellow students more advanced than themselves, would be a healthy, and in my opinion necessary, introduction to the highest stage of a really liberal education. Whether the examination which an average student may be expected to pass when about seventeen years of age, ought to be conducted by the University itself, and called a Matriculation examination, or whether it should be known as the School Leaving Examination, and be managed by those whose interests and experience have been concerned with school rather than college life—these are questions which can be determined aright, only by those who are in living contact with the facts around them, and ready to make full allowance for constantly changing circumstances and conditions. The one thing I am certain about is, that students who are to be liberally educated in the true sense, and to be worthy products of a University, must be set free from the rigid discipline of the school at about the age which I have mentioned. That it is unwise in their case to place them after that age under anything like school regulations, may be proved, if proof be needed, by what is known of the results produced by the German system of education.

The true functions of such Intermediate Colleges is to train their alumni for active and skilful participation in the business of common external life. Admission to them must be made by the same open gate that leads to the broader field of liberal University culture. Their courses of study ought to include instructions in all the various ways in which scientific discovery can be made helpful to the welfare of individuals and the economic development of a nation.

Again each University must consider the con-

ditions that surround it and must face its new problems and work out their solutions for itself. There can be scarcely any greater mistake than to set up Oxford or any other University as a pattern to which all centres of learning must conform.

There is yet another way in which Madras should avoid following the lead of the Commission's recommendations. In the case of Calcutta, and no doubt, of other cities equipped with many colleges, these recommendations aim at putting all the colleges together, in a huge, and in my judgment chaotic mass. Certainly, where several colleges stand together in a single city, they ought to be as far as possible in kindly touch with one another. They ought to have inter-collegiate debates, inter-collegiate sports, and so far as may be found practicable inter-Collegiate or rather University lectures that may serve as a common centre for them all. There are, however, considerations of distance, time and climatic conditions which the Commission practically treats as if they were non-existent. This is one more example of the tendency to imitate what has been found practicable and desirable in other lands, and in very different circumstances. It is true that the Commission has evidently been influenced by a desire, which in itself is most commendable. It plainly wishes to encourage the growth of corporate life among all the students of the University. It fails to perceive, that like other great ends, this high object can be attained only step by step. It has forgotten the wise and well-tried proverb that, "A short cut is almost always a long way round." It is all the more strange that the necessity for step by step development is overlooked in a Report which calmly contemplates the existence of one or more colleges in Calcutta, each of them with one thousand under-graduates. A constituency of one thousand, or even of a much smaller number, is enough to initiate the development of social life, and the best elements of *esprit-de-corps*. Suddenly to mix up many colleges, each of them with some

such number of students, is to make the attainment of the object in view absolutely impossible. To preserve each college as a social unit, in which the spirit of comradeship may find free and adequate development is a prime necessity. There is no need that each of the separate colleges in any single centre should aim at becoming as far as the Arts' curriculum is concerned a sort of miniature University. What we now know as the optional branches in a liberal education are already tolerably numerous, and as time goes on will infallibly become considerably more numerous. The ideals would be that each separate college should specialise in one or a few of those branches and that none should so much as dream of giving instruction in them all. The great essential is, that each college should possess a staff of instructors, adequate both in number and in quality, to deal effectively with whatever it has undertaken to teach. This need not interfere, when their situations and other circumstances are suitable, with two colleges combining to give a certain amount of instruction to the under-graduates of both in common. Each college must, however, on the whole be a unity within itself.

The Tanjore District Teachers' Guild.

The following gentlemen have been elected office-bearers of the Guild for 1921-3:—President: M. R. Ry. R. Swaminadha Aiyar Avl, B.A., L.T., F.M.U. Secretaries: 1. M. R. Ry. V. Guruswami Sastriar (Tirukattupalli) 2. M. R. Ry. V. Raghava Aiyangar (Mayavaram). Members of the Executive Council: 1. Rao Bahadur S. Appusastriar Avargal, 2. K. S. Narayanaswami Aiyar (Kumbakonam), 3. S. A. Israel (Tanjore), 4. S. Sri-rangachariar Avargal (Tanjore), 5. N. Panchapagesa Aiyar (Mannargudi), 6. D. Venkatachariar Avargal (Negapatam).

Reviews and Notices.

PHILIP'S ATLAS OF MODERN GEOGRAPHY, EDITED BY GEORGE PHILIP. (GEORGE PHILIP & SON, LTD., LONDON.) 2s. 3d.

Messrs. Philip and Son have brought out an atlas containing 24 full large-page maps, of which the most deserving of mention are those of the new political Europe, the Alps—Physical, that showing the new Germany, Poland, Austria and Czecho-Slovakia, that showing Sweden, Norway, Denmark and the Baltic States, that of Jugoslavia, Roumania, Hungary and Bulgaria, Greece, South-Western Asia showing the Mandated States of Palestine, Syria, Mesopotamia and Armenia and El Hejaz and Africa. This new and revised edition shows in well-marked and striking colours the new changes in boundaries resulting from the Peace Treaties; and thus the publishers have been maintaining their lead in presenting reliable revised geographical publications with the least possible delay. The map of the world shows the principal commercial highways. That of Europe shows both the territories administered by the League of Nations and the Plebiscite areas. There is an exhaustive reference index which contains the positions of a number of names which do not appear on the maps and each place is given its latitude and longitude, while ancient names are in italics. The atlases and wall-maps, in the course of publication by Messrs. Philip and Son would greatly benefit teachers, schools and students alike; and the publishers are ready to help teachers and schools in securing the latest and best editions of these maps and atlases.

HUMAN GEOGRAPHIES—PRIMARY SERIES—BY J. FAIRGRIEVE AND ERNEST YOUNG: BOOK. VI, EUROPE AND BRITAIN: WITH NUMEROUS MAPS AND DIAGRAMS. (LONDON, GEORGE PHILIP AND SON, 1921. 2s. 6d.)

This is the last of a series of Geography Primers which are specially designed to appeal to young children and which make a special point of striking the human note everywhere, describing clearly at every point the relation of man to his environment and the various kinds of human beings who live in the different environments. The series is distinctly progressive both in difficulty of language and of ideas. In the earlier books simple ideas are alone introduced and treat of the causes leading to the growth of towns, relations of wind and

rain, belts and vegetation, rules, determining climatic phenomena, etc., and the present book develops the political aspect of the subject—countries and capitals.

The first chapter deals with France, how it forms a country in the real sense and explains how its chief towns came to be situated where they are—illustrated by a number of maps showing the position of the various towns. Paris is shown to be the best spot from which to rule a number of different districts each of which has its own special climate and productions. At the end of this chapter there are exercises given asking the student to show the importance of the position of Marseilles, to compare the populations of towns by some graphical method, to show the exports of France by means of a graph, etc. Similar chapters deal with the Scandinavian Peninsula, Switzerland, the Balkans, Italy, the Iberian Peninsula, Holland and Belgium, the great street of the Rhine, Russia, Germany, Eastern Europe. One chapter deals with the place of Britain on the globe; another with its climate and relief illustrated by maps showing the average temperatures in January and July, the stream currents of the Atlantic, and the continental shelf. The last chapter deals with the place of Britain among the nations, explaining its advantageous position for work and trade. The exercises are varied and include all modern forms—statistical diagrams, graphs of climate and other phenomena, distributional and other maps, contours and isotherms. The lessons are said to closely follow the English Board of Education's Revised Suggestions for the Teaching of Geography. The arrangement of matter is very sensible and everywhere the importance of man as the living and moulding factor of the environment is maintained.

PRINCIPLES AND METHODS OF INDUSTRIAL EDUCATION FOR USE IN TEACHER TRAINING CLASSES, BY W. H. DOOLEY. (LONDON, HARRAP & CO.) pp. xi & 257. INDIAN AGENCY: P. T. I. BOOK DEPOT, BANGALORE.

We all know, as Mr. Prosser, Director of the Federal Board for Vocational Education, Washington, says in the preface that he writes to this book that one of the greatest and most urgent problems connected with vocational education is "the systematic training of a sufficient number of instructors for existing and proposed vocational schools." Even America and England have shown themselves industrially unprepared for the great war and there has consequently been created in

every progressive country, including India as well, a realisation of the dependence of production upon skill and efficiency and of the part that wise methods of industrial training can have in cultivating skill. Even in our country we are now concerned not only about supplying skilled workers but also by the demand for a larger and larger number of trained foremen and managers. Technical and industrial education of both the secondary and higher type forms, according to Sir Thomas Holland's Commission, one of our most pressing needs; and the first requisite for this is a sufficient and continuous supply of industrial teachers. Vocational teachers have to train men in the fields of agriculture, home economics, trade and industry; and industrial education is designed to meet the needs of the manual wage-earner in the trades and industries and in the home.

This book deals with the principles and methods of industrial teaching and education. The skilled worker should have in addition to a good physique, a clear mind capable of keen perception and an inventive turn which is often called ingenuity. Semi-skilled workers who are mostly machine-tenders should have a good physical development and good time-perception, which is really the ability of being dexterous. Besides training for these, some attention ought to be given to the group of men on the distributing phase of industry like salesmanship. Again special training is needed to combat the growing unrest among workmen to enable them to develop welfare work among themselves as well as co-operation.

The book further explains how men had been trained for trades and industries in the past, it describes the many types of industrial schools to meet the varied needs of industries and trades—the college grade or school of technology, the secondary, industrial, part-time industrial, continuation and other schools, with their courses of study. The organisation of industrial schools, and of evening industrial courses is then explained; but this should be preceded by investigations and surveys for the purpose of determining just what kinds of industrial training are required in each locality. How such surveys should be conducted is next explained, as well as the general principles of teaching, the most important of which are interest and progression.

The latter part of the book deals with the principles of teaching shop English, shop science, shop mathematics and shop drawing as well as with plans for pre-vocational education. The appendix on the various courses of study is very interesting. The conditions told in the book are

mainly applicable to America, but can be extended with the necessary modifications to other countries also.

EXERCISES FROM ELEMENTARY ALGEBRA, BY C. GODFREY AND A. W. SIDDONS (CAMBRIDGE UNIVERSITY PRESS).

This is a book of Exercises (merely) taken out of the first edition of *Elementary Algebra* by the same authors with additions of new sets of papers and new revision papers. The book will be a very useful book in the hands of the S. S. L. C. candidates, for it contains a judicious collection of revision papers and miscellaneous exercises, the latter being taken from real life, though English life for the book is written for English boys. The book will also give the Mathematics teacher in our High Schools an idea of the standard attained in Algebra in the English Secondary Schools and of the nature of questions that he should try to give from Indian life to interest his Indian students. Thus the book will be useful to the student and the teacher and, we may also add, to the Examiner who can see that all sorts of artificial and complex questions are now-a-days tabooed in England.

THE ARITHMETIC OF THE DECIMAL SYSTEM, BY J. CUSACK (MACMILLAN & Co.)

The author is a great advocate of a Decimal System not only of money but of weights and measures as well. Britain has not adopted such a system. Some think that a change is impossible, others think it difficult and those who have it in their power to make a change do not seem to be fully alive to the necessity for it. The object of the book is to show that a change is neither impossible nor difficult and that a very moderate change will provide us with a decimal system that will make the study of arithmetic a pleasure instead of a drudgery to the child at school and will render business calculations, simple, intelligible, accurate and expeditious. For this purpose the author has taken the pound sterling, the pound weight, the yard and the gallon, the present standards, as his standards and has divided each standard on true decimal principles into tenths, hundredths and thousandths. The multiples are also taken as tens, hundreds, thousands, &c. of the standards. On this foundation, he builds up a complete system of arithmetical calculations, gives worked examples of every class of arithmetical calculation that can arise in ordinary commercial

affairs and has included all classes of problems usually set at examinations.

We must say that the author has succeeded very well in his object and we hope that the Parliament will be able to introduce such a Decimal System at no distant date.

Lower Secondary Arithmetic

BY S. RADHAKRISHNA AIYAR, B.A.,

Late Principal, Maharajah's College, Pudukotah

AND

K. VAIDYANATHASWAMI AIYAR, B.A.

Retired Headmaster, Board High School, Tiruvalur.

19th Edition—In a few days.

SOME OPINIONS ON THE PREVIOUS EDITIONS.

THE MADRAS MAIL says:—"This book should attain the popularity of Mr. Radhakrishna Aiyar's other well-known mathematical publications."

THE HINDU says:—"We have made a close and critical study of the book, and have no hesitation in pronouncing it to be just the Text-book suited to the pupils of the Lower Secondary forms.....The fame already acquired by Mr. Radhakrishna Aiyar, as the author of the well-known F.A. Algebra and Matriculation Arithmetic, is fully sustained by the work under review: and his masterly style of treatment, coupled with the ripe experience and practical wisdom, discernible on every page of the book, of his collaborator, Mr. K. Vaidyanathaswami Aiyar,.....renders it deserving of a very high rank among text-books of Arithmetic, English or Indian.....If only Arithmetic is taught with such a Text-book, it will, we feel sure, soon cease to be the dry and repulsive subject which it, at present, is to a large majority of pupils."

THE GOVERNMENT REGISTRAR OF BOOKS (in the Port St. George Gazette) says:—"The oral exercises in concrete and abstract numbers and the progressive arrangement of the problems in a simple and methodical form make this book better many a class book."

SRINIVASA VARADACHARI & CO., MADRAS

Press Note No. 1815, Educational Department, Bombay, 4th April 1921.

The following Press Communiqué issued by the Government of India, Department of Education (Education), is published for general information:—

"The following Memorandum drawn up by the Secretary to the Delegacy for Oriental Students, Oxford, and approved by the Vice-Chancellor of the University, is published for general information:—

"The position at Oxford University as to the admission of Indian students next October is a serious one. It ought to be clearly understood that the number of candidates that can be received is limited, not by any desire whatever to exclude Indians, but because each College, and the Non-Collegiate body, can only receive a certain number. In spite of enormous pressure owing to the war, the Colleges and the Non-Collegiate body were peculiarly generous last October, and there are now many more Indian students up here than has ever been the case before. But a large proportion of these are in their first year, and therefore there will be far fewer vacancies in October 1921 than there were last year. I do not anticipate more than thirty vacancies, but it is of course impossible at present to say exactly. This Delegacy has already received over sixty applications for admission in October from ordinary Indian candidates, and the list does not close till March 31st. In addition, there will be a considerable number of Indian Civil Service and Forestry Probationers to find room for, and probably three or four Government of India scholars."

"The list of applicants prepared by the Delegacy will be sent round the Colleges (and the Non-Collegiate Delegacy) early in April, and

each Society has an unrestricted power of choice, and the results may not be known till late in May. It is therefore obvious that all possible warning ought to be given to candidates throughout India that it would be most unwise to come over on the mere chance of admission to Oxford, that there will be no chance whatever for personal appeals, and that the only wise course is to wait in India till a certain promise of admission to Oxford has been obtained, or to try some other University."

"The Secretary to the Inter-Collegiate Indian Students Committee, Cambridge University, has also intimated that the congestion in the Colleges shows no signs of diminishing, and that the Tutors are still unable to accept more than a fraction of the applicants. They are forced therefore to refuse some even of the best qualified students. Allowing for a certain number of places reserved for Government scholars, the Secretary has already made recommendations for all the vacancies which he anticipates in October 1921, his recommendations in the majority of cases being of candidates who had applied for admission in 1920; and he regrets that he sees no chance of being able to do anything for any applicant who has not already been informed of his admission, except in the cases of candidates for the Ph. D. degree whose qualifications reach the high standard required by the Board of Research Studies. In view of these facts, Indian students are asked to realise that if they come to England hoping to join the University of Cambridge without having a definite arrangement with the Secretary for their admission, they do so at the risk of almost certain disappointment.

"These Secretaries at Oxford and Cambridge are officers of their respective Universities and are in no way under the control of the High Commissioner."

The Educational Review.

Students of English Literature all over India will be glad to hear of the formation of a branch of the English Shakespeare Association in Calcutta this month with the object of fostering the study of Shakespeare in India. The aims of the Association will be—

(1) To promote the study, interpretation and appreciation of Shakespeare.

(2) To advance Shakespearean research and to help forward investigations in the various branches of learning bearing on the poet and his work.

(3) To hold meetings for the reading of papers and monographs on Shakespearean subjects.

(4) To stage the plays of Shakespeare or represent scenes from the plays of Shakespeare.

(5) To record the progress of studies and activities relating to Shakespeare.

It is interesting to note that the organisers of the Society hope that in addition to these functions, it will also be able to foster union between the people of England and India by uniting the people of the countries in tribute to the great poet. The Association was formally inaugurated on the 23rd April, at a meeting held for the purpose in the hall of the Indian Society of Oriental Art. We hope the Society will receive the support which it so richly deserves.

The report on Public Instruction in the Education in Punjab for 1919-20 the Punjab. which has just been issued is a record of progress on which the Government of Sir Edward MacLagan deserves to be congratulated. In assessing the value of the work it is of course necessary to remember the disturbed conditions of the Province during the year under review. The number of public educational institutions increased by 415 to 7,182 and the attendance by 32,641 to 464,272. Expenditure reached nearly 1½ crores, an increase of nearly 18 lakhs, of which over 64 lakhs were provided from Provincial and Imperial revenues. Among new features introduced in the year was the instruction of pupils in Elementary schools in Agriculture. The principle of compulsion has been introduced in certain Municipalities. Increased attention to the training of teachers, development of girls' education are among other matters worthy of record. Among novel features embodied in the educational system of the Province and worthy of imitation elsewhere is the formation of a number of public libraries at various centres. In a very interesting resolution, the Governor has set forth the scheme. Having felt that there are large numbers of people in various small centres of the Punjab, who have no access to libraries, the Government proceeds to state its willingness to form small collections of books. Government will provide a nucleus of English books not exceeding Rs. 500 to small selected centres at which at least an

equal amount is guaranteed from local sources. Government will also provide a small maintenance grant of 50 Rs. per annum. Government naturally reserves to itself the right of inspecting the libraries with a view to see that they are properly maintained. There has been some talk of starting similar things in the Madras Presidency, but we find that no action has yet been taken in the matter and the prospects of anything happening in the future do not seem to be bright. We have got reconciled by now to a policy of stagnation on the part of the Madras Government in such matters.

We regret that conditions of educational work have again been disturbed in two well-known Indian educational institutions in the Presidency of Madras, whose history in the past has always shown a dangerous leaning in the same direction. At Pachaiyappa's College the Principal has resigned—such a thing happens at stated intervals in the history of that institution—and it is said that it was meant to be a protest against the policy of the Trust-Board, though the details have not appeared in the press. The Trustees of the institution have always had a partiality for European Principals, an aspect of 'slave-mentality' against which we have protested from time to time. Devoid of any special affection for the institution which an Indian might feel in the same circumstances, European Principals have successively made the appointment a mere stepping-stone to

more lucrative or more comfortable jobs elsewhere in India. We are not surprised that such a thing has happened continually, especially when we remember that the policy of the Trustees has never been one of enlightened non interference and educational considerations have often been sacrificed for other things in the administration of the institution. We hope that at least now there will be a realisation of the futility of such appointments and the Trustees will find an Indian head for the institution who may be expected to stick on to it for a fairly good length of time and bring it up to a high level of prestige and efficiency. Being a large institution situated in the metropolis, it has fine potentialities for greatness in it, provided the affairs of the institution are guided with wisdom and statesmanship by those to whom they are entrusted. The Hindu College, Tinnevely, which has hardly yet recovered from a recent crisis, has again lapsed into trouble, the Principal having resigned owing to friction of a serious kind with the members of the management. At a time when Indians are claiming to control their own affairs, especially in matters relating to education, such incidents are not particularly welcome.

The Congress of Universities which is to be held in Oxford in July and which is being attended by a number of representatives from various Universities in India, promises to be a very interesting session, judged by the

The Congress of Universities which is to be held in Oxford in July and which is being attended by a number of representatives from various Universities in India, promises to be a very interesting session, judged by the

agenda which has already been issued. The value of training in humanities for men of science and men in public life; the training of teachers; the interchange of professors and students among the various Universities of the Empire; the frontiers of school and college—these are among the subjects coming up for discussion. The organisers have succeeded in securing the support of several eminent educationists and University authorities: Lord Curzon, Lord Balfour and Lord Haldane being among those who are to take the chair on the occasion of these discussions. Tours have also been arranged to various University centres for the delegates and the members from India and the Dominions will find it a great advantage to be able to study educational conditions in England at such intimate quarters. We hope that the sessions will result in opening wider facilities for mutual intercourse among the numerous Universities of the British Empire—the proceedings will be watched with considerable interest in educational circles.

The Advisory Department of the Secretary of State for India for 'helping' Indian students coming to England for education has been a failure since its inception. Complaints against the Department have been steady and serious, and it has often been said that it has only acted

as a limb of the political department for purposes of espionage. When it was announced sometime back that the Department was not to exist separately, but pass under the control of the High Commissioner for India, Sir William Meyer, it was expected that better days were dawning for the Department. But to the great disappointment of all interested in the question, we are only promised a 'Committee' to consider the whole question. Two representatives have been chosen from India and who else could they be but two stalwart members of the Liberal League, who could be expected to be quite 'safe' counsellors on the matter—Sir Devaprasad Sarvadhicary of Bengal and Dewan Bahadur M. Ramachandra Row of the Madras Presidency. The feeling of Indian students in England has been very bitter against the Department all these years, and if the Government is under the impression that it is going to inspire in them confidence in their enquiry by the appointment of such "representatives" belonging to a party which is looked upon with grave suspicion, it is sadly mistaken. But the Government has very rarely displayed any real profound insight into such matters and has always proceeded in utter miscalculation of the psychology of the Indian mind.

One of the results of the post-war discontent felt in England relates to the question of salaries for mem-

Salaries for Teachers.

bers of the teaching staff, which are being found more and more inadequate for decent living. Till sometime back the question was confined to teachers in elementary schools, but the grievance has now extended to large sections of collegiate and University teachers to such an extent that the Government had to appoint a Committee of Enquiry to consider the matter. It is the deliberate and well-considered opinion of the Committee that the class of teachers are now forced to live in conditions in which any high degree of intellectual efficiency is not possible. It is pointed out that books and magazines, membership of learned societies, travel and the enjoyment of holidays are very necessary for successful intellectual work of a superior kind, but the salaries of the members of the profession render it impossible to make arrangements for these. A vigorous effort is therefore to be made by the Government in England to remedy this state of affairs in Universities by liberal grants. When demands are made for the raising of the emoluments of the teaching profession in India also, we hope it will not be forgotten that they are mainly on grounds similar to those mentioned by this Committee in England.

The Indian Review has done well in bringing together a symposium of opinions of some eminent Indians and Europeans in the

Educational Non-Co-operation.

current number of the Review against Educational Non-Co-operation. We have written repeatedly against this unwise attempt to withdraw students from educational institutions in the name of national service and patriotism and we hope our young men will ponder on the advice given in this symposium before venturing on such a momentous step of action as the cessation of studies. In the course of a powerful plea for the retention of Western culture, against which also much of the present discontent is directed, H. E. Lord Ronaldshay said: "Let India foster her own learning by all means. But why should she turn her back upon all that the West has to offer by way of supplement to that which she claims as her own. Knowledge is not the monopoly of one country or of one race; it is the common property of mankind; and if in certain branches of knowledge, it so happens that the Western races have forged ahead of others, why should those others deprive themselves of the fruits of Western success? To do so is not patriotism—it is suicidal folly." Sir Nil-ratan Sarcar, till recently Vice-Chancellor of the Calcutta University, protests emphatically against the charge that Western education in India has fostered 'slave-mentality'. "Among the charges levelled against our University none is more unreal, none more fantastic, than that the education that she imparts produces slave mentality in the youths of our country."

Writes Sir Nilratan Sarcar : "No greater calumny than this has ever been uttered against those of our men and women who have received the benefits of modern education. It is neither fair nor just that an education that has conferred such lasting benefits on the people of India should be assailed in this fashion. Those who make this extraordinary suggestion betray not only a lamentable lack of a knowledge of realities but also a wanton disregard of facts. A little thinking will dispel much of the misconception that exists in the minds of many persons in this matter, and a comparison of the mentality of those who have had no education with that of those who have come under the influence of education will at once show the absurdity of the proposition that the education that the University imparts has a special proneness to make people servile." The Hon'ble Mr. Paranjpye, the distinguished Minister of Education in Bombay, has issued repeated appeals to students not to leave the present educational institutions. Though we are by no means unfriendly to the starting of National schools and colleges independent of Government control, we have no doubt that there is considerable force in the following case made against giving the preference to such institutions to the existing ones:—

The so-called National Education cannot be national, as it will not be efficient.

For efficient education what is most neces-

sary is better teachers and, therefore, efficiency is more or less a question of funds.

With limited means of private donors it is possible to start excellent national institutions, but a system of National Education is possible only by securing control of the State purse.

The absence of religious and technical instruction in the present schools is just as it should be. They are not the places for this kind of instruction, which should be given in special institutions started for the purpose.

The neglect of physical education is not due to the Government but to the boys and their parents and will continue in the so-called National Schools also.

Owing to the objectionable methods of sanctioning books, the books used in the schools at present are no doubt unsatisfactory but it is not right to say that they are purposely written to show an Indian to disadvantage.

The censorship on political discussions in schools has done much harm to the boys, as well as to the teachers, inasmuch as they have learned to look for guidance to an outsider and the influence of the headmaster has been limited.

It should be remembered, however, that times have changed. Secondary education is now a transferred subject and it will be our own fault if we allow these objectionable features of State control to continue much longer. Indications of the coming change are not wanting, and can be seen if we only keep our eyes open. Whatever might have been the condition in the past, one must agree with Pandit Malaviya that now State recognition, instead of being an impediment to education, is a great help. At this moment, when we are almost at the threshold of National Education in the real sense of the word, it would be extremely foolish to undo all the work of the last sixty years by throwing aside recognition as advised by Mr. Gandhi.

An unfortunate feature of the present Non-Co-operation movement is the aggressive hatred against the new Universities which are coming into existence, sedulously fostered in certain quarters. The Rangoon University has met with a staggering blow at the very inception of its career and similar attempts are being made to frustrate the benefits of the new University which has come into existence at Dacca. We hold no brief for the Dacca University, but we have no doubt that under the sagacious and wise guidance of Mr. Hartog, it will strike out new paths of progress and subserve a very useful purpose in the economy of Indian education. We are glad to notice that in the choice of staff also, the University authorities have shown a commendable anxiety to give recognition to Indian talent. The following note on the subject prepared by Mr. Hartog draws attention to several of the prominent features of the University which promise success:—

It has been my object to give effect to the proposals of the Calcutta University Commission, so far as in me lay, subject to minor variations and the exigencies of the Budget. It may be well, briefly, to summarise the points in which the Dacca University will differ from the majority of the existing University institutions in India.

(i) It will be a unitary University in which teaching and the testing of teaching by examinations will go hand in hand. It will be the due object of the University to see that not only the exceptional but the average student, instead of preparing under pressure for an examination, shall

work steadily throughout the year and do individual work under the guidance of his tutors in addition to attending formal lectures.

(ii) The teachers in the University will not be burdened with the first two years of teaching for the Intermediate examination, which was regarded by the Commission as school work, and not University work. The teachers as a body, therefore, starting at a higher level, will be free to devote themselves to more advanced work.

(iii) The University will be a residential University. The majority of the students will live in Halls and Hostels, and all of them will be attached for their social life to a Hall or a Hostel. There will be physical training for all students and organised games—both Indian and European, and admirable opportunities for all students to live a healthy life. There will also be systematic physical training for all students, under the supervision of a Director of Physical Education who has already specialised in this subject and is himself a qualified medical man. It is hoped that a medical and a statistical study of the physical development of the students, their condition, and their dietaries, may lead to important results for the health of the students of Bengal generally.

(iv) The concentration of the students in a relatively small area of about a square mile will bring the different faculties in direct contact with one another, and it is hoped that they will thereby gain the advantages of the training and social life characteristic of the residential Universities of Great Britain and other countries, such as America. But I wish clearly to state that Dacca should not and, I trust, will not, copy any other University. Under the academic control and guidance of teachers of whom the great majority will be Indian, it will be an Indian University of a new type.

It has been the aim of those who have planned the University to create a solid nucleus of humane and scientific instruction comprising branches none of which could safely have been omitted. But I

hope that it may be possible gradually to develop the teaching of the Chemistry Department and of other departments on the technical side and to utilise the resources of the Government Engineering School, and possibly of the Government Agricultural Institution in Dacca, for this purpose. As financial resources become available it will further be possible to create the Agricultural Faculty and the Medical Faculty as contemplated by the Act.

In all departments, it will be the aim of the University as far as possible to give opportunities to the teachers to conduct individual investigations in addition to their teaching. The conduct of such original work is an influence not only on those who take part in it, but on the students as a body, who realise that human knowledge is not something final, but something growing and developing.

It has been no easy task to recruit the staff and that task is not yet complete. Certain posts for which no qualified candidates have presented themselves either in India or in England must be left vacant until adequate candidates can be found to occupy them. On the other hand, every care has been taken to secure men who, by their experience and personal qualifications, are qualified to take part in pioneering work. A certain number of experienced teachers have been taken from the existing colleges in Dacca—the Dacca College and the Jagannath College, and other appointments have been made from the outside. The salaries have been fixed so as to be able to secure a certain number of men already in the Indian Educational Service or Provincial Educational Service.

It is my firm conviction that the men who have been appointed by the Chancellor on the recommendation of the Advisory Committee constituted under the Dacca University Act (consisting of the Hon'ble Nawab Sir Syed Shamsul Huda, President of the Bengal Legislative Council, the Director of Public Instruction, the Vice-Chancellor of the Calcutta University and the Vice-Chancellor of the Dacca University, as Chairman,) will form a band of workers equal to the great task which lies before them.

The Provincial budgets and the Imperial Educational budget in India unfortunately show a general absence of any extensive expansion of education during the current official year, 1921-1922. The prevailing financial stringency is of course assigned as the reason for such neglect. But in the West where post-war conditions are even worse than in India, there is no stinting in matters educational and funds are being provided for numerous schemes of expansion. We have had occasion more than once to refer to Mr. Fisher's splendid educational budgets in England in recent years. France is equally progressive and we find that the budget for the current year gives ample proof of this desire to press forward in education whatever sacrifices may have to be made in other directions. The increased expenditure in Primary education amounts to 84,864,064 francs, an increase due mainly to the increase of pay of Elementary teachers. Seventy million francs go to staff, inspectors, headmasters, teachers and clerks; but as this increase is spread over two years only thirty-five millions fall on 1921. On the other hand obligatory promotions to a higher salary-class involve an outlay of 22,600,000 francs, whilst for teachers to whom has been given long leave as sufferers from tuberculosis 4,500,000 francs is appropriated. The cost of living causes the assignment for Normal schools to be raised by 3,056,920 francs. Stipends to assist the training of teachers necessitate an expenditure of 2,500,000 francs more than in 1920. We commend these figures to those concerned with educational budgets in India.

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THIRD MATHEMATICAL CONFERENCE.

THE PRESIDENTIAL ADDRESS

By MR. BALAK RAM, M.A., I.C.S.

Lahore.

Gentlemen :

Our Society includes among its members a large number of men who were eager students of Mathematics in their early days but whose other occupations leave them hardly any leisure for keeping up their studies. They, however, retain their interest in the subject because of the pleasure they derived, and still derive from it and they are willing to do what little they can to help the Society, feeling honoured when the professional mathematicians among you appreciate their efforts as for instance by electing one of them as their President. But, however honoured I personally feel, I confess that I would have felt more satisfaction if we had been able to carry out our original intention to elect as our President for the current term, Professor K. J. Sarjana who has been one of the most energetic of our members since the Society was started

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fourteen years ago. We deplore his inability to accept office and trust he will soon be restored to health.

Another stalwart whom we miss to-day is Professor A. C. L. Wilkinson, my immediate predecessor in office. He presided at the first and the second Conferences of the Society and he has given us freely of his experience and knowledge, first as a member of the Committee and later, as President for four years from December, 1916.

During the last year we have lost the active co-operation, due to departure from the country, of Sir John Heaton. Those of us who attended the Conference in Bombay in January 1919 will agree with me that the success of that meeting was largely due to his efforts as the Chairman of the Reception Committee. Sir John Heaton was a member of the Indian Civil Service for nearly 37 years and rose to be a High Court Judge which post he held for nearly 12 years before retirement in April 1920. At one time he was Vice-Chancellor of the Bombay University on which body he did useful work. His keen analytical mind, his deep and sympathetic knowledge of human nature, his complete freedom from

Communal and individual prejudice made him a great judge, and his capacity for loyal friendship and wise guidance won for him the affection and respect of all who knew him. He came to India at an early age as was customary in the eighties and never had an opportunity of going through a full course of Mathematics at a University; but Mathematics always fascinated him and he joined our Society on his own initiative as soon as he heard of it. We could always count upon him in time of need. We wish him peace and happiness in his retirement.

Another gentleman whom I mention by name is the Hon'ble Mr. R. P. Paranjpye, our first Honorary Member and our Librarian, who has been prevented from attending the Conference by pressure of his new duties. We congratulate him on being in a position where his powerful personality and abilities will have fuller scope than hitherto. His general career is well-known to all of you, but most people are not aware of one of his activities in pushing forward a scheme which I believe is destined to have an important effect on the future of this country. I refer to his advocacy of the method of Proportionate Representation to provide for communal and minority representation on public bodies. In India the problem is acute, but the compromise solutions accepted so far are, I am afraid, neither acute nor right, but quite obtuse. It is interesting to note that Mr. Paranjpye's first observations on the subject were published as a short note in our Journal under the heading "An Electoral Anomaly." After some years of study he came to the conclusion that the system prevalent in several places in Europe, America and Australia, of Proportionate Representation with a single Transferable Vote gave as satisfactory a solution as was likely to be obtained as long as man was what he is. The working of the scheme is simple as far as the voter is concerned, but rather complicated when the votes are to be counted. A few weeks ago the scheme was adopt-

ed by the Council of State for election to their Committees and I have no doubt that one day it will be adopted for all purposes by all elective bodies. But when the scheme was first brought up before one of the provincial legislatures three years ago it was rejected with scorn, one indignant opponent calling it "Mr. Paranjpye's Mathematics." So I take it that the final acceptance of the scheme may be legitimately put on the credit side of mathematical ideas as supplied to administrative problems.

Probably some of the audience will be surprised to hear mathematics and administration mentioned together. It is true that the higher development of Mathematics does not solve current difficulties of administration; but the same remark applies to ancient history, archaeology, and most other branches of knowledge. What is useful here is the particular outlook which the study of science (especially mathematics) tends to produce with peculiar intensity,—a clear enunciation of the fundamental principles, a reduction of the number of those principles to a minimum, exact thinking, and a quantitative appreciation of the degree of exactitude attained by the accepted tentative solutions. These qualities make for success in all spheres; it is, therefore, not surprising that men with sound mathematical training have left their mark on non-mathematical subjects such as philosophy and law. The contributions of mathematicians to the study of sociology, economics, and biological variations and heredity have been more direct, because these subjects deal with material in the mass and the science of statistics (which is only another name for the mathematical theory of Probability) deals with material in the mass. We all know the scoffer's jeer that statistics will prove anything. The fact is: *In the hands of an ignorant or an unscrupulous man statistics will prove anything; just as in the hands of an ignorant or an unscrupulous man a surgeon's knife will kill anybody.* Nor is there more truth in

the celebrated classifications: "White lie, lie, statistics." In the hands of an expert, statistics lead to the discovery of unexpectedly accurate laws. An example probably known to you is the working formula obtained by Mr. Jacob, I.C.S., of the Panjab, for predicting the yield of crops. The most striking instance of the power of science in disentangling truth is furnished by Karl Pearson's analysis of mortality figures. He first determined the number of deaths in old age, in middle age, in youth, and in childhood, and found them to follow the known laws of distribution of chance events. Eliminating these numbers he was finally left with the curve of deaths in infancy. The curve was mathematically incomplete as if the initial part of it had been torn off. When completed algebraically it was found to end at minus 9 months. The inference is that human life commences normally 9 months before civic birth,—a conclusion obvious enough when stated; but the point is that it was arrived at by practically sitting at the cemetery gate, and doing nothing but noting the ages of the dead people. Those who are interested in this investigation will find full details of the method and the results in Karl Pearson's lecture on "Chances of Death" in his book of that name. The generally accepted opinion is, that the only reliable method of finding out laws governing social phenomena is the collection and analysis of statistics. I venture to commend this view to the able administrators who are present here to-day.

Since we met last, we have lost our most prominent member and one of the greatest Indians of modern times. I refer to Srinivasa Ramanujan whose death at the early age of 32 is mourned by the whole mathematical world. Details of his uneventful life and expert appreciation of his work have been published in scientific and other journals, and are probably known to you. To-day I need only express the unanimous opinion of the Society that we all loved

Ramanujan and that India owes a deep debt of gratitude to Professors Hurdly and Neville for generously and ably befriending him at a critical time of his career. The Society will, I understand, be asked at the business meeting to-day to consider the question of perpetuating his memory in some form.

Mention of Ramanujan's name suggests the question of the organization and endowment of scientific research in India. Now that the official educational policy is in the hands of Indians and there is an increasing number of eager and capable men anxious to make educational experiments outside the official bounds, it will be our own fault if we do not make our educational system as efficient as that of other countries. Progress had been made in technical education, and of late there has been talk of Research Institutions, but the research that is attended to is such as is of immediate practical value, which means research which pays dividends. Very few people will deny the claims of technical education; we all want physical comfort; we much prefer travelling in a luxuriously fitted motor car on a smooth dustless road to travelling in what the Municipality humorously calls a third class hackney carriage on a *kutchra* path; we also want the Best Beloved to wear pretty silks; and if the car is not comfortable enough or the silk not pretty enough, we are willing to set up institutions for improving mechanical engineering, sericulture and the dye industry. This is as it should be in the beginning; but it is to be remembered that technical education provides the pupil with a direct means of livelihood. If the trained student becomes a simple manufacturer, he makes goods of the old pattern and sells them; if he, like Edison, is more intellectually inclined, he becomes an inventor and sells his inventions; in both cases his food problem is solved, and with luck he may even become passing rich on £40,000 a year if not a millionaire. What I wish to emphasize is that the worldly rewards

manufacturers and inventors receive are a sufficient incentive to the pupils of technical institutions and that after the initial stage is passed the persons directly benefited by that education may well be required to pay for their training. The very different results following the pursuit of pure learning are vividly described in Browning's poem "The Grammarian's Funeral." There is no money to be earned, and the audience may be fit but it is certainly "few," and not infrequently the work of a whole lifetime fails to score positive result. The desire for knowledge is, however, one of the primary instincts of the mind; therefore, we find scholars in all settled communities, men like Archimedes and Newton, the stories of whose absorption in their studies have been a tonic to generations of humbler students. Again, every settled community is sub-consciously or consciously convinced that attempts at progress are apt to be wasteful unless guided by thinkers and teachers who have leisure to think and teach clearly; therefore, we find these communities giving special protection and advice to learned men and thus providing them with leisure and the psychological incentives which replace the missing pecuniary reward. I speak of settled communities; but the most telling instance of this view point is furnished by the rude barbarian Timur about whom it is related that when camping, the learned men (without whom he never travelled) were placed in position of maximum security, while even the women and children had to be content with a less safe place. I do not know if Timur had a coherent theory behind his actions; if he had, he never explained it; he was not of that sort; but the modern man whose attitude towards learning is the opposite of Timur's and if symbolically represented by his thinking that Reading, Writing, and Arithmetic can be described by their initial letters as Three R's makes no secret of his theory. "Research" he says, "is waste of time. Here I am, making piles of

money out of sugar or diamonds or musk or whatever it is. What use is it to me, to learn about the stars or electrons or the differential calculus? Look at Professor K. Ley. He is bald and short-sighted and absent-minded, and his socks never match his ties. This comes of Algebra and Euclid and the Fourth Dimension." After this he talks patronizingly of schools and says that it is enough if a person is practical and has horse sense; and he further wants to know what those dashed dots are for.

Fortunately power is passing out of the hands of this type of thinker and it is no longer necessary to explain that scientific research has a practical bearing. Difficulty, however, is experienced when mathematical research comes to be discussed, but there is sufficient evidence to show that though most results in pure mathematics are as a rule not applicable to any purpose of practical value, the work of a pure mathematician has frequently come to the help of physicists and others at unexpected moments. Students of Probability know that the science of statistics to which I have already referred, grew out of an academic study by pure mathematicians of games of chance. The laying of the Atlantic cable, it is said, would have been abandoned as an unprofitable task if Lord Kelvin had not been able to solve a particular differential equation. Heavyside's skill in solving another differential equation enabled him to surmount a serious difficulty in long distance telephony. The latest instance of an apparently aimless research proving handy for physicists is furnished by Einstein's reconstructing the universe by utilizing Riemann's discoveries in non-Euclidean Geometry. I believe it is now generally admitted that during the late war pure mathematicians were able to render invaluable help in the development of aircraft, gunnery, and other matters. Instances might be multiplied; as a consolidated argument in favour of the proposition such that research pays directly or indirectly, I refer to

the example of the hard-headed practical American nation endowing professorships for theoretical research in such unpractical subjects as the Theory of Numbers.

This is our appeal to the moneyed man for endowment of mathematical research. To the mathematical student the study of the subject itself transcends in interest all practical applications. He studies the subject for the sake of the artistic pleasure he obtains in following its rigorous logic and in contemplating the extreme universality of the formulae. Experience of life or nature gives us the data which the mathematician, instead of writing in English or Hindi, translates into his universally accepted symbols, but as soon as he has finished the work of writing down the symbols, he ignores for the moment their original significance and concerns himself with logical manipulation only. When he gets his final results he translates them back into the language of the original data, leaving the physicist or the statistician or the engineer to verify the correctness of the data by further experiment. The mathematician is not concerned with the collection or the correctness of data. This aspect of the subject has led our most famous mathematical philosopher, Bertrand Russell, to describe mathematics as a science in which we neither know what we are talking about nor care whether what we say is true or not. The charm of mathematics lies in the fact that the description is accurate.

Whatever the point of view be, I earnestly plead for endowment of research in mathematics and in other sciences. I do not imagine that we shall discover a Ramanujan every decade; but I am sure there are enough people in the country who are willing to follow a career of quiet study and to do respectable, if not highly distinguished, work provided their minds are free from anxiety about the daily bread. I have only to mention the names of Bose, Roy and (coming to younger men) of Ganesh Prasad, V. Ramaswami

Iyer, O. V. Raman, C. V. H. Rao, Birbal Sahni and Shivram Kashyab to prove my assertion that there is indeed very promising human material in the country for work in all branches of science. Full opportunity alone is lacking.

I may take the liberty of giving a few suggestions of mine on the subject, not as an elaborated scheme, but as a basis of discussion. In the first place it has to be noted that the research man cannot work to order any more than a Poet Laureate, even though fortified by an annual cask of wine. You must give the research man as much time as he wants and takes, and also must avoid as far as possible setting him a definite task. He has been well described as nature's loafer, he will neither be hurried nor commandeered, except in times of severe stress, as for instance during the siege of Syracuse or the late war; and even then you do not get the best out of him unless you leave him alone. It is exceedingly improbable that Newton would have discovered the law of gravitation if he had been placed on special duty, with the usual deputation allowance of 2 2/3% to study the solar system within six months. Another point to be noted is that the research-man is human and has human needs and that you interfere with his efficiency if you do not provide him with a little comfort and free him from anxiety about the future of himself and his family. In addition to conducting his own research he may be researchably required to discover his successors; for this purpose he must be in constant touch with a number of selected students. The scheme that is suggested by these principles is that there should be research scholarships for the beginner and lectureships on a small pay for the student who has proved his worth, the lectureships should not belong to a graded service where the question of seniority or extension of service will cause heart-burnings and depression of mind; and their number should be large and variable to provide for the appointment of young men with

out making the older men retire too early. To minimise distractions there should be a fairly generous provision for individual and family pension and as an additional concession the children of research lecturers of a certain standing may be declared to be entitled to free education up to the highest standard for a certain specified number of years. The duties of the lecturer should be mainly research and control of research by the students, but he should be required to do routine teaching for two or three hours a week, as this would enable him to pick out likely men at an early stage. To allow the students themselves to focus their attention on research, the rules for the M. A. and higher examinations should be made more elastic. Finally good libraries should be provided with complete files of all the leading scientific journals, and occasional visits by the lecturer to Europe and America should be encouraged.

The above is meant to be a rough sketch only; but it seems to me that anything worked on narrower lines will not give satisfactory results. And even then it will not give sixteen annas worth for every rupee we spend if the foundations of education are not properly laid in the school and the Intermediate classes. I invite your attention to this urgent problem, and hope you with your experience of school teaching will devote your energies to solving it. The object to be attained is that the logical principles of the subject should be clearly taught to suitably selected boys and habits of clear and concise reasoning inculcated in all boys. Unless we do this the educational value of mathematics in building up character will be lost.

Considering the wide interest taken by scientists and by laymen in Einstein's Theory of Relativity, it would not be out of place in a popular address to give a brief exposition of these speculations. The broad results of the theory are not essentially hard to understand; the difficulty, which is insuperable in many cases, consists

in removing the old ideas firmly embedded in our minds in our younger days. It is not easy for any but the trained mathematician to realize that a Euclidean straight line has no existence outside our conceptual world, and that there is no logical inconsistency in defining straight lines in such a manner that two straight lines can meet in two or three or a hundred distinct points. The Euclidean straight line is simpler to argue about but neither of them is really more straight than the other. Our children, trained differently, will see this easily; as they will see that two and two are not always four, and will laugh at us as we laugh at our ancestors who thought the earth was flat. We, handicapped by our old notions, have to do the best we can by digging up the foundations of our mathematical beliefs and putting in as much of the new conceptions as we can. I therefore begin at the beginning.

Our knowledge of the world outside us is built out of our detached sense impressions, and the need for co-ordinating the knowledge establishing a chain of cause and effect arises because of the necessity of self-preservation; for instance the organism that fails to establish the connection between the sensation of hunger and the effects of eating will die soon. The number of sense-impressions is large; our minds are finite; hence it soon becomes necessary to invent some shorthand formula for economising thought, each formula expressing some relation between two events (e.g., the relation of before-and-after, here-and-there in terms of an imagined entity (e.g., time and space). When such entities become very well known, the human mind tends to endow them with objective reality. Philosophers may fight about the objective reality of time and space, but when it comes to describing events or natural phenomena, we quietly ignore these controversies and argue as if time and space had an existence independent of the observer or the group of observers. Hence it came about that geometry was considered to embody absolute

truth and many a weary soul found consolation in the thought that even on the farthest stars the three angles of a triangle are equal to two right angles. We have broken away from this faith. We know that geometry *as such* being only pure mathematics, has no concern with absolute truth, and that the practical correctness of the conclusions is to be verified by the physicist who supplied the geometrician with the data (or postulates), such as the postulate that two intersecting straight lines cannot be parallel to the same line. If further experience of the universe gives a different set of postulates, the geometry that deals with them is different, and the conclusions are also different. It is the physicist who has to decide what sort of geometry best describes the universe. Let us consider the case of a race of beings living on this earth, with senses sharp enough to see (with the eye) the variations in the curvature of the surface in a small area but not possessing a worked out geometry. They will draw the shortest distance between two points and call them straight lines and they will find that no two shortest distances if continued, remain a constant distance apart. They will also find things which fit on the surface of the earth in a smooth place will not fit in a rugged place. Their conception of space will be that it is not flat; and their geometry, when developed from these and other postulates will be a complicated non-Euclidean geometry. They may, by a process of abstraction, be able to imagine a flat Euclidean plane; but their space of experience (their space of physics) will be a non-Euclidean plane.

This example will show from analogy that there is no reason why our space of physics should be Euclidean. The difficulties created by electro-dynamical phenomena led Einstein to enunciate a theory which was subsequently replaced by a more general theory in which the universe (consisting of space and time) is taken to be non-Euclidean. This conception enabled

him to dispense with the force of gravitation and to describe the movements of matter as always taking place along lines which were essentially straight; only the type of line which was straight in one place was not necessarily straight at another, as "Matter" was nothing but a variation in space curvature altering the type of straightness in its neighbourhood. As a very crude and incomplete analogue in two dimensions of the theory we may take a wash-hand basin with a sink to let out water. If we think of nothing in the universe except the wash-hand basin and the movement of drops of water in it, the sink will be like a centre of attraction and a drop of water placed on the inner surface of the basin will run to the sink along a shortest line, i.e., along a straight line. But the drop of water will pass through the sink; and here the analogy fails as a particle of matter can not pass through another.

The universe as imagined in Einstein's theory has four dimensions; and this is the second stumbling block in the path of the layman. The space of our everyday experience has three dimensions' length, breadth, and thickness, and we cannot frame a mental picture of a fourth dimension. To understand the theory, let us again go back to our sense-impressions which form the elements of our knowledge. We notice that every object (real or imaginary) has an existence in space and time, that is to say, it has extension (length, breadth and thickness or height) and duration, in all four variables. The mathematician expresses it by saying that every object, when its whole history is taken into account, has four dimensions; consequently the statement that the universe is four dimensional is only a new way of expressing a fact known even to cats and dogs and most of the higher animals. But—and here we come to the greatest discovery that the human race has ever made—the time dimension is essentially of the same sort as the three space dimensions, and the four are interchangeable, one man's time being compounded of another man's

space and time. The three dimensional analogy is that the separate measures of the three space dimensions of a body change without the body changing in shape or volume. A brick placed on one face, and measuring one inch in the vertical direction, two inches in the northern direction, three inches in the eastern direction, will, if placed on a different face, measure 2, 3, 1 inches respectively in the three directions; and supported to stand on a corner the corresponding measures can be varied within wide limits. The length, the breadth and the thickness of the brick have no separate existence; and what exists is a totality of the three. How the totality is broken up by the senses depends upon the circumstances of the individual going a step higher, space and time also have no separate existence; what exists is a totality which the mind is not able to grasp as a whole, and consequently the sense breaks it up into four convenient parts, different for different observers. This is not a metaphysical speculation; this is a theory forced upon us by unexpected phenomena displayed by rapidly moving bodies, the details of which are too technical to be described here.

Two objections at once strike us: How can time and space be similar if we do not perceive them in the same way? And how is it that which in space we can move up and down and sideways, in time we can only move forward, and we do so move whether we want to or not? To see that the objections are not valid, we revert to our initial sense-impressions and note that the three dimensions of space are not perceived by the same senses. Two of the dimensions become known to us through the eye, when our sight is obstructed; the third dimension—thickness or distance,—has to be discovered with the help of sight, touch, and muscular effort and binocular vision. The fact is that the three space dimensions are not interchangeable for all purposes, and a mile up-hill is not the exact equivalent of a mile on the level. The difference is due to the struc-

ture of the human body, and it is only when by a mental effort we eliminate part of the personality of the observer that we can say that space is homogeneous. The perception of time and of space come to us through different sets of sense-impressions; but the discussion above shows that that does not necessarily indicate an essential difference. As regards the monotony and the apparent inevitability of movement in time, the explanation may be the same;—our physical and mental circumstances.

We are now in a position to give some account of the picture of the universe that can be built out of Einstein's equations; this picture is not Einstein's, who steadily refuses to go beyond his equations and symbols; but the human mind is not satisfied with merely x and y and insists on knowing if the symbols have an interpretation in the material universe. The physicist gives the interpretation, but he knows that it is only plausible, being based on necessarily incomplete data, that the picture of the universe that emerges is only an approximation to reality,—if there be a reality,—and that the picture may have to be discarded when further data accumulate. Nevertheless he provides the picture as a help to (his own and other people's) clear thinking; and the picture he gets out of Einstein is something like this; there is a world-stuff spread in four dimensions, with a three dimensional continuum (our universe) as its section or boundary, much as the earth is stuff spread in three dimensions with a two dimensional surface as its boundary. The continuum, like the surface of the earth, is uneven, the unevenness of the former being of course in four dimensions and not in three like those of the earth. This unevenness we call matter. Our momentary view of the universe changes as if each point of it moved in the straightest line, and we call the change the passage of time. Why the universe seems to change and why the movement in the straightest line, we do, now know.

HEADMASTERSHIP BY ROTATION.

ANY one who has been carefully analysing the psychological aspects of the discussions in the Subjects Committees and in the open Conferences of Associations like the South India Teachers' Union, and the Headmasters' Association, will, by this time, have recognised and rightly estimated the reciprocal mental attitudes in general, of the Headmasters and the Assistant Masters towards one another. In the last Headmasters' Conference there were even stray discussions laboriously detailing the woes of the Headmaster, most of which were laid at the doors of his naughty Assistants. Solitary experiences of here and there were elevated to the level of a general law, binding the existing relations of the Head and the Assistants. It is high time that the Headmaster should have a thorough introspection and honestly see if he has himself in any way contributed to the growing discontent of the Assistant-masters.

Let us frankly raise the question if the so-called Supervision, now in vogue, has really mended matters. Before we answer the question, let us see what this Supervision amounts to. By Supervision it is understood, if we are not mistaken, that the daily work of a teacher is properly inspected, and defects, if any, are noted and mended, so that with every mending the defects so mended have been ended once for all, with no chance of repetition. If every one is honest in his work, the Headmaster downward, this is the result that one can safely expect from Supervision. "The Teaching Notes," "the Progress Report," and the actual teaching in the classes are all subjected to Supervision, and

The theory leads to the result that space, time and matter are essentially, but it leaves electricity out as a separate entity. Weyl has framed a new theory, based on a geometry more general than that of Riemann, and has included electricity among the property of space, or rather of the world-stuff. But we have not reached the goal in our search for a scientific monism. The entities we call life and mind still stand out of the mechanical scheme. The experimental method is, however, being applied rapidly to biology and psychology, and the next two hundred years might see the end of the isolation.—

"The Tribune," Lahore.

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there is no reason why the products of such system should not show a steady progress, year after year. But look at the "Examiners' Report" and listen to what it says. Why, it is always ready with its loose tongue, condemning the ugly performance of the examinees, year by year, and laying the blame at the doors of the teachers, Heads and Assistants as well. "Pray, who are the Examiners?"—you may ask. They are, at any rate most of them are, of our own rank. Thus it is that we have a criticism, an unenviable criticism, of ourselves by a body of our own selves! What an irony! How long are we to wait with folded hands to see through the experimental stage of our educational system? Shall we not make a move and introduce some healthy revolutionary changes?

Under the guise of the so-called Supervision, most of us, Headmasters, have very little work of actual teaching. Frankness is a virtue, and let us frankly admit what we have come to by blindly following, and adjusting ourselves to, the convenient Supervision work. We do not deny that there may be a few honest and earnest—and may we also add 'energetic'?—souls among Headmasters that still realise their pleasure in an amount of actual teaching, in addition to their Supervision. But the generality is not far from our description. It is an open secret that red-tapism still plays a prominent part in some cases of Supervision, and reports of actual interference with the individual initiative, nay liberty, of teachers are not always untrue. Herein lies the crux of the situation.

To recapitulate, the Headmaster does not always have a good amount of actual teaching work; his Supervision is generally superficial, and when it tends to go deeper, it does, to an

alarming extent, interfere with the actual 'liberty' of the teachers. Remove the causes, all goes well; and introduce something healthy, the teacher's profession will then be something enviable.

Some earnest and honest souls among Headmasters may probably be led to believe that we are unnecessarily belittling the responsibilities of Headmasters and that our views are vitiated by being one-sided. Far from it. We are not unaware of the cases of the Assistants, who take advantage of their Headmasters' humaneness and easily translate their 'liberty' into what borders on licence. But that is an exceptional case calling for exceptional treatment. Also, though discontent is believed to grow with age, there are sterling cases of exception, deserving well of their respective superiors. We are only concerned with the general facts, rather than exceptions.

What we propose is that the Headmastership of our schools, at any rate of the smaller High Schools and of those that have not Headmaster-Managers, should go by rotation, every year, to the Assistants of the highest academic qualification, with no substantial difference in the actual amount of teaching work, as entrusted to the Headmaster and to the Assistants. While the Headmaster is busy with his 'official' routine in his leisure hours, the senior Assistants must, in *their* leisure hours, share with him, and among themselves, the responsibility of Supervision in the respective subjects they are conversant with. The general administrative responsibility is to lie with the Headmaster, who ever occupies the position for the time being, and the details of administration, like the scheme of studies, the time-table, the periodical examinations, the prescribing of text-books, etc., may be worked up in con-

sultation with the members of the staff, according to their equipments, general as well as special. The Teachers' Associations of the several schools are expected to assist their Headmasters by their valuable co-operation.

We refuse to believe that the Headmastership of our High Schools requires anything more than an average intellectual equipment, coupled with an honest sense of the amount of one's own duty, and a sympathetic insight into the duties of others and also a moral courage that gives no quarter to considerations not quite edifying, when dealing with friends and foes as well. This we can safely expect, unless otherwise warranted by contrary experiences in their relations to one another, in every one of the Higher Assistants who have stood the test of general educational qualifications.

In our proposal, there is the vital question of salary. We have no hesitation in suggesting that the grades of all the senior masters, including the Headmaster, must be raised to a level, and graded according to an accepted time-scale. There should be no special allowance to the Headmaster since it is found rather hard for one to adjust oneself to a lower salary, after a period's experience of a higher one. Seniority of service should however be shown in the amount of salary, whether the member is the Headmaster or the Assistant Master. To see that the burden on the Management is not increased all on a sudden, we would suggest that the Higher Assistants should be raised to the maximum of their respective Headmasters, at their present rates of increments, so that the gradual rise may be almost imperceptible.

Objections there may be raised to our suggestion that, by the annual change of the

Heads, the something which goes to create the permanent character of the administration of the schools would be in danger of becoming ineffective, and that this would encourage indiscipline in the staff and students. Our answer is that, having been brought up under the system of one-man-rule for a long time, some of us may now honestly feel it impossible to perceive that the apprehended danger is after all not substantial, and that even in the experimental stage the healthier effects of the proposal would be realised. With the disappearance of distrust and destructive criticism, and with the positive presence of mutual trust and co-operation among the members of the staff, the question of the discipline of the school is assured. Again, since every question of importance is to be settled by a reference to the Council of Teachers, at any rate of the Higher Assistants, the continuity of the administrative experiences of the Head can be maintained unbroken.

To be in a line with the above, the Class-Teacher System of the Lower Secondary and of the Primary Departments must also go by rotation, so that the responsibilities of the several teachers for the progress of the classes entrusted to them for a period of years must be real and substantial.

Before we close we must explain ourselves why we have been partial to the method of Rotation, in preference to that of Election. To be frank, the method of Rotation strictly avoids even the extreme cases of a few unfortunate members that may happen to fail to get through by Election. A dejected member of the staff will be led to believe his life miserable, and it will be next to impossible to make him turn out cheerful work. A dejected member will be a source of irritation to

the buoyant spirit of the youngsters, and will thereby prove to be a fruitful source of indiscipline. Failure, even if it comes to that, in a responsible position is more a corrective than anything else; but failure to get to the responsible position, even after a determined attempt, has its unhealthy reaction on the psychology of the individual. Of the two we chose the healthier one.

We hope we have made our position clear, and it only remains for us to patiently await criticisms, for and against, from the kind readers of the "Educational Review."

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THE HIGH SCHOOL LIBRARY.

THE periodical inspection of our High Schools during recent years has borne good fruit in the shape of 'large libraries, with additions every year' which figure so prominently in the reports of the working of these institutions. The Inspectors have to be thanked both for seeing that there are such libraries, and for seeing that a decent number of the volumes secured are lent out; and if the number of volumes in the library and the number lent out form the test of the adequacy and efficiency of a High School library, the libraries in our High Schools defy all criticism. We are not, however, dealing with a Public Library, or a University Library. The poverty of the English of the average S.S.L.C. student, and his inability to think, which reduces him intellectually to the level of a parrot, demonstrate that quite different principles ought to guide the formation of a High School Library, and that quite different tests should judge its working.

First of all, there are few teachers to recommend to their pupils books suited to their stage. A less number are there to see that the pupils read at all. And the High School student is bewildered amidst an array of Catalogues and Calendars, the plays of Shakespeare and the poems of Milton, drowned in an ocean of Scott, Dickens, Thackeray, and nonentities. Sometimes some well-wishing elder brother or graduate cousin guides him to the works of Mrs. Henry Wood, or *Ivanhoe* and *Kenilworth*. He does not find the books he can understand, and generally stumbles upon the Scotch dialect of many of the *Waverley* Novels, the Cockney lingo of *Oliver Twist*, or the social satires of Thackeray. For our High School authorities disdain to get down

'adapted' or 'simplified' series, and like to have a library in which they can show original editions of the works of the half a dozen authors all casual visitors could think of. Are those works useful to the pupils? is another question, a question they never ask themselves. It is true that in some High Schools they have interesting volumes from the Peeps at Many Lands Series, and Henty's novels. But the latter frighten students away by their size, and the former generally furnish them not reading matter but coloured pictures. There is one other matter. I have said that there generally is no authority to convince the pupils, by peaceful persuasion or by the other well-known High School methods, of the necessity of utilising the library. The volumes themselves in most cases are anything but attractive, with their greasy covers and detached leaves. That they cannot be counted as half volumes because of their dilapidated condition is the defence of the Management.

Probably, the teachers who neglect to guide their pupils in the use of the library are not greatly to blame. They themselves are not acquainted with most of the books they are to select from. If by chance it so happens that a stray brother of the profession has gone through a decent number of the volumes, he generally has not imagination enough to see what books at once delight and improve his pupils; and there is no authoritative list to which he can refer. The teachers of the Presidency may meet in Conference and resolve that 'our profession is noble, but ill-paid; but so long as we have the present quality of teachers, ours is no noble profession, but is only a trade like all other trades. How many teachers, I would like to ask, care

to read the leading educational reviews, and be informed about the newest theories of education? How many, for instance, have read those chapters in the report of the Sadler Commission which deal with the High School? The managements of our schools are to blame in that they do not provide this sort of reading matter to their staffs, and the Inspectors have no excuse for their not seeing that the managements do it. The object of the managers of many of the private institutions in the Presidency is only to please the Inspectors; but the Inspectors in order to realise their responsibilities and the nature of their work, have to be real educationists, who are not Inspectors only because it is 'a career' for them. At the same time it is doubtful how far the staff would utilise the opportunities that I point out should be afforded to them. Do our present teachers of English go through the volumes in their libraries so as to be able to direct the reading of their pupils? Not to speak of keeping in touch with living English Literature and selecting further volumes for the libraries! Or again do our teachers of History, Geography and Elementary science watch what books are published every month to make the study of those subjects a delightful pastime? It is a well-known fact that many of these teachers merely dictate 'notes' to their pupils in the teachers' own monstrous English, monstrous because of the number of phrases from published works that are discordantly inset in it. Our Inspectors certainly see to these things; but what they do is to approve of such stuff and encourage its production—only it should be disposed into matter and method.

And pupils in most schools pay 'library fees' for benefits which they do not derive. In the scheme that I am going to propose, the

amount so collected is sufficient to provide excellent reading matter and enough of it to the pupils. In fact, if, according to my scheme, each pupil buys a different volume with the 'library fees' he pays to his school, he will have a book of his own into the bargain after all his companions have read it.

For let us suppose that a High School student can read thirty volumes a year. That makes ninety volumes during the three years of his High School course. The right course to adopt in that case is to select the ninety best books from the High School students' point of view, and to make him read them. The books have of course to be divided into three groups according to the year in which they are to be read. The thirty Fourth Form books should be distributed to the thirty pupils of the class and redistributed after stated intervals. And the teacher in charge of the class should see that the pupils read them.

Of course arrangements will have to be made for special cases. For instance, a class may contain more than thirty pupils. In that case two or more copies of at least some of the thirty books will have to be provided. The only condition is that, during the year, all the pupils in that class should have read the thirty books assigned to that class. Then again, there might be some extraordinary students demanding more reading matter. They should be directed to read not only with the class in this scheme, but also from the general library.

In the selection of these ninety or hundred books, the utmost care is necessary. Prominence should, wherever possible, be given to the classics of all time. This would go a great way to develop a sound taste in the

pupils. Language, style, and thought, are other features to be considered. This consideration would result in the complete rejection of certain books now allowed to be read—or rather gone through—by the students, and in the adoption of adapted editions of others. The great point to be considered is, however, the nature and the degree of the pleasure the books would afford to the pupils. It should be remembered here that a healthy relish for sound literature should be created in them. And the last point to be observed is that the list is subject to revision every year to satisfy new conditions and new ideals.

The scheme I have here proposed, while it would be of immense benefit to the pupils, is at the same time not very difficult to work. The various graded series now published by leading houses both in England and in this country under the general editorship of able educationists should make the task of selection easy to any real teacher. For the convenience of the class of teachers and the class of Inspectors I have elsewhere described, some authority should publish lists of books suitable for use in the various forms; and it should be the duty of the Inspectors to see that the scheme is worked in all our schools. Of course the existing libraries have their use; the new libraries can in most cases be formed out of them, and all the unnecessary volumes can be used for reference and by teachers. In large High Schools more copies of the select books have to be bought; so that every pupil in that High School has a chance of reading them all. There is absolutely no use of the miscellaneous and indifferent collections now called libraries in our schools. It has to be emphasized that they are often inadequate, and generally unsatisfactory in their working—undoubtedly explaining the 'slaughter of the innocents' in the University Examinations.

P. A. NARAYANASWAMI.

SOME INDIAN EDUCATIONISTS. (BENGAL).

VI.

PANDIT Iswar Chandra Vidyasagar's activities in the field of Bengali literature were many and far-reaching. He appears to have begun by translating Sanskrit works into Bengali, his first products being the *Basudevacharita*, and the *Betalapanchavimsati*. In 1848 he had been contributing to the pages of the *Tattwabodhini Patrika* a translation of the *Mahabharata*, but stopped the piece as soon as he learnt that Babu Kali Prasanna Sinha was endeavouring to issue a translation. "Not only did he forego his desire of translating the Mahabharata," acknowledged the latter gentleman when his edition of the epic had been completed, "but took the trouble of going through my translation whenever he had leisure for it, and even personally attended my printing press and superintended the translation." Vidyasagar's *Barnaparichaya* or Introduction to the Bengali alphabet is still in vogue among the infant learners of Bengal. His *Upakramanika* and *Vyakarana Kaumudi*, the latter in four parts, are still among the best aids to a Bengali aspirant after the Sanskrit language. Among his works for Bengali learners who have already mastered the alphabet and the letter-combinations, may be mentioned *Kathamala*, *Bodhodaya* and *Akhyanamanjari*. His higher works such as *Sitar Banabasa*, *Sakuntala*, etc., as well as his annotated editions of Sanskrit books need not be detailed here.

In February 1849, Iswar Chandra was appointed Head Clerk in the College of Fort William on a salary of Rs 80 a month; a year later he got a Professorship in the Sanskrit College on Rs. 90. The authorities

of the day had noticed with regret that the number of scholars seeking admission in the Sanskrit College was going down year after year. The cause was not far to seek: English education had already made a headway in the province, and people instructed in English had ample opportunities for employment. Sanskrit education, on the other hand, did not open up any prospects of similar emoluments to its votaries, and the Sanskrit College as a consequence was not eagerly resorted to. Soon after Vidyasagar's appointment, the Council of Education who found themselves faced with the alternatives of either ending the life of the College or mending its workings, asked for his advice in the matter. The learned Pandit in his masterly report of the 16th December, 1850, submitted an elaborate scheme comprehending both the management of the Sanskrit College and the system of instruction to be adopted therein. It was solely due to this report, that the Sanskrit College of Calcutta owed its new lease of life.

In January, 1851, Iswar Chandra was appointed Principal of the Sanskrit College. He set himself at once to bringing about various improvements. He was on the best of terms with both the staff and the students. Sudra boys could not at this time get themselves admitted into the Sanskrit College. Vidyasagar saw the injustice of the practice and brought it to the notice of the Council of Education. He suggested that this unwarrantable distinction should be abolished, even though the principal professors of the College were "averse to his innovation." The Education Council accepted the proposal; and Sudra boys were permitted thenceforward to have instruction in the Sanskrit College in all subjects except Theology. Another in-

novation of this learned Pandit which touches not only the Sanskrit College but all educational establishments of the country was the introduction of the practice of Summer Vacation. He impressed on the authorities the hardships encountered by teachers and students alike during the sultry months of May and June: the Education Department saw the justice of the complaint and lost no time in ordering that all institutions should remain closed in the hottest part of the year.

In 1855, Government having resolved to start a number of aided English and Vernacular schools throughout the country, Vidyasagar was asked to draw up a scheme of running these schools. The scheme was submitted by him in due course, and he was appointed Special Inspector of Schools in addition to his ordinary duties as Principal of the Sanskrit College. The schools established in the districts of Hooghly, Burdwan, Midnapore and Nuddea came under his charge. His income at this time amounted to Rs. 500 a month.

As the Special Inspector of Schools, Iswar Chandra got ample opportunities of putting into execution his favourite idea of the extension of female schools. He had already identified himself with the cause of female education and was the Secretary of the Bethune School from its very start. He helped afterwards in the establishment of girls' schools in various parts of the country. In this connexion it is worth while to mention that Vidyasagar was a great social reformer. He had the courage of his convictions to an amazing degree, and his outspokenness won the admiration of friends and foes alike. He it was who pointed out that the self-imposed tortures of Hindu widows

were not incumbent according to the Shastras and that the religious codes laid down distinctly that widows were free to re-marry. His next effort was directed against intemperance and the practice of polygamy followed by the Kulin Brahmins.

Iswar Chandra resigned Government service in 1858 on account of some violent collision with the Director of Public Instruction; but continued for some years after to be an unofficial adviser of Government in matters educational. His services in the Education Department were signalized by marked success. He breathed his last on the 30th of July, 1901, at the ripe old age of eighty-one, deeply mourned by his countrymen. He was a man of sterling worth and very simple habits, and his name has become a household word for unassuming and never-failing charity. He maintained a large number of orphans and widows and did immense service to his birth place by establishing an English School and a Charitable Dispensary. He was also the founder of the Metropolitan Institution of Calcutta. At the Durbar held in Calcutta on the 1st January, 1877, on the assumption of the title of "Empress of India" by Her Most Gracious Majesty Queen Victoria of blessed memory, Vidyasagar received a certificate of honour. In 1880 he was invested with the insignia of a Companion of the Order of the Indian Empire. An oil-painting of the venerable Pandit by Mr. A. E. Caddy was put up in 1892 in the Presidency College Library.

Contemporaneous with Pandit Iswar Chandra Vidyasagar and of no meaner attainments in any respect, Babu Bhudev Chandra Mukherji was an ardent educationist, a versatile author and possessed of a large

and open heart. He came of very pious and respectable parents, and was a Brahmin by birth. Born in 1825, Bhudev Chandra did not acquire a knowledge of the Bengali alphabet before he was five years old. After learning a little Bengali and Sanskrit at home he was admitted into the Sanskrit College of Calcutta at the age of nine, and studied there for a little over two years. Three years later he entered the Hindu College where he acquitted himself creditably at the examinations and won the affection and admiration of his professors: at the time of leaving the College in 1845 he held a Senior Scholarship of the first grade.

Dr. Mouatt, the then President of the Council of Education, verbally offered Bhudev the Headmastership of a certain school in his Department on a salary of Rs. 150 a month; but the latter declined the offer inasmuch as there was no provision for imparting religious education to the boys. Some time later he took up the duties of Headmaster of the Hindu Charitable Institution which had come into existence through the liberality of a few Hindu gentlemen; but he did not remain there for long. In 1847, he started an English School at Chandernagar, where he and a few of his friends worked simply on a diet allowance. Similar schools were also established through his efforts at Siakola, Sripur and other places, for the benefit of his countrymen. Want of funds, however, obliged him before long to seek remunerative service, and in 1849 Bhudev Babu found himself installed as the Second English teacher of the Calcutta Madrasah on a monthly pay of Rs. 50; in a few months he was transferred to the Howrah School as Headmaster on a salary of Rs. 150 *per mensem*. When he took over charge of this

institution the students numbered only 106. His untiring zeal and single-minded devotion brought about many an unlooked-for improvement; he explained in detail to the subordinate teachers the method of instruction to be followed so that the needs of every individual student might be scrupulously attended to. The system he promulgated had the desired effect. The number of passes increased in the examinations, and more and more students sought admission into this school. When he left the Howrah School after rendering it conspicuous service for some six years and a half, the students counted 236.

The Educational authorities of Government were highly pleased with the output of Bhudev's labour. In 1856 they were contemplating the establishment of Normal schools for the purpose of training teachers for vernacular institutions in the mofussil. It was decided that a competitive examination should be held for the selection of suitable Superintendents of the projected schools from among the passed students of the Hindu College. By the advice of Mr. Hodgson Pratt, Bhudev Babu offered himself for this examination and was appointed Superintendent of the Hooghly Normal School on a salary of Rs. 300 a month; in his letter of appointment, however, it had been distinctly laid down that "the ultimate appointment of a European Superintendent was in contemplation and whenever that measure was carried out his present appointment would cease."

Babu Bhudev Chandra lost no time in giving effect to his well-thought-out plan of instruction in the Normal school, and before the year was out he succeeded in commanding the same respect and admiration among his students

here as he was wont to do at the Howrah School. Bhudev Babu had certain novel methods of imparting instruction; he would not rest content with giving book-lessons to his pupils. In order that the latter (who were expected to exercise the function of teachers in mofussil schools) might develop their faculty of observation, he would take them out on sight-seeing trips under his personal supervision; and he resorted to various means for the development of the rest of their natural faculties. Indeed, the fame of his successful administration of the Normal School had become so widespread that it was not an uncommon thing for school-authorities on the lookout for teachers to publicly advertise that passed students of the Hooghly Normal School would have preference for the appointments in hand.

In 1862, Babu Bhudev Chandra Mukherji was appointed an Assistant Inspector of Schools on Rs. 400 per mensem, under Mr. Medlicott who was then officiating as Inspector of Schools, Central Division. At this time, he contributed some articles of educational interest to a weekly paper in English, called the "Indian Empire," which counted among its contributors Mr. Eden, Secretary to the Government of Bengal (afterwards Sir Ashley Eden, Lieutenant-Governor of Bengal). These articles attracted the notice of Sir Ashley who sent for Bhudev Babu and had some friendly talk with him. Soon after the Government of Bengal in their Budget for 1862-63 sanctioned the expenditure of thirty thousand rupees on primary education. The Government having asked the Director of Public Instruction whether any special proposals were forthcoming for spending the money, the latter called for the Inspectors' reports. In submitting his report for the

Central Division, Mr. Medlicott enclosed Bhudev Babu's report too, and acknowledged with gratitude the help he had received from his Assistant in the compilation of his own report. The Director of Public Instruction forwarded copies of the Inspectors' reports to the Under-Secretary to the Government of Bengal, and in his covering letter No. 2873, dated the 18th December 1862, drew special attention to the masterly report of Babu Bhudev Chandra Mukherji. He made no secret of his firm conviction that here was the man pre-eminently fit, by virtue of his experience and far-sight, for the tasks that were about to devolve on the Inspecting Department, and very strongly recommended for the post then held by Bhudev Babu being made permanent. In accordance with this proposal, Bhudev Chandra was appointed an Additional Inspector of Schools,—the training schools of Burdwan, Krishnagar and Jessore coming under his care. In his new capacity he went to work with redoubled energy. He encouraged the Sub-Inspectors who worked under him; he visited the influential gentlemen of the places where primary schools were already existing or were very soon likely to come into existence, and used every resource to see that the aid coming from Government was fully utilised. In a few months' time he succeeded in establishing a large number of primary schools.

Bhudev Chandra had a very affectionate heart, and his conduct towards his subordinate officers was authoritative but markedly loving. It is said that a Deputy Inspector working under him submitted a written complaint to the Director, saying that the Additional Inspector was used to cutting jokes with the Deputy Inspectors, playing with them on the chess, etc.; but if any error or oversight

was discovered in their work, they were asked to rectify it *immediately*; it was very difficult to work under such a whimsical man. The Director sent the report to Bhudev Babu, remarking that it had not perhaps fallen to the lot of any other person to secure from a subordinate such a high certificate regarding the superior officer's liberality, skilfulness and kindness of disposition.

On the 1st of April 1867, Babu Bhudev Chandra was appointed to the Fourth grade of the higher Educational Service as an Inspector on a monthly salary of Rs. 500, an office never before held by a Bengali gentleman. It was the post of Divisional Inspector of Schools of North-Central Provinces. He retired from Government service after having reached the first grade of Inspectors.

Bhudev Babu, it has been already remarked, was also an author of eminence. The Bengali books that were in use in the Government schools of his time were sadly poor both in quality and in quantity. This want was sorely felt by gentlemen engaged in the profession of teaching, and Bhudev Chandra knew it from personal experience. He set himself the onerous task of filling up the gap by bringing out suitable works for the youths of his country. He wrote several books,—the more important being *Siksha Bidhayak*, *Prakritik Vijnan*, Parts 1 and 2, and *Pura-brittasara*. He also compiled some historical facts into a volume called *Aitihashik Upanyasa* or historical anecdotes, and translated into Bengali the histories of Rome and England, as well as the Third Book of Euclid's Elements of Geometry. Of his higher works, mention may fitly be made of his essays such as *Acharik Prabandha*, *Puribarik Prabandha*, *Samajik Prabandha*, etc. Besides these publications, Bhudev Chandra edited a weekly paper in Bengali, *vis.*, the "Education Gazette," which is still in existence. The history of the birth of this paper is interest-

ing. When Bhudev was Headmaster of the Howrah School there came out in a newspaper called "Bhaskar" a scathing criticism of a certain beneficent action of the Government. Mr. Hodgson Pratt, who was at the time, Inspector of Schools, Western Circle, showed the piece to Bhudev Babu and expressed his astonishment at the ignorance of the writer. Bhudev Babu admitted that the criticism was unjust but explained that so long as there was no publication on the Government side to make known their views and enlighten the public mind the existence of such critics was not to be wondered at. He urged the necessity of a Government owned newspaper for the purpose of meeting this deplorable want. The Inspector having fallen in with his views recommended the proposal for the consideration of Government, and thus was started the "Education Gazette" as a weekly paper in 1856. In December, 1868, it came under Bhudev Chandra's editorship; but it was no longer Government property. The proprietorship vested in the Editor and Government granted the paper an annual subsidy.

On the 1st of January 1878, Babu Bhudev Chandra Mukherji was invested with the insignia of a Companion of the Order of the Indian Empire. He was "remarkable for his natural intelligence, educational acquirements and his zeal in the cause of learning". He died in 1894. "There was in him", wrote Mr. Hodgson Pratt after he had passed away, "a quiet readiness to accept all the higher ideals of life without any cant or surface profession; he was too full of grave self-respect, and endowed with too high a moral sense for any insincerity. He recognized to the full the responsibility of his task as a teacher of young lads, many of whom were preparing for a college education; but he never chattered about it."

Bhudev Babu was an orthodox Hindu of

the conservative type and was sorely against the movement for widow re-marriage advocated by Pandit Iswar Chandra Vidyasagar. The venerable Pandit, however, had obtained among other persons, a staunch supporter of his views in Babu Ramgopal Ghose. It is said that on the occasion of the first widow-marriage, Babu Ramgopal and the learned Pandit walked by the side of the bridegroom's palanquin. Born in October, 1815, Babu Ramgopal Ghose was first educated in Mr. Sherbourne's School and afterwards at the Hindu College. He left college very early, but appears to have been a steadfast votary of the Goddess of Learning. He was a merchant by profession and an ardent patriot. He started a newspaper called the "Spectator," and was one of the founders of the British Indian Society. He was "a great friend of education and was known to be a public-spirited man." He associated himself with David Hare in various educational affairs. In the Medical College he took a good deal of interest; and a considerable sum of money from the coffers of Babu Ramgopal went out year after year to procure prizes for successful students of the Hindu College. A great public speaker,—the Indian Demosthenes, as *John Bull* styled him—who (in the language of the same journal) "floored three English Barristers" by his oratorical gifts, Ramgopal left no stone unturned to serve the cause of education in his mother-land. When it was not only objectionable but also too costly for ambitious youths to cross the seas in quest of higher knowledge, this liberal-minded gentleman "assisted Babu Dwarka Nath Tagore towards sending four students to England for education in different professions." In October, 1848, Ramgopal Babu became a member of the Council of Education

and helped Mr. Bethune in establishing a female school in Calcutta. He was a great friend of Dr. Mouatt, the President of the Council of Education, to whom he offered valuable suggestions in connexion with the establishment of the Calcutta University, and was among the only four Hindu gentlemen who were first appointed its Fellows. Before his death (in 1868) he bequeathed by will a princely donation of Rs. 40,000 to the Calcutta University.

Babu Ramgopal Ghose was highly respected both by his countrymen and by the Government. After he had left his mortal frame, the Secretary to the Government of Bengal in a letter addressed to the late Babu Pyari Chand Mitra wrote as follows: "How highly the Government valued Babu Ramgopal Ghose's opinion is evinced by the number of occasions on which he was called on by Government to give his assistance as a member of a committee during the last quarter of a century."

(To be continued.)

GOKULNATH DHAR.

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THE PRESENT STATE OF THE TEACHING PROFESSION.

AFTER the introduction of the new curriculum and the Secondary School-Leaving Certificate Examination, a hue and cry has been raised by a great majority of even educated people that the products of our schools at present are very low in value, and that the defects of the present educational system are greatly responsible for such a state of affairs. But a hasty observer, a person who has taken no pains to investigate into the real causes of the defects, a critic who is carried away by a superficial review of the state of things, can never discover wherein the defects really lie. But people who have laboured long in the mines of knowledge, spent their time, energy, and experience in the factories of instruction, and driven with skill and intelligence the complex machinery of educating the public, need not go far to find where they have to set things right if the educational machinery should work smoothly and efficiently and turn out highly-finished products.

In this age of commercialism, there is a tendency in us to economise in everything, aye, to over-economise or even to be niggardly to some extent; we want things to be done as cheaply as possible; but, will we not be going against our dearest interests and most cherished ideals if we also desire that the great task of educating three-hundred million people of our motherland, should be done as cheaply as possible? We want to spend less money on education; we do not equip our schools with the most up-to-date requirements; we do not pay our teachers sufficiently, but yet we do not shrink from clamouring for valuable products. We must know we may make education cheap but not teaching.

If we pay a visit to our Elementary as well as Secondary schools, of course, not in the

capacity of an inspecting officer, we will not be surprised to find a state of double-starvation—the physical starvation of the poor teachers on one side, and the intellectual starvation of the children of our motherland on the other. It is really a pathetic sight to see the poor school-master of the village, mustering all the truants and taking infinite trouble to make his little school decent for the Inspection day; how many sleepless nights of thought and care would he have spent, how many songs would he have composed, how much difficulty would he have had to borrow a coat for the special occasion, with what guile would he wear a smiling, solicitous countenance, while, alas! his stomach is pinching with hunger, while his wife and children are half-starving at home! O! What a painful dissimulation! and all these for a pittance barely sufficient to feed his child for a week!! We may preach patriotism to him; we may egg him on to work with vigour and energy for the common cause, we may extol before him the dignity or the nobility of the profession, we may even flatter that the Elementary school-master is really a great builder of the future generation, we may give him a cart-load of instructions in Direct method, Heuristic method, Montessori and Froebel, &c., we may din into his ear a world of sermons about organisation, discipline, and a thousand others pertaining to teaching and management of school, but if we neglect the poverty of the teacher himself, if we do not care to bestow a look of sympathy and compassion on his haggard countenance and hand-to-mouth existence, if we do not realise that the teacher also is a being endowed, above all, with the instinct of self-preservation and try to first appreciate and deserve his labours sufficiently, then we need not be sorry even in the least, if a School-Final candidate commits hundreds of grammatical mistakes in a single essay, and writes

the address of a letter prefixing and suffixing Mr. and Esquire to the same name! Little should we also be sorry to find a similar condition in higher schools, and still less should we be justified in finding fault with the curriculum itself! It is as much as a doctor applying remedy with little brains for the diagnosis of the disease; it is as much as a bad workman quarrelling with his tools.

With due deference for the teaching profession and the teachers it may be said that the lot of the Secondary school teacher is no better; perhaps he is a greater artist in the art of dissembling when occasion arises; he also feels the thorn of poverty pricking on his side; his looks show how far he is cheerful and satisfied with his position; but he is wise to think that self-preservation on half-bread is better than self-destruction on no bread; and he also thinks that discretion is the better part of valour; he is something of a philosopher too; he is a greater believer in the mercy of God in every place, and mercy, encouraging thought! gives even his affliction a grace, and reconciles him to his lot; his future is almost a blank before him; his position no better than that of a frog in a well; he can depend on the well as long as there is water in it or as long as it is agreeable to his habitation; else, migrate to some other more congenial. "To fresh fields and pastures new" is his motive; he is a rolling stone, a bird of passage; he is tossed about from school to school like a ball in lawn-tennis. But wherever he may go his prospects are poor; he never hopes for any change in his status; his life as it were is reduced to a dead level; his poor salary and his poor-school, are his be-all and end-all of his life. So his ambition is killed; his hopes are shattered and if his conscience is also blunted, he will at least console himself by making his position sinecure. But who are the sufferers? They are the sons of our

motherland. But with all these disadvantages under which they suffer, the teachers of our land have never lost their love for the profession; hold out some brighter hopes and better prospects for them, then we can dare say that none can vie with them either in the enthusiasm of their spirits or the efficiency of their work; but their lot forbade. They have only learnt submission to it; but how long? they ask. Their enthusiasm, zeal, and earnestness for work have been rendered dormant by that killing frost of poverty, and it is that canker that is eating away into the very vitals of the teaching profession and it is that terrible leech that is sapping it of its life-blood, namely, efficiency. The teachers are not inefficient but only

"Chill penury repressed their noble rage
And froze the genial current of their soul."

The main remedies that may be thought of for this state of things are no other than those twice-told tales, viz., the unification of the teaching service and the raising of the salaries of teachers. I might give here the means by which we can raise the salaries of teachers but it is a subject by itself and requires to be dealt with in detail; but it may be very well pointed out that by unifying the teaching service, the teachers will not only feel their professional solidarity but will come to appreciate better its dignity and value. They will also feel, serve where they might, either in an elementary school or a secondary school, aye, anywhere in the Presidency, they are the real members of the same body-politic with common interests and ideals and work with greater co-operation and enthusiasm for the uplift of thousands of young boys entrusted to their care. Then, will the darkness of their cheerlessness and discontent disappear and then will they look with renewed hope and joy at the brightening of their benighted horizon indicative of a happy dawn for the

teaching profession and themselves; and it is then, and then alone we can hope that our so-called complex educational system will cease to be top-heavy and work with ease and facility, then alone, will our schools produce better yield both in quality and quantity, and the Goddess of Learning appreciating the devotion and faith of her ardent worshippers,

would freely pour forth those elysian and bounteous streams of knowledge to flow through many an uncultivated mind and render it sufficiently fertile to yield such valuable fruits of loyalty, citizenship, patriotism, unity and solidarity among the teeming millions of our motherland.

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UNIVERSITY EDUCATION.

EDUCATION is the concern of the Government no less than of the public. Where the ruler and the ruled are identical the truth can never be denied. The interests of both, then, are the same so that the education of their children reflects very well to their ambition and civilization. In other cases the truth will have to be either modified or explained away, with suitable additions. It does not always imply that in a subject nation the interests of the people and the Government collide; but one fact is undeniable, that the latter dominates in all matters whether it is connected with them immediately or remotely. As civilization advances the amelioration of the down-trodden or the depressed is inevitable but as human nature would have it, the ruling class grows hide-bound exactly in proportion to what the subject race gains in vision. It, therefore, follows that where the divergence is more than ordinarily injurious opposition becomes pointed and further co-operation impossible. Since free countries are immune from any such clash the problem of education affords no scope for any to complain or disavow.

We cannot wholly ascribe the shortcomings in our educational system to the case-hardened government of the country. None can help but admit that the education we receive is alien and consequently the method of its inoculation too is unquestionably foreign. Though the interests of the Government are, by no means, inimical to the aspirations of the country to a definite extent, the Reforms as inaugurated by Lord Macaulay are now calculated to have been the genesis of the present distortion of the Indian mind. None can gainsay that the Government had, during its incubation, a very altruistic principle of civil-

izing the depraved Indians. Since its basis itself was the ill-conceived ambition of christianizing India the pristine and insidious methods were brought into fresh use here. The progress marched apace, till it was arrested by the counter-civilization which had gone in a long hibernation due to internecine conflicts in the country. The peaceful days gradually restored the Titanic powers to this Indian Progress but unfortunately before it could rehabilitate the beatific glory of its past days, there were innumerable apostates and heretics who tried to rend its garniture in a thousand ways. The conflicts of these two colossuses do not lie within the purview of our subject, our aim in suggesting it being the search for the sources of contending aims of the Government and the people in the later two or three decades of the last century.

It would be the basest perversion of the truth if the Indian educational system is associated with any corruption of motive. Britishers loved to see us Christians and gave the flower of their enlightenment; they loved to see us happy and, therefore, blessed us with their own modes of education. Though we observe here the one-sided apprehension of Indian conditions, we cannot withhold our plaudits for their sincere attempts. An unexpected result, however, baffled them; the knowledge of our greatness flashed like lightning from the gathering clouds of the East and the West dazzling the whole world with an oriental effulgence, where the West seemed but a faint reflexion of the East. We advanced instantly while they are still reluctant to follow our track. We were undeceived then but they still labour under their favourite hallucination. Had it not been for their masterly composure we would have known ourselves better and remained the more faithful to ourselves, for

all the oblique measures of our competitors. But the aims of education continue to be the same though they have lost all their spirit; and such a spiritlessly aimless education has been given us for the last fifty years, bolstering it up with all possible vagaries and all imaginable pretensions. Even the most distant vestiges of the exploded aims cannot be seen in the education of the country, even though the buttoned and self-deluded missionaries and their vulturous and self-abused shadows attempt to rear a phoenix on their debris. There is still no sign of reform; no hope of progress; no phantom of ambition. It is indeed pitiable that in such a vacant and eyeless policy the Government is compelled to nourish the lifeless current of education, the remains of its frustrated hope.

Now that the ambition was foiled by the renaissant Eastern civilization the currents of education were turned to the providing of secular education to the country. Britishers were not, and have not been, much dispirited in this connection. Since there was novelty about them, their manners, customs, and education, the attention paid to all these was very titillating in the beginning. The unbounded and precious treasure of their literature and their mastery over seas, commerce and industry contributed not a little to our over-rating whatever was given us in imitation of their own institutions. The present Universities sprang up then with a distinct purpose and were continually dominated over by the Government. The attractive feature in them was the fashion of certifying the students at the end of every grade in their education. Thus, the current once changed, changes its course permanently. The tradition of these Universities has almost established itself in the hearts of the young and aspiring people and we see very rarely an individual who will reject the University distinction in whatever form.

Universities have been the life-blood of Indian education. It is but necessary that they should be examined first. If education is to bring into action the best powers of students to the furtherance of their nation's good we shall have to doubt, at the very outset, whether the Universities have discharged their duties well. If education is the index to the moral and spiritual standard of a nation may we not aver emphatically that these have failed in their functions? If education is the concern of the people and their aspirations, can any one vindicate the manner in which these Universities have tortuously tortured the Indian mind to a pitch where nothing but its own death is recognised? Here is then a current which being turned to fulfil a new purpose has hopelessly failed in its very source. The secular education for which it is intended, is imparted neither for the benefit of the people nor of the Government; and after a wistful protraction of drifting policy it is found that if for nothing else the production of the Universities may be used as Government accessories or, at best, as the perjured malefactors of Indian progress.

The conflict between the governors and the governed was not dreamt of even after the inchoate stage of the British consolidation in India. Besides the many causes that have been suggested above one was pre-eminent. The minute attention in all affairs, even to a point of suspicion, was the characteristic of the rulers so that all institutions that were expressly for the people to manage and manipulate, were interwoven with the interests of the Government in the subtlest manner. Thus the Indians were deprived of all good occasions of self-education and the popular institutions too were savagely misappropriated. The ambition of the rulers to dictate was very recently seen in the Hindu and Moslem University affairs. The Universities to-day are in no way independent institutions and

in spite of the ostensibly jejune power and control over them, the Government, still, has them under its throttling grip.

With this feature, others can very well be adjudged without the necessary details. Universities in India never claim to be popular bodies in any sense. The public funds have been negligible and therefore, the control of the people too despicable. The popular aspirations are not well ministered to and hence their loving votaries decline in their warmth and are fortified in their prejudice. The main defect in them is their function which is known as the examining function. Nowhere can examiners be the love-inspiring preceptors and their community is hateful to sight and abominable to mind. It is construed sometimes, rightly as destructive and suicidal. The best Universities are the teaching ones where professors are endeared to their students by their profound erudition, their unimpeachable rectitude, and their devout faith and immaculate conduct in religion. Even one of these traits will suffice to lead the professors to an exalted seat in the scholars' mind provided they are, in no part of their function, in a deterrent lion-skin of the examiner.

Universities in this country are fed by their far-reaching hands while they are allowed to bulge out in their own place. As a matter of fact, the Universities have no existence worth an energetic body. It is absent by reason of its exiguous influence. Except for the fact that a University appoints examiners and prescribes books, the institution may almost be thought to be as good as dead. Men are not inspired by either the books recommended or the examiners given; and when nothing beyond this characterises our University, people do try to belittle it. Under the existing conditions, therefore, the Universities can neither prosper nor command influence. There are other factors too that detract the partial

mind. The Universities have been blind-fold to their environments and their course from the time of their inception to this day, has been insipidly straight and colourless. Even when the villagers of the farthest corner of India inquire about events abroad and pull faces over the untoward circumstances against them the minted graduates of the *Alma Mater* are forced to practise a cynical unpuckering of their visage with a supercilious countenance. How can graduates, when they are thus rendered incapable to study and explain their surroundings or direct and control their unlettered plebeians to a healthy understanding of their situation, preserve their own dignity and foster a filial love for their University? Unless these march with the march of time their activities and their worth would be ludicrous. Next is the defect of tasteless uniformity in the shapes that are given to the intellects of the country. The distinctive features that mark different Universities are deplorably absent and the graduates that are turned out annually by all of them are so similar to one another that people ridicule the stereotype and harbour the most peccant idea that the mentality of Indians is inherently unequal to the great task other nations have achieved.

Nor are the Universities such as to attract all men of different abilities and tastes. Though very recently some faculties have been introduced into the empyrean where others were long enjoying their undivided domination the great bulk of the populace remains as feebly attracted by them as ever. Being inaccessible to the generality of seekers after knowledge by reason of their seclusion and contraction the Universities forfeit their claim for universal approbation. Men of uncommon abilities, in departments, the Universities have squeamishly devised to omit, are left to the best of their opportunities or the worst, to reveal to the public their Promethean

achievements. Universities are not the emporium now of all arts and of all talents, developing the commerce in them and incidentally acquiring the all-merited esteem as the repository of all that is best, most desirable and permanently interesting.

With the premises as have been already supplied, we can confidently conclude that the collegiate education which is directly controlled by Universities is insufficient, defective and morbidly degenerate. Following the accredited principles these Universities have sanctioned the demarcation to different departments of knowledge and to every subject so that a student who emerges from the sanctuary finds, not unnaturally, that his attainments are only complimentary and cannot carry him through his life ambition to an independent position of consequence in society. Even conjuring up that he has a congenial atmosphere where his achievements can be utilised to some advantage, his struggle to furbish his old knowledge and to weld it with more such accretion, will have to be maintained very late before he could gain anything like an approximation to a useful factor in society. This is very well borne by instances of men of peculiar endowments, who lengthened their days of scholars' life to drink enough from the fountainhead of Western education. Though they passed creditably, period after period, by the few available attenuated springs of the strangled fountain they remained throughout their life dissatisfied and dis-spirited. Their life, even after so great an exertion, became a drudgery extenuated by neither a heart to serve the country nor by an opulence to satiate their concupiscence. Then burning with disappointment they saw that all the fund of knowledge they strove to collect and others that are snatched with avidity by other lovers of knowledge are perfectly insane masses of dyes that colour their intellects that the market may know

which of these can best be distinguished for a specific use or concern. At best the education of the University print is most suitable for vicarious purposes where the individual bearing the stamp is annihilated in the general deluge of the master's pride, greed and caprice.

Others may be cited to bring some more defects into cognizance. We know instances where Bachelors of Engineering and of Medicine scrambled up to a pittance in the Educational and the Revenue Departments and Bachelors of Agriculture courted to high posts in the latter that fresh men may be snared with that bait into the limbo of unredressed under-graduates and uncanny instructions. The fact is ridiculously obvious. The graduates in every line do not recognize in their training any peculiarity that may exclude them from other branches of active work. Their special knowledge is either negligible or can be nothing better than a passport to find their living somehow. They either want absolutely in that higher ambition to emulate their fellow-graduates and to enlarge their mind with higher knowledge in the profession or the instructions are so shamelessly scanty and incomplete that their recipients are not dignified by a sense of their own competence in their work or the advisability of getting into it.

Far from condemning the efforts of Universities, though they may emanate from, no higher motive than the mere cultivation of the servile in us we shall have to record that the roll of subjects has been mercilessly mutilated. Allowing that under the munificent and benign regime of our rulers we are in no need of the necessities of life—nay—even its comforts and that our greatest deficiency is the pleasure that secular knowledge brings, enchanting our life, may we not expect that we should devote our attention, par excellence, to bless our educa-

tion with their surfeit? Here, too, we find that the Universities have been remiss; they have withheld from us the support to our *summum bonum*. They never raise their finger to help needy scholars who sacrifice their life to exhume, from the general wreck of the past, our ancient existence. May-be, this is not considered a part of their duty on the score that public money is squandered thereby. But what have they to say to the study of comparative politics in colleges? Bearing in mind the great precepts of the Government, as to the inoculation of any such knowledge during the special period of life we may justifiably opine that, under the exterior of unrestrained study, we are given only the lifeless odds and ends of ante-deluvian principles and practices with the superficialities of the modern commonplace. This is a meat for our spleen and liver which, when fully enlarged, secrete noisome substances and gorge up the regimen offered as wholesome to our ambition and spirit and ruin our peptic powers even when the milk of our history is administered to our soul.

Other subjects there are, the insertion of which in the syllabus of subjects for colleges will surely be congratulated upon. Considering the manner of governing, we find that the art of speaking is essentially the citizens' prerogative. All men lettered and unlettered are controlled by good speakers and all governments are managed by tongues. How improbable would it be, if reticent scholars were pitch-forked into the position of ministers or presidents without knowing even the A. B. C. of personal magnetism on the people. In spite of the helter-skelter attempts in educational institutions, this side of the mental culture is utterly neglected, so that even the talented graduates lose the best part of their youthful life in preparation for their ultimate duty and often-times fail to master that art. We perceive that the bugbear of current

politics weighs very heavily on all the dreamy cogitations of the authorities in this connection. There can be no life in the instructions imparted if they are not directly applicable to the present environments. People lose sight of their extinct glory if it is not brought home to them, in all its pristine splendour. How can the receptive minds of young Indians be best furnished, if it is not through the realisation of their own conditions and requirements? Whether the instructors mean it so or not, have not the Egyptian children and parents seen the glare of freedom and the lurid light of disappointment when they were carried away by the voice of the angelic Orpheuses to the revivifying sun-light of regeneration? It is impossible to lead blind-fold the future citizens to the hazy West while the East is gloriously over-spreading its roseate lustre round about. Let them stand as the free interpreters of their own needs and aspirations to their countrymen and we shall very soon be all gravitated to the Mother of Education.

In theory as well as in practice the Press has been our potent instructor; where it is misguided and antagonistic to the popular principles there is always a simmering dislike permeating the whole country. Great magnates in England own many newspapers and through them disseminate their views throughout the country. It would be a great destructive power if the press were in the control of the nihilistic propensities in the land or in the time-serving hands of the Utilitarian. Free education must, therefore, foster a free press. Any amount of exaction bestowed in this direction that students may rightly apprehend their duties as the servants of the country, will never go un-recompensed. A thorough training in journalism is, in our opinion, the pre-eminent duty of the Universities in all countries that profess to be advocates of freedom and self-determination. Here i

a function peremptorily embargoed under the most mendacious arguments of unconcern or impropriety. If Universities have patronised other professional trainings however penitentially, it is but reasonable that they should include this one too in that privileged category.

By all these considerations we are compelled to infer that some part, at least, of the education is nugatory and pernicious. There is no healthy understanding among the taught and no unprejudiced or out-spoken doctrines among the teachers. The students are hampered in the speedier development of mind by the detracting study of an alien language. The thoughts that might have been most conveniently circulated in the cradle language of the youths and with greater effect are first invested in hieroglyphics to decipher which they are conjured to spend a decade or so of their life; there might be subjects which, due to their pure Western nature, do not readily translate into the vernaculars of the country but looking to the technical ways of their instruction we may safely pre-judge that they can be perfectly mastered by their gifted students with a smattering of English they have gathered in the course of their early study. There seem to exist other reasons why English was preferred to other tongues of the country for the medium of instruction. But it must be remembered that those ideas and reasons are now no longer cogent or persuasive and circumstances have sprung up which demand a total subversion of the system. The diversity of dialects in the early fifties of the last century was so despairingly felt and its transmutation to homogeneity so stoically under-estimated that no language except the State language was thought to be universally helpful. The fame

and currency of the language aided by the low idea of the expressive power of the Indian dialects naturally induced the ruling class to offer their own language as the panacea for the existing evil. Unfortunately the transcendent influence of that language and the interminable variety of information and excellence that it embodied gave so drastic a dose to the vernaculars that they long lay in suspended animation till the Indian Renaissance, as it is called to-day, gave them all a general resurrection. All dialects have so fast recuperated that most of them have passed their convalescent period and are now in their full vigour and activity. The conservative Universities have not condescended to be informed of this fact but continue, still, to cling fondly to the subterfuge that they are deficient for the purpose.

English was considered for long the only possible common language for India and many Anglo-maniacs proposed simplification of spelling and other absurdities, such as the sacrifice of strict rules of grammar to perspicuity, &c., as some of the few steps to take English to the nursery of infants. The idea and the movement were in full swing till very recently the Indian Ego reclaimed the hesitant deserters and showed them the possibility of an Indian language bidding fair to be the *lingua franca* for the children of the soil. In the face of many instances that prove beyond doubt that Hindustani is the only language that can be universally used in the forensic phraseology of law-courts and dispensaries and that it has the widest possible scope to enlarge its vocabulary with the least possible damage to its purity by means of those of the two mighty Oriental languages, Sanskrit and Urdu, no University however phlegmatically opposed can deny the inevit-

able supremacy of the tongue. We believe most sincerely that so long as Indian Universities do not change the medium of instruction to either the language of the Province or to the prospective common language they cannot stop the wastage of life and abilities of Indian youths. The loss is tremendous and unless effectively checked the possibility of the Indian regeneration recedes to an indefinite future.

Without pretending to exhaust the subjects eligible for University syllabus we may humbly suggest that geography, especially physical and commercial, and such other topographical information that civilized life requires are wanting in our education. One subject that has been strenuously kept aside, but which requires most zealously to be taught and nevertheless remains as yet precluded from the considerations of the present pontiffs of education, is Indian Theology. There can be no other arrant blunder than to withhold from young minds their own religion, the very sauce of Indian life. From the nonage in schools to the youth the boys have not one occasion when they might, in communion with others, enjoy the fervour of religious vows or practices; they are at liberty to discuss the most abstruse doctrines of Indian philosophy and we have sometimes heard dreadful assertions defiling the sanctity of our time-honoured religion. This is a sacrilege which is not allowed even in its burlesque aspect in the English colleges and Universities. The education we receive is plainly counter to all our traditions, customs and manners and, to add to our misery, we are left completely to ourselves to maintain what we can of our religious integrity against the paralysing influence of the exotic civilization of a purely

materialistic nature wedded to the sublime indifference on all sides to our spiritual development. The plea of diverse religions is the principal defence of the Universities or the Government but can it justify a total abjuration of all feasible managements? Why should there not be some periodical sermons at least to Hindus and Mahomedans separately that the sub-sects among them may have common ideas to agree to, and stand upon during their future unification? Are not the strictures among sections on their religions and customs more healthy than the total absence of any discussion on such topics followed by a wholesale condemnation of all their ancient holy treasures? If the rulers countenance the proselytizing campaign of missionaries can they not with much more propriety allow Indians to have the chance of nearer and more wholesome union among them based on the most permanent footing of religion? Rather than subside into an incredibly mystic sense of their own incompetence to crack this hard nut let the Universities venture to include in the faculties the divinity and to enjoin a few observances in all their institutions that they may deserve the whole-hearted praise and love of the languid and atrophied spirit of the Indian religion.

One thing remains yet to be told, of crucial importance. The educational system of a country can never be complete if it does not conduce to the material welfare of the people. One thing that grieves more than any other, is the inadequate, perhaps the mimetic, attention paid to the technical training, there appears to be a frantic confusion in the idea of the authorities as to the necessity and methods of this kind of education. They fail to grapple with the question which to every Indian is transparent. Rather than

arrogate however all discriminating power to ourselves would it not be more consistent and judicious to attribute that failure to their astute policy or tutored selfishness? They have given us to understand most unmistakeably that we had reached the acme of spiritual civilization long before the Westerners could articulate and that due to many petrifying causes we are to-day some four centuries behind time in our development. We implicitly believe that the intimate contact with the English had a leavening influence on our degenerate condition and that we shall rise up to be potent power if we keep pace with the world civilization. It is in this regard that we are utterly bewildered why the Universities try to elude our oft-repeated request. The Government thinks it perhaps an unprecedented departure to allow Indians any semblance of industrial training when that is likely to prove prejudicial to the interests of Englishmen. Sometimes industries and their developments are calculated to be no part of the Government concern with platitudes most appreciated in England and elsewhere. The glory of Hutchesons, Cobdens and Gladstones that blinds the English people in their native land follows the satraps and their retinue like a mobile nimbus which serves the double purpose of infusing awe and hope in us and dazzling out of sight their selfishness and rapine. The obsessed notion of free-trade and competition ruined our cottage industries without supplanting them by the large-scale productions. Is it not a mere execrable travesty of the duties of Government to render its subjects dependent for the necessities of life on outsiders? It is a pity if in such a continental country with so many resources and such a teeming and intelligent population its rulers fail or omit to recognise, utilize and strengthen the multifarious possibilities of national prosperity. Even in what the Government

has most repeatedly dinned into our ears it has not showed its sincere attempts at educating. The agricultural industry is but niggardly attended to and besides what the inexorable nature peremptorily refuses to dole out, the Government majestically aggravates the misery by its thousand-fold restrictions and prohibitions. Though collared and neck-tied graduates are dubbed annually, the real agriculturists are removed as far away from the enlightened methods as ever. Other industries are left out of consideration absolutely without contrition. If technical education is physically impossible in India we have nothing to beg of the Industrial Delphi except to say that its mysterious veil must be doffed with the least circumstance and the naked shame of selfishness be set free to settle on the tongue-tied mammon. To us it appears stupidly absurd that in a country—even though mainly agricultural—blessed with all the requisite climatic and other features and also with the plenitude of all minerals of industrial importance the inhabitants cannot take advantage of the technical or technological training of the nature that so largely obtains in almost all the countries of Europe. It is unfair in the extreme to impugn people for the most baseless and supposed inability without giving them the least opportunity to prove their mettle. We have been exploited and way-laid so that we are made to-day mental bankrupts. During the last hundred years of peace and prosperity we have not gained even an iota of productive knowledge. Would the Government and its Universities still demurely postpone the benefit of technical education to the artificially shrivelled intellects of India or be damned in the public eyes for ever for their airy promises and their dreary deeds?

A. S. HARNHALL.

THE TEACHER'S HOPES AND FEARS.

[Translated from the original Bengali of Prof. Lalita Kumar Bannerjee of the Bangabasi College, by Mr. L.V. RAMASWAMI, B.A., F.I.C.]

AT the recent (eighth) session of the Sahitya Sammelan, the members of the teaching profession have again played a very important role. The Literary section, the Science and the History sections were presided over by teachers; the Chairman of the Philosophy section alone was not a teacher. At the seventh session of this assembly also, the Science and the Philosophy sections had teachers to preside over them. It cannot be said that all this is the result of mere accident or chance. It is evident that in the field of our national language and literature, the importance and popularity of the members of the teaching profession are becoming more and more prominent. This affords sufficient proof for the fact that teachers are not merely capable of imparting education to beardless youths and inexperienced youngsters but also possess the ability of taking upon themselves the heavy and important responsibility of teachers of the world. Pondering over these facts, it is only natural for members of the teaching profession to feel flattered and elated.

It is not merely in these Sahitya Sammelans (or Conferences) which assemble only for the short space of three days, that teachers have gained this position of importance and respect, in many learned associations like the Bangiya Sahitya Parishad, also, they have asserted their capacity to do solid and substantial work of a high character. Then again, if we examine the long list of ardent devotees in the temple of our national literature, where for the past so many years there has been unprecedented fervour and wear-

less activity, this fact becomes more evident still. It is true that Profs. Jagadish Chandra Bose and Prafulla Chandra Ray in Science, Prof. Brajendranath Seal in Philosophy and Profs. Jadunath Sarkar and Radhakumud Mukherjee in History, have adopted English as their medium for the publication of the result of their great erudition and original research; but yet there is sufficient reason to think that their love for their mother-tongue is undiminished and that they might yet enrich our language with their original productions. So as to have the benefit of propagating the result of their labours, amongst the learned associations of Europe, they have been obliged to use the English language. Even in Europe for a long time, Latin was the common language used by learned men to publish the result of original work in abstruse subjects like Philosophy, Science and Mathematics. Bacon and Newton are instances in point. Learned men like Descartes and Locke broke through this convention and at the present day in Europe such work is invariably published in the language of the author and is immediately translated into other languages. We know not whether such a day will ever dawn for our Bengali language in the distant future but till now this hope has remained but the shadow of a nightly dream.

Amongst those members of the teaching profession who have tried to break this convention and publish the result of their original thought, in Bengali, the names of Ramendra Sundra Trivedi, Yogeshchandra Ray, Apurba-chandra Datta, Panchanan Neogi and Jagadanand Ray are especially worthy of mention in the field of science. The names of the first two are famous even outside the field of science. Trivedi Mahashoy's learned philosophic works, "Jignasa" and "Karmakatha"

have established a permanent reputation for themselves. Yogeshchandra Ray's reputation as a philologist and linguist, is also unequalled. Even the great linguists of our University must hang down their heads in shame, if they compare the result of their own labours with the distinguished work of this great philologist. In the field of history the original works (published in Bengali) of three teachers, Kaliprasanna Bannerjee, Ramaprasad Chanda and Radhagobind Basak are particularly worthy of mention. In the fields of religion and philosophy, many teachers have shown talent by publishing works in Bengali. Then again teachers like Pandit Jadaveshwar Tarkaratna, Haraprasad Sastri, Rajendranath Vidyabhushan, Saratchandra Sastri, Vidushekara Sastri, Benoykumar Sarkar, Radhakamal Mukherjee, Bepin Behari Gupta, Rasik Lal Ray, have, with their learned books and many original discourses and essays, ennobled our mother-tongue and adorned the several departments of our national literature. There are also three young poets who belong to the teaching profession—Babus Karuna Nidhan Bannerjee, Kalidas Ray and Kumudaranjan Mallick.

There are numerous members of the teaching profession, amongst the well-known contributors to our Bengali magazines and monthlies which afford, at the present day, a very important and favourable arena for the display of learned original work. Even the editors of some monthlies have been members of the teaching profession. The editors of many of our Anglo-Bengali College magazines are also teachers. The worthy editor of the "Prabasi" (and of the "Modern Review"), Babu Ramananda Chatterjee, for a long time combined the functions of teacher and editor.

Babu Jaladhar Sen (the distinguished editor of the monthly called 'Bharatvarsha') was an erstwhile teacher. In the field of prose, the names of Dinesh Chandra Sen, the author of the classical work, "Bangala Bhasha Sahitya," and of Jogendranath Sen, the distinguished writer of Michael Madhusudhan Dutt's life, occur to our mind. Both these distinguished authors were teachers when they composed these works. Even the great poet Rabindranath Tagore, though he cannot be strictly called a teacher, has taken immense interest in founding and developing the model institution at Bolpur and methods of teaching have always fascinated him.

Till now we have been speaking of the present day. At the time of Ishwar Chandra Vidyasagar, the time when Bengali language and literature began to receive great impetus owing to its contact with English ideals, there were not wanting members of the teaching profession to undertake the pioneer work of writing in Bengali. Pandit Ishwar Chandra Vidyasagar, Bhudev Mukerjee and Akshayakumar Datta are the most important among these. At this time many teachers developed the ability of publishing school and educational books in Bengali. The modern reader might say that this could not be work of a high order but in this connection we should remember that in those days, as such books were entirely non-existent, the composition of such books was tedious and difficult. Hence it was that erudite and deeply learned men like Ishwar Chandra, Bhudev Mukerjee and Akshayakumar Datta had to devote themselves to this work.

If we compare the teacher's position at the present time, with the same at the time of Vidyasagar, it will be seen that the number

of teachers composing books in the Bengali language, has increased enormously. This increase has not merely been in proportion to the general increase of learning and progress evident everywhere but has been so rapid and so significant that we can account for it only by saying that a new feeling of stimulating strength has influenced the teaching profession at the present day. This feeling of invigoration never existed in such great strength fifty years ago.

All this is matter for great hope and gratification; but there is one point on which so much satisfaction cannot be felt, and this is that we have not had, amongst the members of the teaching profession, a Bankimchandra Chatterjee, a Rabindranath Tagore, a Nobinchandra Sen, a Dwijendralal Ray, a Hemchandra or a Chandranath.

At first sight it appears very probable that those who are assiduously engaged in acquiring and disseminating knowledge would only be too ready and anxious to share with the outer world, their great erudition and deep knowledge. But there are very serious obstacles to this. Under the present educational system the student,—whatever walk of life he may have chosen and may be working for,—is forced to laboriously equip himself with the thoughts, ideas, artistic tastes and the artistic expression of others through the medium of a foreign language. In this respect, in the student stage, there is no difference between the position of a student who intends to become a teacher and that of another who intends to become a judge, a doctor, a lawyer or an engineer. But whereas, in the case of judges, doctors, lawyers and engineers, soon after they enter life, they

enjoy very favourable opportunities of developing their power of original thinking, the teacher has to toil on in the work of explaining, understanding and analysing the ideas of others. At home and outside, he is always busy with this work; in fact this provides him his food and so he has to concentrate the greatest attention upon it. As a consequence, the possibility of a free and unhampered development of his mind seems to be little indeed, on the contrary the possibility of his mind being atrophied is great. He has neither time nor favourable opportunities to indulge in original thinking. Those who take to other professions like lawyering, have splendid opportunities of mingling with the wide world at large and fathoming the secrets of the human heart. The teacher, alas! is never so lucky. No wonder, then, that as a result we have, amongst teachers neither writers like a Bankim Chandra, Nobinchandra and Dwijendralal, whom the judicial profession has been able to produce, nor men like Indranath or Hemchandra whom the legal profession has produced.

It cannot be denied that the teacher while busily engaged in his work of teaching, gains in one way, although this can scarcely give him the necessary strength to arrest the deadening process of his mind. On the one hand his mind comes into contact with that of the text-book writer or author he deals with, on the other his thoughts continually come into contact with those of his students, and as a consequence he perpetually learns something from the mistakes of ordinary students, gains a good deal from the thought-provoking answers and questions of brilliant students and finds occasions to view things in their various aspects. But although all this is undoubtedly a great gain to him, as he is

uninterruptedly immersed in this task, his mind never acquires the power or occasion to develop the power of original thinking. Like the poor householder who busies himself only with the thought of maintaining himself for the time being, absolutely unconcerned about every thing else, the teacher too is incessantly occupied with his current duties and can never rise above them. That unhampered frame of mind which is essential to the creation of original literary work, the teacher ever lacks. There is very little of freshness in his life and year after year, he grinds the same corn and doles out the same dish so much so that his life becomes isolated and his mind narrowed.

The kind of intellectual work required in teaching and that required for composition of books are more or less the same although two different objects are aimed at, and different matters are dealt with. On the other hand, the intellectual work demanded of a judge or a lawyer is so essentially different from that required for the composition of books that the judge or the lawyer feels the latter work to be a delight and an immense relief from his ordinary duties. The teacher never finds a solace in such work.

Again the teacher has to spend so much time, in and out of his home, in connection with his normal duties and functions that ultimately a kind of intellectual debility or nausea sets in, incapacitating him from doing any sustained or solid work. Even from such distinguished teacher-writers as Ramendra Sundra Trivedi we have been able to get only stray pieces like "Fragments of Science," "Fragments of Philosophy," "Fragments of Sociology," "Fragments of Science of Religion."

But of course genius transcends all such

limitations. In spite of poverty, in spite of all thoughts of ruin and hunger, the flame of genius has continued to burn as bright and clear as ever. It has never failed to assert itself even when hampered by the ordinary functions of life. Men of genius have not failed to display originality of thought in literary or research work even though they performed their ordinary duties to perfection. Profs. Jagadis Chandra Bose and Prafulla Chandra Ray in the world of Science, Babus Bankimchandra Chatterjee and Nobinchandra in the world of Literature have demonstrated beyond doubt that genius, besides successfully performing the necessary duties of ordinary life, can display original thinking in other directions also. But, as we have said above, the case of genius is governed by exceptional considerations. And yet sometimes there have not been wanting examples where even the free development of genius may be stopped. Whatever this may be, it can be said with the assurance of certainty that in the case of many teachers the reasons we have detailed above stand in their way of original thinking and original composition.

Hence, in my opinion, if the path of original composition and research in science, philosophy, history or literature is to be rendered easy or pleasant, then a "leisured class" must be created amongst the members of the teaching profession. If the actual teaching work and original research or literary composition both engage one's attention at the same time, necessarily either the one or the other is bound to suffer, except, probably in the case of men of genius. It may either be that a kind of indifference or disgust to actual teaching work may be born thereby; or it may be that the work of original research is irreparably injured by obstacles and distractions. Under

these circumstances it is extremely necessary that a series of 'Endowed Research Chairs' should be created in our Universities, if the work of original research is to be really helped. Of course we do not say that these chairs should be the monopoly of teachers. If these chairs had already been founded, men like Raja Rajendralal Mitra, Pandit Rajamkanta Gupta (the historian of the Sépoy Mutiny), Dinesh Chandra Sen could have published the result of their original labours in a far easier

manner than it had been possible for them now to do.

Leaving apart the case of genius, it might generally be said that the establishment of such Endowed Research Chairs would considerably encourage and stimulate research work and original literary composition in our country.

[A further article entitled "The Teacher's Hopes and Ideals" will soon follow.]

Ready.

INTERMEDIATE EXAMINATION, 1922

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LITERATURE AS PART OF EDUCATION.

THIS question has engaged the attention of many eminent educationists both in America and also in England, that we should as students of literature try and understand how far should Literature (as understood at the present time) form a portion of our S. S. L. C. syllabus. Should Literature be taught in our schools? Should we make it a compulsory subject for the S. S. L. C. and if so, what is the best method of introducing that subject? Before proceeding to answer these questions, it is better to say a few words on the present system of education in our schools. Parents in the first place have to understand, (which they have not generally done up to the present time) what they are aiming at, in sending their children to schools and the school authorities, (at any rate the ill-paid teachers) should know what sort of education it is the proper business of the schools to give, that is to say, what kind of intellectual discipline they mean to impress upon the un-expanded brains.

We know that our students, a majority of them at least, do not pass their life as students or authors. The chief object of many students is to get a decent living for themselves and those who are depending on them (as is generally the case here.) No education can be called perfect that leaves this important problem in search of some pseudo-higher aim which is generally not realised. We know there cannot be any higher aim with the majority of students as far as practical life is concerned, and all such pretensions are mental impudent illusions. Some men actually do get more than what they want or deserve and that is

the best they can do. We know as a matter of fact that more than ninety per cent. of our students, live more by hand-work (clerical and official) than by head-work (intellectual work as authorship, etc.), and what they have to learn is, how to guard their hand-work against loss and error and to make it pay more. For learning hand-work, the largest and best part of their education is certainly not the school. For example, a student learns more about printing and publishing by being apprenticed to the Lawrence Asylum or Higginbotham's Printing Press than by attending a course of lectures in a school on printing and publishing by professors who are theoretical. We cannot acquire the use of tools unless we handle them practically and work with them and this holds good in all professions and trades. To pretend that we can learn anything and teach any subject (as a presumptuous Headmaster once remarked) is an unwarranted effrontery not consistent with actual experience.

On this point the public seem to have taken quite a wrong view. How they came to have this view is not our present purpose to discuss and we take matters as they are. At any rate we know that a parent supposes, that it is the business of the school to give his child all the education that is necessary to make him get a substantial appointment and that as soon as he leaves the school, he should be armed and equipped for engaging intelligently and successfully in any department of work. The school authorities are found fault with, if they do not send out boys equipped in the above manner, and if the boys are not able to procure food and cloths as soon as they leave the school, their education falls flat on the parental expectations. The fault lies in the parents

more than in the school authorities. The best that a school can do is to educate the mind and the heart and for the education of the hands, the parents must look elsewhere for instruction. We have also to bring to the notice of many parents that unless the pupil brings something inside his skull, namely brains, the school cannot educate his mind. It cannot furnish brains to him and it is often blamed for this, not only by the parents but also by the Inspecting Officers of the Education Department (a matter for consideration). Parents should endeavour to educate their children to be good for some sort of work and make them understand that any form of honest living, however plain and humble, has manliness in it and therefore is a sounder basis of self-respect than the proudest form of social ornamentation. An aristocratic idler, however strong he may be in degrees or finances, is no better than an illiterate loafer; on the other hand he will be more dangerous to morals. The school can do only its part of a boy's education and all parents who do their part in the training of their boys, are satisfied with what the school imparts in the shape of education.

We find then that children should learn to think and to act independently and that the duty of a teacher is to make the boys under his care, intelligent, thoughtful and sober-minded men who are not carried away by the false speeches of this or that orator and to make them prudent, upright and patriotic citizens. The school and the home should join together and should co-operate in bringing about this desired end.

The greatest institution in the world is the family and it is worth all the other institutions put together, and the foundation of them all. The greatest art is house-keeping

in its noblest model, for unless we know how to keep our houses well, how can we be expected to keep anything else in a proper way? The love of home and the art of making the home really attractive must be acquired at home under the parental training and the best thing that the school can do is to co-operate with the home to that end.

Our civilisation has now reached that stage where both the virtue and the happiness of the people depend upon their intellectual training, suitable to the present progress. Books of one sort or other are a common resort for entertainment and pleasure and are likely to become more and more so as we advance. Wealth has been accumulated by industry and labour is made easy by machinery and every man has got some leisure (except the present school-master who has sold his body and soul together). This leisure ought not to be spent in idleness, but in the study of useful literature. In the vacancy of their hands, the thoughts of the people will be busy either for the better or for the worse. If God does not occupy their thoughts, they will then be the workshops of his "Satanic Majesty." Reading, in fact, bears a large part in filling up this time.

We are now getting very powerful devils in the shape of cheap and nasty light literature (so light indeed as to make their readers also light in their brains), which awaken, the morbid sensations of the man and unfit him for sober and serious occupations. Generally man takes more to that which is bad and false than to that which is good and true. The way to virtue and wisdom is an uphill work and that which leads to vice and folly is a downward path and this is true in the intellectual sphere as in the moral regions

It is generally believed that if a man knows how to read, he will make a good use of that knowledge. It is a great error to think so. Every one who knows *how* to read should also be taught *what* and *which* to read. This faculty of knowing what to read, must be fenced with the safeguards of judgment, utility and good taste. So from early youth people should have their minds so bent and disposed as to have *pleasure* in reading books intended to purify and raise their intellects. There should be real pleasure as we cannot rely on arguments of reason. Reading good books without pleasure and merely from a sense of duty (as many of our boys do), is of little benefit and may even be harmful by creating an aversion to what is good as in the case of voracious novel readers. A sense of delight in what is good is that which brightens the mind. People cannot be forced into virtue nor can we force one to read good books. A sincere taste for them should be gradually created by the combined efforts of the parents and the school authorities.

The best method therefore of guarding the young minds from the pestilence of bad and foolish books is to familiarise them with the best and purest mental preparations and make them have a hearty relish for them. Let the efficacy of a few good books be steeped into their minds and they will be apt to go right of their own accord. If in the early stages we set their tastes to Shakespeare, Addison, Goldsmith, Wordsworth, Scott, Tennyson, etc., is it likely that they will stuff their brains with the cheap and nasty half-penny two-penny literary productions? We may hope that it will never be so. Nor is there any impracticability in the above methods advocated by us. There may be cases of genuine and native dulness here and there but as a general rule, young minds are prone to be led easily by what is good and

pure if it is placed constantly before them in a palatable and attractive form.

In view of the above, a well-chosen course of study in the best English and vernacular classics to be drawn up by a committee, who *know* something about the books and not merely because they possess monetary or other influences (as in the case of the present text-book committees), seems to be the most effective preparation. Literature in its proper character is not a thing standing outside of and apart from, the practical service of life. It is not a moon-shine world where one is to dream and do nothing else. A good book brings us face to face with real men and things and helps us to see them as they are and as they ought to be. It is such literature that the poet has in his view when he tells us:

"Books we know
Are a substantial world, both pure and good
Round these with tendrils strong as flesh and blood
Our pastime and our happiness will grow."

Such authors combine utility with pleasure. We thus see that next to the Elementary subjects, English Literature ought to have a place in the system of our school education. The best way of teaching English Literature is to introduce only a few of the very best and fittest authors and these should be studied for a long time and in full, so that the boys might be able to commune with the author and quietly drink in the sense and spirit of the author. The pupils must feel happy while reading such books and our fervent wish is that in the near future our youth may now and then breathe and listen an hour or two in the old intellectual fatherland where all the foul noises of the modern world have died away leaving the pure music to resound over the whole land.

B. LAKSHMINARAIN RAU.

THE TEACHER.

EDUCATION now-a-days has become, to apply an economic law, a matter of increasing cost and decreasing returns. It is that branch of human activity, which undertakes to equip the youth for the battle of life and set him on the proper path for a glorious future. The teacher is the master-hand of this department, and he is the pivot around which all the future of any country turns. The off-shoots of the present educational policy fall far short of our expectations, for while greater attention is paid to make the course rigorous and costly the needs and capacities of the students are overlooked and the Educational Deities gloat over the thousands of "Plucked Candidates" whose laments echo in the hearts of every one year by year. A promising student hardly prepared for the shock, suddenly hears a ghastly tale that he is one of the sheep butchered for the season. We have reason to hope that at least now, that Education is a Transferred subject, and is in the hands of Indian ministers, better days are not far off, and that speedy arrangements will be made to bridge over the troubles that multitudes are a victim to.

From the earliest days the profession of the teacher has been receiving the greatest reverence. There has been a special sanctity attached to it. Cheiron, the Centaur—Pedagogue of Greek legend, is revered as the foster-parent of Jason and many other Greek heroes, and he was more sacred than even the father, since in him lay the future of the youth. Even in our own history, we have seen how sacred were Vasishta, and Visvamitra, and how it was their training that gave Rama and Lakshmana, their immortal success. It was Valmiki that gave to Lava and

his twin-brother Kusa, the strength to overmaster even their own fathers. But for Bhishma the Mahabarata heroes would have dwindled away into oblivion. They have been the chief constructive element in all past history, and are, and will be so always.

Of all the professions that man has a fascination for, and is attracted by, there is nothing so peaceful but powerless, so fruitful but silent, so healthy but remote from all the bustle and turmoil of worldly strife, so supreme and holy as that of the teacher. He is more than a parent, and he rules the realm of the book and the birch with the solitary weapon of his personality, his tongue, and in a few cases the rod. He is one that least participates in local animosities, but yet forms an integral and significant unit in the body-politic of the village. On account of 'indefinite lore, and extraordinary erudition' the rural teacher is most conspicuous and exacts unalloyed adoration, the 'Guardian Angel' of the village.

The teacher, in the village as elsewhere is the exact counterpart of the Pastor in the Scriptures and he has as much pastoral care over his flock of school-children as Jesus is ascribed to have had over his flock of men in Jerusalem. He bestows all his affection over them and works heart and soul for their good. From the supreme college professor, down to the rural school-master this feeling of responsibility and interest is visible, men in charge of bringing up youths to be upright and famous in their time. Many a time in recent days has been the idol of the student and not to speak of multitudes of 'roses who have blushed unseen' we may aptly refer to the late Dr. Arnold of Rugby and Drs. Miller and Skinner of the Madras Christian College.

Dr. Arnold was the most popular Headmaster of the Rugby School and in the words of his more famous son he was :—

"Oh! faithful shepherd, to come,
"Bringing thy sheep in thy hand.

... ..
Ye move through the ranks, recall
The stragglers, refresh the outworn
Praise and re-inspire the brave,
Strengthen the wavering line,

* * * Our march

On to the city of God.

Such is the esteem that Matthew Arnold has for his great father, to whom was vouchsafed the special privilege of guiding the destinies of many a promising youth and who has been the standing monument of all that is admirable and worthy of imitation in a teacher.

Dr. Miller and Mr. Skinner have endeared themselves to all by their simplicity and parental care and interest they evinced in their youngsters, their profound knowledge of science and literature and their majestic personality which enforced mute obedience and discipline. Such is the attitude one has for a good teacher.

Far from the regular course of things it yet stands a stubborn fact that the responsibilities of teachers in charge of higher education, are less pronounced and palpable, and their task less difficult, than that of the lower class teacher. It is the stage in the life of the lad between 6 and 18, that is the formative period and that has to be taken particular care of. The lower class teacher knows little when compared to the Professor in a college, but his work, that of implanting the seeds of knowledge, the preparatory stage of the youth's life and the guiding of the immature intellect

of the youth is far more significant, and appeals to our better judgment, than that of the professor who prepares for a lecture in the class, repeats to the indifferent or at least half-willing class, paying the least attention to the fact whether the student understands him or not, but particularly careful to be mercilessly stringent in the award of marks, in time of examinations. By this, we do not mean to decry the value of the work done by the Professor. He works on a more mature brain, and his genius is devoted to development, while that of the lower man aims at a strong foundation for the edifice of the citizen body. The value of each is equally sacred and important.

The calling offers few chances for the aspiring youth, since sufficient emolument is hardly found co-eval with the work expected of him. Some idle brains have said that the teacher's life is only fit for old men since it is after all routine, and the intellect of youth utilized on this profession is after all a waste. This is too silly and sinister an opinion. It is the vigorous youngster that is wanted for a teacher, though the wisdom and experience and managing capacity of elders is also necessary. The higher demi-gods in the hierarchy of educational officialdom manipulate all Government resources to themselves while it is the lower circle that trembles in the balance.

The S. S. L. C. trained teacher, in most cases a smart young man, has always been an object of especial rigour at the hands of the authorities. The old Matriculates have made the best of a bad bargain and they are now far better in the position as either Sessional school masters, or High school assistants. The training that the S. S. L. C. man undergoes is hard for its course, and after he has

escaped the common filter he enters some school as a teacher on a small start of Rs. 25, which considering the work he does and responsibilities he bears, is evidently too little. He has to move heaven and earth to gain a sustenance on his limited income, and the honest penny that he earns as an unambitious pedagogue, is hardly enough for him. The fact that he occupies a lower rung in the ladder of educational officialdom does not afford an argument to fix the ratio of his income as compared with that in the higher circle, as 25 : 500. By the time that he can successfully work himself into the favour of the authorities which is next to impossible, he will have either resigned his job, careworn, or have retired from service. To add to this, comes as a gratuitous insult, the abnormal rise in the cost of living, which stares the impecunious schoolmaster in the face. The total neglect that the authorities treat them with, has made their lot more deplorable. The question of remuneration for these occupants of the lower rung in the ladder, has been engaging the minds of many a politician, and the Government have a legitimate task to fulfil, to accord satisfactory stimulus to the teacher, that he may be induced to apply himself to his work and achieve the

glorious aspirations and traditions of his noble profession.

More clearly romantic and valuable is the life of the rural and elementary school teacher. He is the demi-god of village society, a member of the administrative body, the most respected in the village but least paid by those who govern his sphere, but well-fed by the grateful and willing public for his benevolent work. An elementary school teacher who has under his care about 60 infants to be brought up, is paid a "ration allowance" of Rs. 12 which can hardly feed one mouth a month. Simple yet unassuming, contented yet orthodox, timid yet useful, he fills a place that is silent but a significant force in the reconstruction of the country. Whatever men may say on the point, the schoolmaster has run the gauntlet of public criticism and has emerged a glorious man from all the trials to which such men are subject. It is thus the teacher who needs the legitimate attention of the rulers and it must be the prime object in the enunciation of the educational policy of our Minister to improve the teacher's lot, before attempts are made to work upon things of far less immediate importance.

P. VENKATESAIAH.

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Reviews and Notices.

ELEMENTARY SCIENCE SERIES:—PRACTICAL LESSONS IN SCIENCE AND GEOGRAPHY: TAMIL, ADAPTED TO SUIT THE GOVERNMENT SYLLABUS APPROVED BY THE DEPARTMENT, BY B. NARAYANASWAMI IYER, B.A., L.T.; SENIOR SCIENCE ASSISTANT, TOWN HIGH SCHOOL, KUMBakonam.—First Year Course: As. 5; Second Year Course: As. 5; Third Year Course: As. 10; Fourth Year Course: As. 10; Fifth Year Course: As. 12; Telugu edition for Form I: As. 10.

In these days when industrial development on the basis of applied sciences is being more and more required for the material advancement of our motherland, it goes without saying that mere literary education should partly, if not wholly, give way to practical sciences. The required output of knowledge of the practical sciences cannot be kept in abeyance until literary studies of a higher character are finished. It is no uncommon phenomenon to see our graduates even with Physics and Chemistry or any other science for their subject being at sea, not knowing what to do in order to make a living. As matters now stand, the only course open to the majority of them is either to taking to law or entering the quill-driving line in the Government service. Of the educational systems in the advanced countries of the world, that of India, especially of Madras, is the only system which incapacitates its products to use their hands and eyes. It is why that the leaders of our country deplore the present system of education and say that the degrees of our graduates are not worth the parchment on which their diplomas are given. Hence it becomes necessary that from the most early stages of education the eye and the hand of the child must be trained to see and to do.

It is a matter for some congratulation that the old theoretical studies in our schools and colleges are giving way to something of a practical character. Syllabuses framed by well-informed educationists have been issued by the Educational Department and teachers in primary and higher classes are required to teach the elementary principles of various sciences on the basis of these syllabuses. But the pity of it is that up to and inclusive of the Third Form, teachers with scientific spirit sufficiently developed in them who can make use of the syllabuses in the manner they are intended to be used, are found wanting. Knowing as we do what the educa-

tional output is of our Elementary Higher grade teachers and even of our S. S. L. C. men, we cannot expect them to put the syllabus to any practical use. The writer of this review knows very well that in a large majority of our secondary schools the Departmental syllabuses are merely kept for exhibition only to satisfy the Inspector at the time of the inspection and that in the ordinary course of daily lessons, random things are said having little or no bearing upon the science subjects taught, only to while away the time. One may even go to the length of saying that sciences are more mistaught than taught and that consequently the hand of the child is as it were twisted and mis-shaped and the observing eye is injured, so much so, that it takes, if at all, a long time to restore the hand and the eye to their normal condition. It is needless to say that more injury is done by mis-teaching than by no teaching.

The most important desiderata in these circumstances are texts-books in Elementary sciences written in easy and attractive vernaculars of the respective children by the same author gradually leading up a child from at least the IV class up to the commencement of his upper-secondary stage. The books written should not be of a mere theoretical character or should not require apparatus too costly for schools but should be such as are homely and within the daily experience of the children and as can be improvised then and there. The children must be enabled to construct most of the appliances themselves which, it must be admitted, is the only way to enable the children to acquire practical knowledge of the simple truths of nature. It is a great pleasure to come across a series of this character written by Mr. B. Narayanasami Iyer, B. A., L. T., Senior Science Assistant, Town High School, Kumbakonam, in his Elementary Science Series under review. He has made a combination of all those elements that should be found in the Elementary Science Text-Books for our lower classes. If anything is absent from his books it is the dogmatic statement of natural truths. By inductive methods, illustrated by simple appliances, he enables the children to discover the truths of Nature for themselves. The series is spoken of in high terms by highly qualified educationists such as Messrs. H. Champion, W. C. Douglas, P. Rajagopala Iyer, M. O. S. Ananthapadmanabha Rao, K. Natesa Iyer, and others, too numerous to mention. In his note on Elementary Science Teaching in schools Mr. Champion says that, in many schools he has visited, teachers of inferior qualifications

either try to cull out information from scientific books too high for their comprehension or use text-books differing from class to class. As the result of this, according to this veteran educationist, "the work of the pupils or in other words the teaching is possibly marked by gaps, unevenness, absence of sequence." This serious defect is remedied in an effective manner by the series published by Mr. B. Narayanaswami Iyer. Being such as they are, they have been adopted as text-books in some of the premier High Schools in the Tamil districts. The object of this review is not so much to push the sale of the series, as to inform the heads of the Secondary and Primary schools in the Presidency of the existence of the series in order that the science teaching in them may be organised and graduated on right lines. It is understood that the author of the series is intending to bring out a Telugu edition of them which, it is hoped, he would do ere long. He has taken in hand also the publication of a similar series of Elementary Geography text-books. The printing and the get-up of the series under review are all that they should be, while all the diagrams are executed with as much neatness as possible. The cost too of each book of the series is cheap considering the market values of the paper used and the prohibitive cost of printing in these days of labour troubles.

A MANUAL OF THE BENGALI LANGUAGE, BY J. D. ANDERSON (THE CAMBRIDGE UNIVERSITY PRESS). 7s. 6d. net.

It is significant of the growing attention bestowed on the study of modern languages in the Universities of to-day that the Cambridge University Press should have started the publication of a series of manuals entitled *Cambridge Guides to Modern Languages*. A striking compliment has been paid to India by making this *Manual on the Bengali Language* the first book in the series. No better author could have been found in England for a manual on the Bengali language than the late Mr. Anderson whose persistent labours were largely responsible for the growing recognition of the value of Bengali literature in the West. The author has embodied in the volume the most up-to-date principles of language-teaching and has provided it with all the apparatus of scholarship necessary for investing it with a high degree of educational importance. In the Introduction he gives a brief but informing account of the present position of the language, its linguistic affinities and touches a few other questions of importance. In addition to expounding the grammar of the language, he has selections of choice passages from Bengali literature at the end of the volume with translations and also a Vocabulary containing

meanings of all the difficult words which occur in them. No objection can be taken to the grammatical terminology used in the volume except perhaps that it might have been less technical and elaborate. According to the Census of 1911, (the figures for 1921 are not yet available in sufficient detail), Bengali is spoken by 44,861,000 persons, of whom 42,566,000 are residents of Bengal. Some of the greatest names in Indian literature in recent years belong to Bengal and yet there is practically no evidence of any appreciable attempt at studying the language in other parts of India. This manual should prove of great use to students in India as well as in England.

THE ART OF THE NOVELIST, BY H. B. LATHROP. (HARRAP & Co., LTD.); INDIAN AGENCY: P. T. I. BOOK DEPOT, BANGALORE). 7s. 6d. net.

At one of the Indian Universities the other day, a proposal to constitute Fiction the subject-matter of a separate paper at the M. A. Examination could not be put through, as many members of the Senate wrongly thought that the subject did not deserve any serious study. The phenomenal development of the literature of fiction in recent years may not be an entirely wholesome thing, but there is no denying the fact that it has captured the fascination of the world and there is also need for the serious study of the art itself. Praise-worthy attempts have been made in recent years, especially in America, to expound the art of the novelist and this volume itself is one of the best we have seen on the subject. Here are chapters devoted to the various elements of fiction, to the story, the characters, setting, etc. and the analysis is as illuminating as it is precise. One of the greatest dangers in work of this kind is to make the treatment too technical, but Mr. Lathrop has succeeded in never losing sight of the whole in his pursuit of the details. His presentation is so popular that it is sure to interest even laymen and should find a large number of readers in India. Mr. Lathrop has only one fault (and it is one which we have noticed in many other American writers on this as well as on similar subjects)—he has introduced the work of many writers who cannot claim any permanence in literature. It would be difficult for students of literature to recognise the names of many American and English novelists whose names are introduced by him in the volume for illustrative purposes, unless he is a sedulous votary of novels of the season. There is not a single element of the art of the novelist which cannot be very fully illustrated by reference to standard writers of Fiction, past and present and there should be no need to draw on the many obscure writers whose names are mentioned in this volume. But this is however not a circumstance which vitiates seriously the value of the book as there are enough of examples from standard literature capable of wide appreciation. We have great pleasure in recommending it to students of English literature in our colleges.

LYRA HEROICA, BY W. E. HENLEY: GOLDEN TREASURY SERIES. (MACMILLAN AND CO., LTD.) 3s. 6d.

This well-known anthology of poems edited by the late Mr. William Ernest Henley needs no introduction to students of English literature. It enjoys all the advantages of editorship by a person who was himself a poet and critic of no ordinary taste and ability and should undoubtedly be grouped with the same class of anthologies as Palgrave's classic *Golden Treasury of Songs and Lyrics*—it is eminently deserving of a place in the same series. "To set forth, as only art can," wrote the late Mr. Henley, in the preface, "the beauty and the joy of living, the beauty and the blessedness of death, the glory of battle and adventure, the nobility of devotion—to a cause, an ideal, a passion even—the dignity of resistance, the sacred quality of patriotism, that is my ambition here". It is well-known that he more than succeeded in this excellent aim of his and the *Lyra Heroica* is to-day one of the essential works in any library of English verse for boys. Starting with Drayton's *Agincourt* and the admirable passages relating to the same inspiring theme in *Henry V*, the anthology closes with pieces from Kipling and Henley himself. Since Henley's time such fine heroic verse has been written in English that it would be eminently desirable to add a few pieces to the volume as has been done in the case of Palgrave's *Anthology*, and bring the list of poems down to specimens from Rupert Brooke of our own times whose patriotic poems will rank with the best efforts in the English language.

THE TEACHING OF ENGLISH, BY W. S. TOMKINSON. (THE CLARENDON PRESS). 5s. net.

The books which profess to guide the teacher of English in his every-day work in the class-room are many, but very few of them are of any real help to the members of the profession. Mr. Tomkinson's *Teaching of English* is however an admirable example of what such a book ought to be and deserves to be in the hands of every teacher of English in this country. Mr. Tomkinson calls it, 'a new approach' and it is no boastful claim. The problem is presented with a delightful freshness and originality and the book is not enveloped in the usual routine outlook and technical verbiage characteristic of books of pedagogy relating to the teaching of individual subjects. Mr. Tomkinson is very comprehensive in his treatment of the subject and deals not only with what is the actual teaching in the class-room but also with such other matters as have a bearing on the development of English studies in the entire scheme of school-life. Oral expression, the art of reading, the art of speech and debate, all of which play no unimportant part in fostering the student's command of English, are all emphasised upon and this deviation from the usual methods of pedagogic treatment should be immensely appreciated. Verse-making in schools is an exercise of no ordinary value, not of course to manufacture poets but to furnish a discipline to the mind which will

improve considerably its appreciation and mastery of the language, and Mr. Tomkinson devotes an admirable chapter to the subject. The ordinary teacher of English in the Secondary School does not realise the opportunities for training the pupil's critical sense he throws away in the course of his work, and Mr. Tomkinson draws attention to the various processes in detail by which the critical sense may be awakened and fostered in the young mind. It is easily among the best books on the subject which have come under our notice and its extensive use by English teachers in our Secondary schools, should result in a considerable improvement in the teaching of the subject in our country.

THE SUPERVISION OF INSTRUCTION, BY H. W. NUTT. (HARRAP). INDIAN AGENCY: P. T. I. BOOK DEPOT, BANGALORE. 7s. 6d. net.

"The fundamental purpose of all school supervision," says the announcement on the cover of this volume, "is to increase the efficiency of the classroom teacher. School supervision is, worthy of the name only when it results in such an increase. This work shows how proper supervision may secure valuable results." The purpose of school supervision cannot be stated in better language and Mr. Nutt's book is indeed a useful contribution to the literature available on the subject. Head-masters often spend hours in school supervision without much of benefit either to themselves or to the school, and the guidance furnished by Mr. Nutt's book is sure to furnish a correction to any such fruitless employment. Advice on subjects of this kind is also apt to be too technical to be useful, but that is precisely the danger against which Mr. Nutt guards himself. In addition to laying down the general principles of school supervision the author enters into many details which would strike only a very experienced teacher. Here are some specimen directions in the chapter entitled, *Estimating the Worth of the Teacher*:

Never hold up one pupil as a model to another, and never discuss the conduct of one pupil with another. Hold up ideals of group welfare and seek the co-operation of each pupil in realising the ideals.

Be alert and accurate in interpreting the acts of pupils so as to anticipate their conduct and to start counter-suggestion to prevent undesirable behaviour. Decide quickly and act promptly.

See and hear everything that goes on in the room, in the halls, on the playground, on the street and in public places where the conduct of pupils may be observed.

Have a dignified, firm bearing, attitude of sureness of self and just what is going to be done.

Control of temper; keep cool in emergencies.

Be willing to go more than half way to meet a pupil who is being disciplined.

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Never announce in advance what the punishment will be for any offence.

Do not talk to people outside of school about disciplinary problems and measures that have been administered.

The Supervision of Instruction is undoubtedly a book which deserves to be in every school library.

CHAUCER: *THE HOUSE OF FAME*, BY C. M. DRENNAN, M.A.; (THE UNIVERSITY TUTORIAL PRESS). 2s. 6d.

The University Tutorial Press has long enjoyed a high reputation for the excellence of its editions of literary classics. The volume under review comes up to the usual level of its editions and contains all the features necessary for a publication of the kind: an illuminating general introduction on the author as well as on the *House of Fame*; brief but pointed notes and a glossary; and information on Chaucer's grammar and pronunciation. It is however a pity that the text of the poem should have been printed in double columns; nothing can vitiate more seriously against the appreciation of verse than this kind of presentation and it should have been much more pleasing to the eye if the poem had been printed in single column. It would have meant an addition of thirty pages to the volume but it should not have been grudged even in these days of costly paper and printing.

A LETTER TO A NOBLE LORD AND OTHER WRITINGS, BY EDMUND BURKE, EDITED BY M. MURISON, M.A. (CAMBRIDGE UNIVERSITY PRESS). 7s. net.

"To lose Swift and Burke out of our mind's acquaintance is a loss indeed, and a loss for which no converse with contemporary prose literature can make up any more than converse with contemporary poetry could make up to us for unacquaintance with Shakespeare and Milton. In both cases the unacquaintance shuts us out from great sources of English life, thought and language and from the capital records of its history and development, and leaves us in consequence very imperfect and fragmentary Englishmen. It is a pity that the writings of Burke should not be prescribed more extensively in Indian Universities—in fact it has even been suggested in certain quarters that Burke has been excluded with a deliberate purpose. But there is no denying the fact that his writings supply inspiration of a high order to the patriot and to the student of public affairs and apart from literary reasons this book will therefore find a cordial welcome all over India, especially in the present outburst of patriotic feeling everywhere. His famous *Letter to the Sheriff of Bristol*, *Speech at Bristol on Parliamentary Conduct* and a *Letter to a Noble Lord* are the pieces included in the volume and the student of literature will feel thankful for their being made available in such a handy, admirable volume.

PHILIPS' NEW ERA LIBRARY:—1. WEALTH AND WORK BY G. W. GOUGH, M.A.; pp. viii & 260. 2s. 6d. net; 2. THE GATEWAYS OF COMMERCE, BY J. FAIRGRIEVE YOUNG, pp. viii & 272. 2s. 6d. net. (GEORGE PHILIP & SON, LTD., LONDON), 1921.

Messrs. Philip & Son's New Era Library represents an attempt to meet the demand on the part of the general reader for works which are merely introductions to the subject and give in broad outline something of the main principles and sphere of activity of the subject. The books in this series are not burdened with excessive detail and are put in a form that would be easily assimilable by the man in the street or the beginner; but at the same time the explanations are full enough to permit the reader to get a wide general view of the topic. The aim of the books is to teach the man in the street to know a little of many things and to present 'that little' in such a way that it is easily assimilated and yet so accurately that nothing has to be unlearned at a later stage.

The first book is a primer of Economics which tries to show what the stuff of Economics is, how the economist deals with it and how it affects the wealth and welfare of both citizen and State. Elementary ideas like goods, markets, incomes, economic laws, needs, wealth, individual and national, are first explained. Then the nature and work of the four agents of production and the special contribution of each to the growth of wealth are explained. The underlying idea seems to be to point out how society is a partnership of the various classes each dependent upon the others. Now-a-days men have begun to organise themselves for wealth production of set purpose and on scientific lines; and success due to good luck is being replaced by success due to sheer hard thinking. The chapter on cost of production is interesting and very simple; and all the ideas as short and long periods, fixed charges, prime costs, production on a large scale, pendulum and point (market price and law of supply and demand) are clearly and effectively told. The real test of good money, the root of mistakes that are made about money, the methods of credit in use at the present time, banks, the way in which credit affects prices, foreign exchanges, etc., next occupy our attention. The difference between earned incomes and invested incomes is next brought out as related to the agents of production. It is not about the income of individuals, but only of that of classes that Economics can teach us much that is interesting and useful. The laws that fix the different kinds of income are next explained; and the whole book illustrates well the truth that the business of Economics is to teach confidence and caution and how to better one's position by wise conduct based on accurate thinking.

The second book deals with the geography of commerce and trade and explains how the basis of trade is geographical. 'Where things grow' largely affects the truth of how things are

grown and where things are grown. The various branches of the agricultural industry are explained, how we get our dairy produce, bread, fish, etc. We are clad as we are fed by countless hosts of labourers working in organisation which is described in detail as it affects the cotton and woollen industries. Then we are taken to the chains of trade that bind our country to other lands and that are always longer than at first appears. "In the case of cotton it is anchored at one end in the plantations of the States, passes through the factories of Lancashire and has perhaps its other end in India or Africa where some dusky maiden is partly clad with the product of the British looms. Negro labourer, Lancashire lads and lasses, African peasants—each and all are interested in the labour of the rest." The book clearly brings out the most striking result of the study of economic geography—the fact of our dependence on all kinds of people all over the world. World-wide trade is possible because of world-wide organisation which is weakened and strained by nothing so much as war. The world is one great co-operative society; its members belong to each other and that which hurts one, hurts all. Trade can never be prosperous unless on a basis of mutual exchange of equal values; and the value of commodities is increased mutually by exchange. Under modern conditions the world has become not a collection of narrow independent circles of interest but the whole is "linked together in a common life and interest, such as humanity never saw before."

ZOOLOGY FOR SECONDARY SCHOOLS IN INDIA, BY W. RAE SHERRIFFS, M.A., D.Sc. (FORMERLY PROFESSOR OF ZOOLOGY, MADRAS XI'AN COLLEGE & NOW LECTURER IN ZOOLOGY, UNIVERSITY COLLEGE, SOUTHAMPTON (MACMILLAN AND CO.) Price Re.11-8-0.

We cannot be too critical in reviewing a book on "Natural Science"; whether Zoology or Botany, especially when an honest attempt is made to make our boys acquainted with the features of the Indian forms. Mr. Sherriffs, M.A., D.Sc., who was, for over eight years, Professor of Zoology in the Madras Christian College, has published a neat little book on "Zoology for Secondary Schools in India" and the book is intended for use in Secondary Schools. The publishers are Macmillan and Co. and the book costs only Re. 1-8-0, a price which should be considered moderate for a work on Zoology abounding in appropriate and neat illustrations.

In our Presidency, Zoology does not find a place in the curriculum of secondary education, and usually very little of animal life is taught in connection with elementary science. It is only proper that the teacher should try to introduce the student to the salient features of animal life, and the volume before us will surely place at the hands of the enthusiastic teacher correct and useful information about Indian forms of the different groups of animals.

A brief account of the different phyla or groups is given in the book under review and the structure of the common type is described. Also, attention is drawn here and there to the peculiarities of structure, habit and distribution. Reference is also made to the economic aspect of certain animals such as insects. The usefulness of the book will be further enhanced if the author had dropped the technical terms or names wherever possible, and if he has shown less attention to the systematic aspect.

We are glad, however, that a handy book has been placed in the hands of students and teachers in our secondary schools, and we hope that in course of time, books such as the one under review, will create a general interest in the study of animals and plants in our Presidency.

WOMEN OF INDIA, BY OTTO ROTHFELD; (D. B. TARAFOREVALA, SONS AND COMPANY, BOMBAY)

The author, a beloved civilian of the Bombay Service, now Registrar of Co-operative Societies, Bombay Circle, is well known as a writer on Indian subjects, being already the author of several books.

In this work, he makes an essay at studying the women of India—a problem which would make most daring spirits hesitate. A study of Indian art or Indian nature, much more Indian human nature, requires a breadth of culture and a width of sympathy, which it would be difficult to master for a satisfactory effort. When it comes to a question of studying, not human nature but woman nature, woman's life, qualifications require to be enhanced a great deal and the most qualified need not feel disappointed if they fall short in the achievement. So varied is the human type, so secretive the human tendencies, particularly feminine and with all so interesting the adventurous account might well make the essay.

Mr. Rothfeld brings the necessary breadth of culture and as the requisite quantity and quality of the sympathy to understand the problem, the effort has achieved a very considerable success, though it may fall short of the achievement of the Sister Nivedita. That it challenges comparison with the writings of that good woman, who could study Indian women from the inside is a compliment to the author and that he falls short in the achievement of understanding Indian women is no disparagement to him, for after all he is a man and could not have had anything like the opportunities of studying women at close quarters that Sister Nivedita enjoyed.

Mr. Rothfeld divides his book into a number of sections. He deals with the chivalry of Rajaputana first and passes in rapid survey the other classes of women-folk, the middle-class, the working and aboriginal class and the dancing girl. He puts the finger on the right spot, when he points out the marriage forms the centre of woman's life in India and that a woman regards marriage and child

bearing as a duty that they owed to society. The ideal of the married woman, who lives for the husband and has discharged an honourable duty by becoming mother, gives the direction at once to their life and points the ideal that they set before themselves. He need not be surprised therefore at the calm resignation to what they regard as their duty and the apparent surrender of all that goes to make them enjoy in life that he enables in a large class of women in the country, particularly Brahman women in the south. He brings into contrast the active life and the ideal of enjoyment of the West with the life of resignation and the surrender of what is concerned to be difficult here in this life as a preparation for the next. The whole life whether it be of the chivalrous Rajput or of the sacerdotal Brahman or even of the toiling millions in the cities and country of India is coloured by outlook upon life. There is very little room left for enjoyment, but punctuates a life of duty. His criticism of the life of the various classes shows knowledge and sympathy and he seems to be at home where he deals with the women-folk of Bombay only, the locality he is familiar with. In his appreciation of the working of the humbler classes, he is very much to the point and is capable of getting into their life sufficiently to appreciate its beautiful features. As an European, he is bound naturally to appreciate the married life and the marriage customs of classes like the Muhammadans and the matriarchal communities of Malabar. It is nothing strange that he is not in a position to appreciate to the same extent or even understand to the same degree the ideals infusing classes with which he is not familiar and which are necessarily almost diametrically opposed to those with which he is familiar.

From the point of the Indian therefore, the book may not be as inviting as one would desire, but no European has got as near to understanding Indian women as Mr. Rothfeld in this particular work of his. The book is throughout very well written. There is spirit in the writing and sympathy and the requisite degree of gravity in attacking a problem of this kind.

He has had the assistance of an artist, who has done his level best to render any picture what the author has drawn with his pen. We have however to point out very unfortunately a serious blemish in regard to the work of the artist though we would rather implicate the author in the blunder. The picture of the Madras lady given opposite to page 97, as the Southern type, the southerner would not perhaps accept as such, but that may be excused. The specimen of a "genuine dancing woman from the south" that faces page 165 is, I should think, a very bad blunder. It is likely to be damaging to the book. The picture given there may be that of a dancing girl, although we fear, she is not, if the picture was taken from a photograph cannot call up ideas of the South Indian dancing girl, either from Tanjore and elsewhere. We hope that that it is the only bad point about it and as far as we are able to judge, the other representations seem appropriate. Just a few small blemishes, such as the word "Gunika" for "Genika" on page 173. This is however trifling. As we had said already the author shows himself possessed of the right feeling for a study of such a subject and exhibits a considerable amount of understanding and that is best exemplified in the chapter on the "Dancing Girl." The European student of Indian womanhood could understand and appreciate this much despised class of women; we very much wish the fire-eating social reformers had a tithe of that understanding or anything like a fraction of sympathy, which might well go to improve their lot and elevate their art rather than set about a braying condemnation without understanding or sympathy, as if the abolition of the dancing girls would put an end to unchastity or immorality. If the art finds patrons, it provides at once an assured guarantee against immorality and the abolition of a difficult art, as he pointed out is the most certain way of adding to the roll of the miserable women who have to eke out their existence by an immoral life. We have nothing but commendation for the book as a whole. We congratulate the author on the degree of understanding and sympathy that he exhibits in the handling of a difficult subject such as this.

Fifth Edition—In the Press.

TEXT-BOOK OF TYPEWRITING

by Rao Sahib S. VAITHYANATHA IYER,
Headmaster, Government School of Commerce, Calicut

[Recommended by the Director of Public Instruction as a Text-book for the
Madras Government Technical Examinations in the subject]

SRINIVASA VARADACHARI & CO., TRIPLICANE, MADRAS.

18 ELEMENTARY MATHEMATICS ASSOCIATION:

MISCELLANEA MATHEMATICA.

VII. Length of a circular arc—due to RANKINE.

[The reader is requested to draw the fig.]

Let ACB be an arc of a circle (less than a semi-circle). Produce the chord BA to D, so that $AD = \frac{1}{2} BA$. With centre D, and radius DB, describe an arc cutting the tangent at A in E. Then AE is very approximately equal to the arc ACB.

VIII. Approximate construction (using ruler and compasses only) for a Radian—due to C. M. CHILD.

[Fig. is left to the reader.]

AX is a tangent to a circle, centre O. On AX, take AB = the radius of the circle, AC = $\frac{1}{4}$ the radius. With centre C and radius CB, describe an arc of a circle to cut the original circle in D. Then AD is approximately equal to the radius.

Angle AOD works out to be $57^{\circ} 21' 0''$, while a Radian is $57^{\circ} 17' 45''$.

IX. The following method of filling in numbers so as to form a magic square of four rows of four small squares each has been suggested by M.R.Ry. T. S. Krishnamurthy Ayyar Avergil, B.A., L.T., Inspector of Schools, South Arcot, the condition to be satisfied being that the sum of the numbers in the four squares of a horizontal row or of a vertical column or along a diagonal or in any quartet of four small squares having a common corner should give any arbitrarily chosen number 'n'.

Let 'n' be 100.

A	X		D
	a	d	
	b	c	X
B			C

Fill in any numbers in the central squares in place of a, b, c, d, marked in the diagram so that their sum = n, i.e., 100. Let 28, 12, 24, 36 be the numbers. Substitute for A, B, C and D numbers equal

to $\frac{n}{2} - 24$, $\frac{n}{2} - 36$, $\frac{n}{2} - 28$ and $\frac{n}{2} - 12$, i.e., 26, 14, 22, and 38 respectively, i.e., so that the sum

26	X11	25	35
35	28	36	1
25	12	24	X39
14	49	15	22

of the corner squares along a diagonal of a square of nine small squares = $\frac{n}{2}$.

Next fill in the squares marked 'X' with any two numbers whose sum = $\frac{n}{2}$

e.g., 11 and 39. Then the number to be filled in the remaining square in the first horizontal row = $n - 26 - 11 - 38$ or 25, that in the third horizontal row = $n - 12 - 24 - 39$ or $\frac{n}{2} - 25 = 25$,

hence that in the second vertical column = $n - 11 - 28 - 12$ or 49, that in the third vertical column = $n - 25 - 36 - 24 = 15$ and hence those in the second horizontal rows are respectively $\frac{n}{2} - 15$ and $\frac{n}{2} - 49$ or 35 and 1.

34			26
25			15

If the corner squares are filled in first, say by 34, 25, 15 and 26 so that their sum = 100, the remaining squares could be filled in by a similar method.

The rationale for the process would be welcome from members, as well as additional information on the subject.

X. The Theorem of Pythagoras—(Ref. Miscellaneous Mathematica IV.)

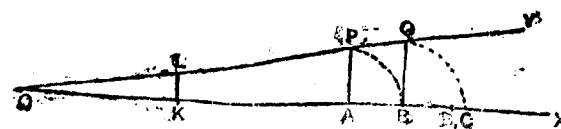
The teaching of Elementary Geometry, as it obtains at present in our Secondary Schools, first exhausts the important propositions of the first four books of Euclid before taking up the geometrical consideration of Ratio and Proportion. This order of treatment can only rely upon past tradition for its recommendation. A healthy change for the better may be made by teaching Ratio and Proportion as soon as the pupils are

in a position to understand the rational scientific proofs of geometrical propositions. The particular chapter in question is treated arithmetically even in the Second form and by the time pupils advance to the Fifth form (when theoretical geometry is begun in right earnest) they must be in a position to understand the significance of the same and hence the geometrical aspect of this topic may be taken up as soon as a few propositions in theoretical geometry are considered in the class. Another argument may be advanced in support of this order of treatment. According to the present order the pupils have to tackle with complicated propositions and deductions within the range of the first four books of Euclid before they are introduced to the simple propositions of Ratio and Proportion. This is opposed to the psychological order of treating any subject—the most fundamental pedagogical maxim.

If the order of treatment suggested above is accepted the theorem of Pythagoras can be easily proved by the methods of similar triangles suggested by C. S. Jackson.

S. KRISHNASWAMI AIYANGAR.

XI. Geometrical methods in Compound Interest.—The construction is very simple and illustrates very clearly the rationale of the principles involved. In the following construction the figure is not drawn to scale.



Ex. 1. To find the amount at compound interest of Rs. 700 for 2 years at 5 per cent. per annum.

On a horizontal straight line OX take K so that OK represents Rs. 100 and erect a perpendicular KL representing Rs. 5. Join OL and produce it to Y.

Take A on OX so that OA represents Rs. 700 and draw AP perpendicular to OX meeting OY at P. Then AP represents the simple interest on Rs. 700 for 1 year.

Now step off AB = AP and erect BQ perpendicular to OX. Then OB represents the amount of Rs. 700 for 1 year or the principal for the second year and BQ represents the simple interest on this for 1 year.

Again step off BC = BQ. Then OC represents the amount at compound interest on Rs. 700 for 2 years and AC the compound interest on Rs. 700 for 2 years.

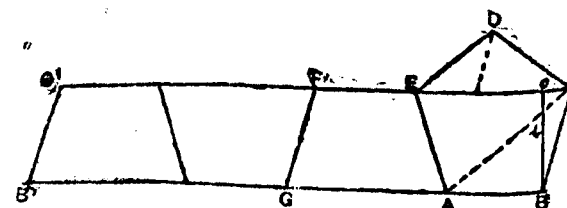
The process is *general* and it may be continued thus finding the amount at compound interest on *any* sum for *any* number of years at *any* rate per cent.

NOTE.—If we step off BB₁ = AP along OX it is evident that AB₁ is the simple interest on Rs. 700 for 2 years and AC the compound interest. Hence B₁C represents the difference between the simple and compound interest on Rs. 700 for 2 years at 5 per cent.

G. DESIKACHARI, B.A., L.T.,

Ramnad.

XII. The Geometry of a Simple Knot.



1. Take a long strip of paper and make a simple knot with it. The knot, when well formed assumes the shape of a regular pentagon.

The pentagonal knot ABCDE when opened out, takes the shape of a parallelogram BCC'B', which is divided into four congruent isosceles trapeziums placed in juxtaposition as in the above figure.

Let us take one of the trapeziums, ABOE; AB, a side of the trapezium is a side of the regu-

lar pentagon, whereas the opposite parallel side is a diagonal of the regular pentagon. Thus the trapezium is so constructed that three of its sides are the sides of a regular pentagon and the fourth is a diagonal of the same.

If b be the breadth of the strip, and l the length of it, l bears a definite ratio to b . From the above fig., we find that $CB = b \operatorname{cosec} 72^\circ$ and $CO = b \cot 72^\circ$.

$$\therefore CE = 2b \cot 72^\circ + b \operatorname{cosec} 72^\circ.$$

$$\therefore CC' = 4b (\cot 72^\circ + \operatorname{cosec} 72^\circ) = l,$$

which is the longer side of the parallelogram.

The shorter side of the parallelogram $CB = b \operatorname{cosec} 72^\circ$.

$$\therefore \frac{\text{The longer side of the parallelogram}}{\text{The shorter side of the parallelogram}} = 4(1 + \cos 72^\circ).$$

The dimensions of the paper required bear a definite relation to the breadth of the paper.

2. Two of the trapeziums, as placed in the figure, will form a parallelogram BCFG equal to half the original parallelogram. This when folded along the crease AE will form a regular pentagon (of course without the knot).

3. Let us consider the angles formed:—

$$\angle DAB = 108^\circ \text{ and } \angle DAC = 72^\circ. \therefore \angle CAB = 36^\circ.$$

We have obtained here an easy method of dividing 180° into 5 equal parts, without the help of the protractor. Now we can get at 6° easily by the help of a ruler and compasses only. This when bisected gives us 3° , the smallest subdivision of a right angle, obtained easily, with ruler and compasses only, and precocious antiquarians may avail themselves of this to explain the sexagesimal system, which research shows was prevalent in olden days.

V. THIRUVENKATACHARI.

19

PILLORY.

N.B.—The quotations have been taken from text-books in common use.

1. "A directed number preceded by '+' is called a positive number and one preceded by '-' is called a negative number."

The signs '+' and '-' are used only conventionally and are parts of directed numbers.

2. "The '-' sign put before a number indicates that we have now to take that number in the reverse direction."

What is meant by taking a number which is abstract in a particular direction? And if a

number has once been taken what has direction to do with it?

3. "The parts of an algebraic expression connected (or separated) by the signs + and - are known as its terms."

Is not $-5a$ a term in $3b - 5a + 8c$?

4. "To multiply one number by a second is to do to the first what is done to unity to obtain the second."

$\frac{3}{4}$ could be got by subtracting $\frac{1}{4}$ from 1. Could we get $\frac{3}{4} \times \frac{3}{4}$ by performing the operation $\frac{3}{4} - \frac{1}{4}$?

V. RAGHUNATHA AIYAR.

20

An ordinary meeting of Elementary Mathematics Association (Trichinopoly Branch) was held in the L. T. Hall of the St. Joseph's College on Monday, the 21st March 1921. Mr. Martyn M. Thomas, M.A., of the S. P. G. College, was elected as the President and Mr. S. Krishnaswami Aiyangar, M.A., L.T., of the St. Joseph's College as the Secretary.

Mr. P. S. Ganesa Sastrigal of the National College spoke on "Some points in the Teaching of Elementary Mathematics." He began by comparing the methods of teaching that obtained in the Matriculation days with those at present and emphasised on the change of aim in the teaching of mathematics in the Secondary schools as being now more utilitarian than cultural. As a result the unnecessary and artificial barrier between arithmetic and algebra is removed, the treatment of equations as an important method of attacking problems, has received its proper place, and lastly geometry is treated according to psychological principles. He emphasised the teacher's task of making the pupils analysing the conditions of problems, insisted upon his devoting the first ten minutes of every mathematics class to the mental exercise of the pupils, pleaded for the infusion of more life and interest in the teaching of the subject and proposed the problems be made more real and to have more intimate connection with the pupils' every day life. After explaining the importance of the contracted methods of multiplication and division he pleaded for the nationalisation of mathematics illustrating the same with many interesting problems from the works of the ancient Hindu mathematicians.

S. KRISHNASWAMI AIYANGAR,

Secretary.

The Educational Review.

In the course of a recent interview given to the press, Mrs. Sarojini Naidu had some very interesting observation to make on the use of the English language in India. Asked whether the present tendency in India to turn away from the English language was good, she said that if the country was going to give up English as a step in political boycott, it would be being treacherous to the spirit of Hindu religion. "Do you know why Hindu civilization is permanent and unshakable—because it is elastic," she said—"It permitted assimilation of foreign culture. It was wide enough to provide for dissemination. That is why your civilization is everlasting. By nature, by temperament, I am cosmopolitan. Because I am cosmopolitan, I think I am a true Hindu. Do not for goodness' sake boycott languages, boycott culture. After all English is one of the most beautiful languages and our national culture must be broad enough to admit of English language and English culture. Do not mistake me. I am at the same time one with those who demand greater concentration on the vernaculars than on a foreign language." These opinions are interesting, expressed as they are by a person belonging to the extreme wing of political thought in India.

The South India Teachers' Union held another successful session of its Conference this year at Palghat.

under the presidency of Mr. S. Srinivasa Iyengar, C.I.E. In the course of an eloquent address, Mr. Srinivasa Iyengar put in a vigorous plea for National Education pointing out the various directions in which our educational system might be brought nearer the people. The Indianizing of the agency, the reformation of the courses of studies so as to bring them nearer the daily life of the people were the two things rightly insisted upon, and the speech contained a trenchant criticism of the educational policy of the Government in India to-day. The Conference passed a number of resolutions which deserve the most sympathetic attention of the Ministry of Education in our Presidency, though it almost looks futile to expect any vigorous action on its part. The Conference is rightly of opinion that the budget allotment under Education for 1921-1922 is inadequate, a complaint which we have heard in almost every other Province in India except in the United Provinces where the energy and statesmanship of Sir Harcourt Butler are directing all available resources to education. Various educational reforms are suggested and from the standpoint of constructive statesmanship the proceedings are very instructive. The request that representatives of the teaching profession should be nominated to serve on the Councils is a very reasonable one and a determined agitation should be carried on till this is done. The sending of teachers to foreign countries for the study of educational problems; the improvement of conditions

relating to Provident Funds for teachers; the provision of military training for senior students in Secondary schools and in Colleges; the improvement of teachers' salaries; the encouragement of the Boy-Scout Movement—these are some of the subjects on which resolutions have been passed by the Conference. We cordially approve of the resolution of the Conference relating to the transformation of the present system of the inspection of Secondary schools. The following suggestions made by the Conference may appear somewhat novel and curious, but they have been adopted with considerable advantage in several countries in the West, and we see no reason why they should not be equally beneficial to India:

That in view of the fact that the present system of inspection of Secondary schools is not productive of any beneficial results to such schools and that the maintenance of the huge costly machinery for this purpose is not justifiable when the more pressing needs of education are many, the Inspectorate of the higher rank of Provincial and Indian Educational Service be abolished, and the objects to be secured by this highly-paid agency be attained by (a) a moving commission of three or four experts in the different subjects of the Secondary school course inspecting high schools once in four years and making constructive suggestions for the improvement of such schools; (b) by the appointment of a District Inspector for each district from among the ranks of senior Sub-Assistant Inspectors whose work will be confined to the inspection of middle schools and the account and the statistical branch of high schools.

From a fairly long experience of how inspection is usually carried on in our Secondary schools, we have no hesita-

tion in saying that the disappearance of the present system will not result in any injury to our educational progress. With Inspectors, the majority of whom have neither the knowledge and experience nor the inclination to make inspection a success, it is only a frightful waste of public expenditure to perpetuate the present system and to extend it as the Madras Government is at present arranging to do. The Educational Conference consisted largely of experienced teachers in Secondary schools and there cannot be a greater condemnation of the present system than the above resolution passed by such a body. There is a welcome development of the feeling of independence among the teachers as exhibited at the Conference and that is a feature on which they deserve to be congratulated.

We must confess to some sympathy with Mr. Satyamurthi's agitation against members of the Syndicate receiving any honorarium from the funds of the University, but we fail to understand why it should be magnified into such a serious matter and such an attempt should be made to impose an absolute restriction in the matter on members of the Syndicate. Senior members of the Senate commanding the confidence of the body are usually elected to the Syndicate and it passes our understanding why the moment a member rises to such a position he should cease to be an examiner or a member of inspecting committees, for which he is likely to be better qualified than others. The

other alternative is for the member in such cases to do the work *honorarily*, which is undoubtedly a hardship, especially as the Syndicate membership itself demands considerable expenditure of time and energy. In the course of a letter to the press on the subject he has given statistics of honorariums received by members of the Syndicate during their period of office. The figures can easily be matched by members of other Universities in India and being honorariums paid mainly for examining work, should not be grudged at all. We see no reason why such a fierce agitation should be carried on over the matter, especially as there are measures of considerable educational value awaiting immediate attention.

We had occasion to draw attention sometime back to an interesting publication of the Oxford University Press, issued under the auspices of the National Council of Missionary Education, under the title of *Village Education in India*, surveying the problem of elementary education in India from the standpoint of the Christian Missionary. The Oxford University Press has just issued another volume on *Schools with a Message in India* by Dr. Fleming, Ph.D., consisting mainly of material collected during the enquiry conducted for the purpose of the former volume. Schools started with a view to proclaim a "message" are apt to be judged without a sense of proportion and many schools with a 'message' are only educational

institutions with high-sounding aims adorning the advertisement without being carried into practice. Even institutions like the *Gurukula* at Hardwar and the *Shantiniketan* at Bolpur have not yet demonstrated their superiority to our schools and colleges to everybody's satisfaction and many of the other institutions included in the volume have even less claim on the public attention. But the record is nevertheless very useful containing as it does an account of valuable ideals which our educational institutions should ever keep before them. Curiously enough there are many other institutions in India itself embodying many novel ideas. Vocational schools; schools embodying the family system; schools combining a life of earning livelihood with instruction; educational commonwealths in which the entire administration is entrusted to the pupils themselves—these are some of the types dealt with. We have great pleasure in recommending the volume to the notice of educationists in Southern India.

Pedagogic problems are receiving special attention in America to-day and among the subjects most elaborately studied are the problems of Adolescence in relation to Education. In the current number of the *Pedagogical Seminary* edited by Dr. Stanley Hall, there are numerous articles drawing attention to several aspects of the subject. The subject of sex-education which has a special bearing on the period of Adolescence is discussed by

more than one writer. Dr. Henry Curtis who writes on the subject has no hesitation in saying that there should be sex-education at home as well as 'at schools and that instruction in the subject should embrace the following branches:—the acquiring of information; the development of a proper attitude; the strengthening of the will and the development of positive ideals of love and marriage. The experience of America in the recent war has been particularly encouraging to advocates of sex-education as there was appreciable reduction of venereal disease in the army as the result of an extensive propaganda in sex-enlightenment. The concluding observation of the writer will command general acceptance: "No young man or young woman should be graduated from any college as ignorant of matters of sex as were the majority of those who took their degrees five or ten years ago." Teachers in secondary schools in our country will do well to form themselves into groups for the study of such problems. The mere meeting of persons in annual conference to pass a few resolutions of general importance to the profession can be of little use. It is a pity there should yet be no appreciable contribution to pedagogic literature from Indian teachers.

The Calcutta University has just taken an important step in the Vocational Education direction of drawing attention to the value of vocational education in our schools. The Hon. Justice Sir Asutosh Mukerjee, as Vice-Chancellor of the Univer-

sity, invited all the Head-master of High Schools in Bengal to a conference to consider the subject. It was attended by as many as about 500 Headmasters of High Schools, though no special facilities such as the granting of travelling allowances for the purpose were provided, thus showing the remarkable interest commanded by the question in the country. The following are among the resolutions passed at the Conference:—

That scientific and vocational education in schools is desirable; that instruction and examination in subjects other than English should be conducted in the vernacular; that the minimum age-limit for Matriculation should be fourteen; and that students should be required to produce certificates that they have received training in at least one of the nine specified vocational subjects. With the co-operation of the Government and private managers, it should not be difficult to carry out these resolutions in the Secondary Schools of Bengal. We hope that other Presidencies also will appreciate the value of vocational education and take early steps for its introduction into schools.

A recent order of the Mysore Government with regard to the further expansion of education in the State deserves wider notice. In connection with the programme of opening 10,000 new primary schools, it is directed that all the new institutions should be for girls and for the depressed classes, to

reduce the present disparity between the education of boys and girls. The number of schools for boys is fifteen times larger than the number of schools for girls and the proposal will therefore be welcomed, but we hope that boys will not be denied facilities for education in this anxiety to expand female education. Another interesting feature of the new Government order is the provision for industrial classes in connection with the girls' schools—classes for needle-work, embroidery, lace-making, etc. To cope with the additional strain imposed by this expansion, it is also proposed to add to the existing facilities for the training of teachers. We have no doubt that these steps are in the right direction and will result in the advancement of education in the State.

The report on Public Instruction for 1920-1921, just issued by the Government of Bombay, furnishes interesting reading. As in other parts of India, the difficulties relate mainly to finance and expansion has been hampered for want of funds. The increase in expenditure on education during the year was only 20 per cent. while the increase in the number of pupils

receiving instruction was only 7 per cent. There have been additions to the hostel accommodation available in colleges and Government has also announced its intention of affording financial assistance to private institutions to add to the residential facilities. A committee under the presidency of such an expert in the subject as Sir M. Viswesvarayya was appointed during the year to consider the introduction of Vocational Education in the schools and the report is being awaited with interest. It is significant that the Government does not rely very much on its own efforts to elevate the depressed classes by education. The decrease in the numbers of the depressed classes attending schools is to be regretted though the cause is entirely economic. The social disabilities under which the children of these classes lie are to be deplored, and the remedy lies chiefly in the hands of the social and religious leaders of the Hindu community. Government trust that the stress laid on the removal of the untouchableness of the depressed classes by all leaders of the people will bear immediate fruit in a rapid educational advance of these unfortunates. Government are considering what further encouragement on their part will produce the best results in this direction.

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THE MODERN TEACHER AND HIS TEACHING.

A PLEA FOR CORRELATION.

AS a student in the Training College the would-be teacher learns a lot of things on 'Pedagogy' and as soon as he enters the portals of an institution he has, what with the snubbing remarks of the senior teachers in the school, and the School Committee that won't give facilities, to forget most of his so-called new-fangled ideas with the result, that not only is the institution deprived of the benefits of the modern methods, but the poor youngster bubbling with good spirits begins to lose his enthusiasm and gradually, but out of necessity, becomes one with the rest who are, like Mr. Hardcastle, for old things only and in his turn cites his own case as an example for the conversion of others who are entertained in the institution. What wonder then, if decades roll on before methods recognised in the Continent and America as productive of better results, are given fair trials in our land.

Even to-day the teacher does most of the work and the students are passive. Does the modern teacher approach his subject in the heuristic spirit? Does he take his boys to the laboratory, there to learn for themselves by doing? 'The Montessori method' on which he could write a volume is grossly neglected as impracticable. The blame rests as much on the teacher as on the management. If after much correspondence the management be persuaded to finance a few excursions, how many teachers do throw their heart and soul into the work and turn them to good advantage? In the class-room itself does the teacher make any attempt to show that 'Knowledge is one though subjects are many'? Does he in plainer terms effect the correlation without which the knowledge gained in each of the several subjects is and is likely to be thought of by the students as an entity by itself having little or nothing to do with the sister subjects or with their everyday life. From the start, the pupil should be made to realise the fact

that 'knowledge is meant for use' and that knowledge if not used, will not only rust, but will prove to be a burden and an encumbrance. Knowledge could be put to use only when the boys are aware of the many ways in which a single idea could manifest itself and once they are made to recognise the fact that so many items of knowledge are inter-related leading to the goal of making life happier, much of the blame that is thrown on 'book-learned knowledge' will fade away.

Syllabuses have been and are being drawn, books are being published closely following the syllabuses recognised, and able headmasters choose the one or the other best suited for the different localities. One teacher prefers the topical plan, another the concentric system and both are found defective. And any arrangement however ingenious it be is bound to spell failure, until and unless the teacher effects a correlation and supplements the matter in the books. A syllabus correlating the subjects of the school curriculum might be drawn up; but at its best, it is only dead matter on a scrap of paper. It is the living voice in front of the pupils that should effect the relation; that is why the many syllabuses hitherto published have been so freely criticised and are honored more in the breach than in their observance.

In a few schools attempts have been made to write out correlated syllabuses which are forced on the teachers who in obeying the domineering powers have to write notes in accordance with the syllabuses and dictate those notes to the boys and thereby do more harm than good. Incidentally it may be remarked that want of enthusiasm, discontent and rupture among the staff, the inborn tendency to resist an overlordship, mostly, self-centred headmaster,—all these and many

more akin to these have contributed in no small degree to the undervaluing of a teacher's work and responsibilities. But these are inevitables and that institution is the best where there is a minimum of these undesirables though I am of a strong conviction that there is no irreducible minimum. A teacher who draws the best 'notes of lessons' with the Herbartian stages pompously displayed, goes to his class and sticks to his notes, has never been known to have given a successful lesson. Let him by all means jot down a few notes; but he should be cultivating his resourcefulness by preparations and wide reading; the teacher has to adjust himself to the times and also to the needs of particular individuals in the class. The teacher's work is not a routine work and should not be made one. Once made routine woe to the institution where he works and to the boys under his care. The defeat of the German army is due to the damnable routine in the ranks and the success of the Allies is due to their strategy, resourcefulness and flexibility. The teachers are not blind to this fact; why do they not then profit by this example?

One may go on writing in this strain for any length of time; for many teachers have yet to realise their responsibilities and if only they work for the uplifting of the younger folks with half the zeal they do exhibit in discussions regarding their emoluments and status the profession will certainly be the noblest and not at all 'the sorriest of trades' that by their harangues and hot words in conferences, they have themselves made it to be.

So far I have ventured to throw a few remarks on what a teacher should do. Having equipped himself, I have also remarked, he

should try to show that 'knowledge is one though sciences are many' and this is best effected by correlation. I propose to discuss the subject under the three following heads:—

1. Impediments in the way of correlating the subjects of the school curriculum.

2. Dangers that attend a half-hearted correlation. What correlation is and what it should not be.

3. Remarks on how correlation could best be effected with the many unsurmountable hardships the teacher labours under.

4 (a) *The annual examinations*: The teacher has to finish a prescribed portion in the time. At least a fortnight before the date of examination the teacher ought to have washed his hands clean off the set. He has to plod through every page of the prescribed text-books. He has to hold special classes during the week holidays to finish the portion *before he finishes with the boys*. He has evidently no time. These are a few of the *practical* difficulties in the way of the teacher. Shall we then do away with the examination altogether? We dare not. The examination is a necessary evil and it should for the present be put up with. However much the dread of examinations be exaggerated, I for one, cannot reconcile myself to the idea that they do really stand in the way of correlating the subjects. If problems for the Mathematics classes be constructed from the data furnished by the Practical Science Courses and from Practical Geography Courses, fresh light is thrown on those subjects that are incidentally taken advantage of, so that when those subjects have to be taught the knowledge the pupil already possesses will facilitate instruction in that subject; but the teacher of Mathemat-

ics rarely handles the Science classes and never takes Geography or Sloyd for that class and this leads to other difficulties.

(b). *The Professorial system*: No educationist has so far advocated this system for the Lower Secondary Department. The Secondary grade teacher is expected to teach all the subjects and it is nothing short of a sin to entrust the *knowledge subjects* to different teachers.

I mean a single teacher should take all the knowledge subjects, *viz.*, Elementary Mathematics (Arithmetic, Algebra, Geometry practical only in the lower forms), Kindergarten or Sloyd, Geography, Elementary Science and Drawing. No teacher of the languages (English included) would like to split 'Composition,' Grammar, Detailed Prose and Poetry to be taught by different men and of late, even the system of earmarking periods for Composition, for Grammar, for detailed Prose and Poetry, etc., has been condemned and rightly condemned. Exigencies may arise necessitating the teaching of knowledge subjects for a class by different men and in this case harmony between teachers handling sister subjects shall give the desired effect. The teachers should live in harmony before they harmonise subjects of the school curriculum. Even this harmony amongst the teachers will not form sufficient excuse in the Lower Secondary Department for the entrusting of the knowledge subjects to different teachers.

(c). *The existing course of studies*: The existing course of studies for the High School Department has been found most unsatisfactory and needs a thorough overhauling. A History graduate of the present day even after getting himself trained is not fit to handle either Mathematics or

Geography for the Third Form. It might be said that his work is in the High School, to teach History and History alone; but this I feel is not a healthy state of affairs. Every teacher should know something of everything and to attain this end the old Matriculation and F. A. have been more useful: if nothing else could be done, a return to the old order should be welcome. What an unhappy state of affairs! Geography has been ignored, Elementary Science has been thrown in the background to live or fall with Geography and Indian History in the mystic 'B Group', History has been mutilated, the mother-tongue has been sinned against, the study of English has been made 'extensive' with no better results and of late Drawing has been deleted from the course of Studies. The old Matriculation system was defective and in response to the cry of the frogs King Stork has been forced on them.

It was once argued by a famous Professor of Education that Science and Geography were relegated to the B Group that a freer scope might be given to the teachers to handle those *useful and important subjects* in a way best suited for each locality. The subjects are not to be fettered by the examinations which necessitate the teacher falling into a groove for 'coaching up the boys.' Is there at present, a single institution in this Presidency where this trust has not been abused? Words fail to describe the langour of the teacher of those subjects and the lethargy and unwillingness of the student when he goes to these classes. And following the S.S.L.C. Examination, the apology of an examination that is held in these subjects has all the unpleasantness of the bill that is handed after the fare is over.

Here then is the legitimate field for our activities, for a better state of affairs should we agitate and the recommendations of the Calcutta University Commission seem to be promising; but it behoves us to do the best of the worst. Knowledge is not for knowledge sake nor for the sake of examinations. Keeping this in view and also remembering the fact that our goal is to make worthy citizens of the boys that come under us, let us work and the examinations will take care of themselves. Examinations are for testing knowledge; but knowledge is not for testing Examinations.

(To be continued.)

P. R. SUBRAMANIAN.

THE SCHOOL ARITHMETIC

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THE HEADMASTER.

SOME may deem it quite improper that an Assistant-master like myself should venture to write about the Headmaster, the qualities of his head and heart, and his relation to the other factors of the school environment. Without presuming to poach irreverently on the sacred precincts of the place and function of the Headmaster, I hope I may be permitted to state what I know on the subject. Evidently I set no great store by the "man on the spot" theory, and as such that none but the Headmaster can venture to write sensibly on a subject that pertains to the Headmaster himself. As the saying goes, the spectators see more of the game than the players themselves. So, I hope to be judged impartially as being no "party to the transaction," with no vested interests to defend and exalt, and with no clannish *esprit de corps*, which is possible, nay probable, to be shown were an Headmaster himself to write on his place and function in the school.

The most important consideration that should ever be borne in mind is the necessity for the cultivation of happy relations between the Headmaster and his Assistants. This is a matter of such prime importance that the tone of the school may really be said to be most dependent on this. Where this desideratum exists, the position of the Headmaster himself is largely strengthened. He will be, then, enabled even to bid defiance to the controlling authorities of the school, where he rightly feels himself to be in the right and the latter in the wrong. Indirectly, such amicable relations between the Headmaster and his staff react on the relations between the Headmaster and his pupils. The latter will be all the more induced to honour and obey the head-

master ungrudgingly. For, if the latter and an assistant, are always at logger-heads, the assistant, fretting under some sense of injustice, real or not, sees that no opportunity is lost in speaking ill of the headmaster before his very pupils. Naturally, such untoward happenings make the pupils silently sullen and sometimes openly rebellious against the authority of the headmaster. There is no doubt that such a conduct on the part of the assistant is suicidal to the prestige of the assistant himself in the long run. Naturally, under such unhappy circumstances, the pupil is wont to say to his teacher, "Sir! If you yourself do not care for the headmaster and cry him down, what certainty is there that we do not do the same with you?" On this matter some headmasters would say that it is impossible always to maintain good relations with their staff, especially if there are any obstinate and unreasonable members therein; and that truckling to such persons seriously compromises their prestige and power. I quite see the force of this argument. But at the same time I would like to say that such unruly assistants are more often the products of the headmaster himself. One or two teachers may always range themselves unreasonably against the headmaster. But it is too much to expect that most or all the assistants are made of such stuff. Under these circumstances, the most effective and salutary way of toning down such a recalcitrant is for the headmaster to bring his happy relations with the staff to bear on the former. If such were to be the case, the headmaster's conduct cannot but produce a striking moral effect, and the moral victory he thereby wins is apt to make such an assistant feel himself all the more humiliated by the "public opinion" of the whole of the staff. Such an assistant will be, unless he is hope-

lessly lost for ever, willing to turn a fresh leaf in his future career.

But from this it should not be misunderstood that the headmaster is to *create a party* of his own against those whom he considers subversive to his authority. I am very sorry to say that, in this respect, some headmasters do not hesitate to worm themselves, by questionable means, into the good-will of some of their assistants and trade on the unholy policy of "divide and rule." Some headmasters—I hope they are very few, or at least they will be very few—may be so wily as to cultivate disgraceful terms of support and intimacy with their "favourites" and use them against the other members of the staff. As is often the case under these circumstances, the "favourites" degenerate themselves into the noxious parasites of the C. I. D., who with their twin accomplishments of tale-bearing and wire-pulling strike a blow against the tone and the public opinion of the school itself. More often than not, such a headmaster who is proficient in this crude art of diplomacy, is sure in the long run to be hoisted on his own petard. Such illustrations are not, unhappily, wanting, and it is the danger signal to the headmaster himself. But what I mean is that the headmaster by his sweet reasonableness and moderation should try to enlist the support and confidence, by means open and above board, of the whole of the staff, if possible, or at least most of its members.

But unhappily some are prone to make a fetish of their power and pelf, and glot over the fact that there is none to dispute their right. Some have gone even to the length of discountenancing the formation of Teachers' Associations or Councils on the illusion raised by themselves that they may be seriously

prejudicial to their exalted dignity and prestige. It is the most melancholy fact. On the other hand, the Educational Authorities are encouraging the formation of such associations, and the Director notified in the Fort St. George Gazette that he would be pleased to know the work of such associations.

Next, to state something of the relations between the headmaster and the controlling authorities of school, *viz.*, the School Managing Committee and the Inspectorate. Here, the position of the headmaster is often very delicate, and not very much enviable. He is often, if he is not compromising and conciliatory, placed between the nether mill-stone of his own assistants and the upper one of the controlling agencies. It is *prima facie* in his own interests to fall in with the views of the majority of the Managing Committee, if he is on the latter, and it is therefore not without reason that the assistants look askance at the headmaster's place in the Committee. Unhappily, though not unreasonably, the view of the assistants is that the headmaster, more often, represents nobody but himself therein, and that he is more solicitous to further his own prospects than those of the assistants. But my own view of the matter is—and I hope it is the view of all reasonable men—that the headmaster should deem it his first and foremost duty to stand by his own assistants, and endeavour, with all the influence at his command and all the means at his disposal, to better the prospects of his assistants. Doubtless, this involves in the headmaster a strength of character, a dogged determination, inflexible zeal, persuasive tact and sweet reasonableness, to make his own influence effectively felt on the Committee. On the other hand, if he always dances to the tunes

of the rest of the Committee, unable or afraid to assert his own cause which he implicitly believes to be in the interests of the staff, he soon becomes in the eyes of his staff an object of contempt and ridicule, a negligible quantity, or a magnified non-entity. I admit that it is not always an easy task for the headmaster to make his presence felt on the Committee, especially when his own personal interests are jeopardised by pressing an opinion hostile or repugnant to that of the rest of the Committee. Under such circumstances, I deem that the only honourable course left open for the headmaster is to retire himself from such a Committee, if he has the nerve to do so.

To state something about the relations between the Headmaster and the Inspecting authorities. In the interests of the school and more particularly in the interests of the headmaster himself, it is deemed highly prudent that the Inspectorate should be made to bear good-will towards the school and staff. Naturally, therefore, the headmaster tries his level best to earn the latter's good regard. For, if he incurs its displeasure, no one's position is more unstable than the headmaster's himself. Instances are not wanting in the annals of the school world to show that headmasters are sometimes unmade for no other fault than for showing a little desirable independence and the courage of their convictions, and I am sure that very few aspire to the post of the headmaster, if one can get the same salary as an assistant. Personally, I am of the opinion that the Inspectorate, as is at present functions, has not the *raison d'être*. As it is constituted and conducted now, it is nothing but a glorified *tamash* and a huge camouflage. Gentle-men, for reasons obvious to us all, are

appointed as Inspectors, who have not in the least the qualifications expected of them, and such persons are armed with the authority of supervising, among other matters, the teaching of even experienced Licentiates in Teaching. I deem it nothing short of an outrage that the latter should be so annually weighed in the balance by Inspectors who are supposed to be well-versed in the teaching of all the varied subjects of the school curricula. It is already showing itself to be a white elephant, which we can ill-afford to spare, swallowing a substantial part of the educational funds, while the ill-paid and over-worked teachers are left in the lurch. The Inspectors more often indulge in nothing but censorious superficialities. Their comments, at least so far as the supervision of teaching is concerned, are generally unfounded, sometimes indiscreet, and at times even silly. Such remarks are made with a self-complacency that is tickling to their vanity. The sooner we are rid of *such* a system, the better it is for us. I have no quarrel with a system under which really able and efficient Inspectors, proficient in a particular subject, supervise the teaching of that subject, instead of our being forced to believe in the all-round omniscience of the present Inspectorate. I am glad to note that the present Inspectors are on the way of cultivating a little introspection, and of trying to observe more the beam in their own eyes than the mole in those whom they are called upon to inspect. It is a sign of the times that they are going to be chary and less indiscreet in their remarks. They are trying to realise that they are paid to wash their linen in the public. It is with such an Inspectorate that the headmaster has to curry favour. Naturally the headmaster tries to make his show, on the occasion of inspection, commensurate with the

more exalted show. The headmaster, at the visits of the Inspector, feels himself as nervous as the pupil when the examination results are about to be announced.

Lastly, regarding the relations between the headmaster and his pupils, I deem these to be of secondary importance. The headmaster has very few opportunities for having any direct and intimate relations with the pupils. Under the School Final System, where red-tapism is perfected to a fine art, the headmaster is little more than a mere signing machine. I think it is more in the fitness of things to style him as the head-clerk of the school rather than the headmaster. No doubt, the headmaster on ceremonial occasions like the celebration of the anniversaries of debating societies, brings himself into occasional contact with his pupils. But even here the headmaster's role is narrowed down to proposing "a vote of thanks" before an half-empty gathering. But a sympathetic and self-sacrificing headmaster may create opportunities when the pupils' attention will necessarily be drawn towards him; for example in helping in all ways possible poor and deserving pupils, in acceding to their reasonable wishes, and in the sympathetic supervision of their out-of-school activities. In short, it requires in him a moral earnestness, a high sense of responsibility, a sympathetic insight, a self-sacrificing spirit, a hand willing to help and an ear willing to hear, which pupils are not slow to perceive and admire.

D. RAMAMOHAN RAO.

EDUCATION—ITS MEANING AND FACTORS VII.

BOARDING AND DAY SCHOOLS.

IN order to afford the fullest advantage to the child in his education from company, two kinds of schools have been devised—the Boarding and the Day Schools. Both these types of schools have their advantages and disadvantages. The main ground on which Boarding Institutions may be supported is that they try to combine in themselves the influences of both home and school. But it will, we are sure, be admitted that no Boarding School, however perfect, can take the place of a good home. Even if the teachers in charge of these schools be men of exceptional abilities, they cannot be expected to devote individual attention to all the boys placed under their care. The ties of natural affection cannot, so long as human nature is as it is, be replaced by any other ties, however strong. Can a teacher, even of the most approved capacity, take the place of a good and affectionate parent? Can he know the inner current of a child's mind just as his father or mother does? From the nature of the human mind as it is constituted we may surmise that he cannot; and his difficulties increase with the increasing number of boys placed under his charge.

But, this does not mean that the Boarding Schools have not their advantages—they have undoubtedly had their good points; but what we mean to say is this that they are not at all comparable with the benefits conferred on the child by a well-ordered life in a good home, nor are the wants of Boarding Institutions felt so long as homes are what they should be. When the parental life is far from what is desirable, when the home of the child

is a den, a place of vice and squalor, then and only then, the necessity of a Boarding School is felt. It will then afford the child at least some of the pleasures and benefits of home-life. The loss cannot be made up—but the Boarding institutions may furnish what may be called "the second best." It is after all a patch-work arrangement—but a patch-work arrangement of the best sort that can be devised. The influence of a mother or sister, the free and unrestrained play of the instincts and tendencies of the child-mind, a homely chat with a good and virtuous father, the affectionate kiss of a good old grand-dame are things which are natural to home and are nowhere to be found in this world of ours. These are blessings for which there are not, nor can there be, any substitute. When they are present, a day-school is a boon—for, it then combines the influences of a good home and a school. But when they are wanting the Day school, however perfect it may be, is of very little use, for, it can hardly counteract the evil influences of a bad home. And it is to provide for the education of the children who are thus deprived of the benefits of a good home, that the necessity of a Boarding school is felt.

No one will, we are sure, be led to think from what we have said above, that the existence of Boarding schools in England is due to the existence of a large number of undesirable homes in that country. The origin of the English public schools had other tales to tell. They are the outcome not so much of a moral consideration, as the consideration of a historical kind. When the educational conscience of England was roused, it touched those institutions which were residential in their character. And these institutions having been at the same time under the guiding influences

of such eminent educationists as Dr. Arnold, Butler and a few others, their reputation became unique in the country; otherwise Boarding institutions with so many disadvantages could not take such a deep and abiding root in the English soil.

Besides the defects we have tried to describe above, Boarding schools divorce female influences on the child's character, as well as influences of the child on the family. The home that is not lit up with the beaming countenance of a cherub, nor resounds with the chuckle of a child's laugh, is a veritable desert, and the child who does not know the fondling care of an affectionate mother and the sweet caresses of a loving sister is really unfortunate. The education of such a child may be what you please, but it is far from what may be said to be perfect education. The one part of his nature remains untrained. He may be an intellectual phenomenon in after-life, but his character, the formation of which we have tried to show to be the end of education, remains one-sided and narrow. The social, æsthetic or what, in short, may be called the "feeling" side of his nature cannot be developed unless the essentially intellectual education received in Boarding schools be modified by the kindly influences of a good home.

The tradition of a Boarding school may no doubt spur a youth here and there to noble efforts but the example of a bravado may also turn the scale entirely in the other direction.

The essential condition of the residential system, as we have already stated, is this that it combines, so far as possible, the influences of home and school and, as such, it is the privilege not of the poor but of the rich, for it is the latter who can pay for the increased cost of such an establishment in order that it may

be efficient. For example, if a teacher is to approximately take the place of a good parent such as is contemplated in an ideal Boarding school, he must admittedly be a man of proved capacity. And so employment of a man of proved ability means money which the rich can pay. The same argument applies to the material conditions and other necessities of a child's life in a school of residential type. Lastly, the ties of Indian home life are undoubtedly stronger than those of any other country. The Indian mothers are proverbially affectionate to their children. Indian sisters are strongly attached to their brothers. On the other hand these influences of home-life are not such as to call for a check. They are what have made the Indian home a home of love and peace, as is now being admitted by the people of the other countries as well. Instead of putting a check on these salutary influences on the child's life, it is necessary that they should be cherished and fostered. That the introduction of the Boarding system in the country particularly for boys of very tender age, has made our little folks very sentimental and has struck at the root of the fundamental unity of a Hindu home appears to us to be a fact of the gravest consequence. Young men trained in these foreign institutions have a tendency to ape the manners of elderly people and to look upon society as a ground for wrangling and disputation. The cementing strength of a female influence, the sobering tradition of a family life are absent, and the result is that the educational products that are turned out in these seminaries become, as a rule, destructive critics and not constructive architects.

The Boarding institution thus seems not to take very kindly to the Indian soil where both law and customs have from time im-

memorial recognised and encouraged the existence of good family life and the secular system of education. The Boarding system is specially harmful to little boys whose education need be chiefly confined to the home. For them at least, if not for others also, a combination of the influences of a good home and a good school is the best arrangement that can be made.

BEPIN B. BANERJI.

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EDUCATIONAL RE-ORGANISATION.

ELEMENTARY.

"PREVENTION is better than cure" is specially true of the Educational system of any country. Unsoundness of the system and of organisation and the consequent inefficiency gives rise to very undesirable effects as in the matters of Unemployment, Drink, Marriages, Citizenship, &c. These are sought to be counteracted by various kinds of reform and devices, conceived piecemeal and hence failing to effect any lasting or general good. To this day the urchin at home is terrorised into obedience by conjuring up a vision of the school and the schoolmaster; a girl, by an appeal to the word "marriage" and the Senate House as a "Slaughter-house." These proclaim with all the fatality at the command of true eloquence how helpless and perverted matters stand. But now schemes of reorganisation are launched upon, and time and circumstances are come when a careful, unbiassed and intelligent grasp of the situation and a true statesmanship with an unerring foresight are more than ever necessary, as the salvation of the country depends on the efficiency of her education and through it, her prosperity, industrial and otherwise.

Thanks to the labours of the late lamented Mr. Gokhale, a strong impetus was given to a deeper consideration of the questions relating to Elementary Education, which if efficient, lays the foundations of national prosperity. A scheme of expansion was entered upon; larger numbers are trained for teachership; rates of grant-in-aid have been revised and more money is spent though not in proper proportion on the teacher. Education has become a "transferred subject" which

is perhaps more a political than an educational stroke. Last, not least, because of its potentialities, Elementary Education is entrusted largely to the control of District Educational Councils and by these I lay great store.

The District Educational Council is a non-political body formed exclusively to serve the interests of education. It is not merely a duplication, District-war, of the Director of Public Instruction but a representative body of the several managing agencies and of the intellectual element interested in the educational questions of the District. These are in themselves great advantages and this departure marks an era in educational organisation and management. It is a huge co-operation admitting of localised vision and effort and perhaps leads to standardisation of service and unity in the profession. But a correct, unbiassed and intelligent grasp of the situation and an unerring foresight with a definite aim and a consistent and continuous policy alone can guarantee any success in its service to the country through education. Very difficult questions still unsolved and perhaps, never to be solved finally, stare the D. E. C. in the face and the views about these questions determine its policy. The defect thus far lies in the exclusion of experienced Headmasters from its membership.

First and foremost rise the questions of aim and then of achievement. I am not tired of saying it and say it here again that it is absolutely no disparagement to education, or to speak of it more narrowly, Literacy, that it is a means to *livelihood*, honest and straightforward. The defect, if any, lies in the fact that it serves no other purpose, ordinarily. There can be no enthusiasm about

other problems unless the problems of bread and one's well-being here and hereafter are solved. And if education fails to guarantee this, it fails fundamentally. Hence it becomes imperative that *vocational* training should be freely available in the schools and that on an efficient basis. It is the recent failure of education in this respect, not to speak of the weaknesses inherent in expansion, that largely accounts for the indifference, in spite of various kinds of real and showy improvements, towards education. Herein lies a special facility for the D. E. C., that being localised in its efforts, it can study the local needs and possibilities and adjust the training it affords to the demands of such. Thus it can bring the school into actual touch with *life*; make life a continuation of the school and by a reciprocity of influence make life influence the school, specially in rural areas. This also under proper guidance helps the solution, slightly though, of the problem of *adults'* education. Then education commands faith in itself and becomes a force in life. In addition to the Three R's, a definite general knowledge relating to the home and the surroundings and the rudiments of an art or craft in keeping with the demands of the surroundings and the traditions of the pupils should be provided for. Waste of time and exertion should be avoided. Even the methods of teaching should be not only within the capacities of the teacher but also along lines of least resistance. The Night Schools, largely, rather exclusively, intended for the labouring classes, are a failure for non-compliance with the above unexpressed demands. Education can never be a great success except through channels of *interest and pleasure*. (A child-laboratory for psychological studies is a special matter

for special persons). A mere increase in the numbers of schools and scholars, though good and even desirable from the view-point of expansion, means nothing significant of improved efficiency of the people, without which faith is lost in education. Mysore seems to restrict expansion to promote efficiency. Even the Philippines seem to command a sound system of Elementary Education on the above lines. But India is not Philippines!

Thus arises the other question; how to meet the demands of those that aim at higher efficiency or culture? Here is required the provision for *continuity* in studies. These do not require a special course of vocational training beyond ordinary manual training. But kindly permit me to say it, that the numbers of such will be reduced in proportion to the increased economic efficiency of Elementary Education and then consider please what a saving there will be from educational (so called) wastage! This provision, however, can be made in two ways: (1) by organising schools to serve special purposes. By the way, schools for special subjects are not out of place even like Universities for special subjects in advanced countries; even promotions may be subject-war instead of class-war, and (2) by organising continuity in schools; one school beginning where another ends, say after a three or four years' course. This reduces both the financial pressure and unhealthy competition. Look at the confusion, caused by an indiscriminate starting of Lower Elementary, Higher Elementary, and Secondary Schools. Now the reaction has set in, naturally, in favour of Lower Secondary Schools. The distinction, under the modern circumstances, as between urban and rural is only rough and thus far has served no useful purpose. A knowledge of the local needs

and possibilities leading to a happy combination of the purposes should be within the reach of the D. E. C. A competent professional adviser had better be employed by the Council for purposes of special study and report and even guidance.

But whence the *Sineus of War*? This question has become the stereotyped answer to all the questions relating to Educational reform, even when the benefits are undoubted and substantial. What a sorry pass for Education and for public Economics! Dear Sir, as you sow, so you reap. I wonder if ever God should hurl down finances labelled for several purposes or the Alladin's Lamp can be unearthed for Education! No hope, surely none, so long as Education is the problem for financial savings and spare time. Education is the first charge on public and even private revenues and the teacher is the first element of organisation. Thank God, it is becoming less and less a question of Politics (Municipalities excepted) and of bureaucratic management, a broken spoke in the wheel of Government. Where does the money come from for other matters even in the Educational profession, blessed grant II? In spite of the theories of Decentralisation, utilised against the Provincialisation of the Headmasters' places in Secondary Schools, the Directorate is multiplying enormously and likely further in the shape of a Deputy Director for every 5 or 6 districts under the scheme of District Inspectors who in their turn will correspond to the old 'Assistant Inspectors' with one difference, the substantial difference of the much-lamented finance! Never mind feeding the other Government services, reported last year. Thus what by choice and what by compulsion, the profession is certainly self-sacrificing; and the noblest indeed! The

educationist (subordinate branches and teachers) has the honour also of being called upon to show "money"—Budgetteering—which other services had not. I am afraid he would do it if the whole business should be entrusted to him. I submit that the answer 'whence the money' is meaningless and unworthy of a true public statesman. A costly I. E. S. Inspectorate is not necessary for Elementary Education, chiefly during a time of transition and expansion and with a D. E. C.

This also brings up the problem of *Public vs. Aided school system*. The idea of the Government starting Elementary Schools was entertained at the beginning of this century but was given up; only the fad still lingers in respect of Secondary Education. Better counsels may prevail here also! Public schools are more costly, at least on the side of "contingencies." (More so when under the direct management of Government or on the net cost system). Then about *Efficiency*? Judgment perhaps varies. Broadly, however, Aided Schools are not far worse; and a few are decidedly better. Pardon me the local reference; Raja Bazaar School of Vizianagram, Mosalagantivari School of Vizag. and the school at Melupaka stand three against one public school at Revidy in Elementary Education in respect of efficiency. Then the question of *Expansion*? It may be urged that the people have not risen equal to the occasion. But even in the natural course of things, the rate of expansion cannot be chronologically uniform, particularly in the matter of education on whose behalf the expenditure exceeds the income. Again the purposes and types of schools, not to speak of returns and standards became unstable. Broadly, Government withdrew from management in favour

of Local Boards and private agencies and contributed grants. People did come forward. Schools were started afresh also. There was proportionately a good harvest of Aided and Unaided schools. And it was, numerically at any rate, the teacher in such schools that did yeoman service. The rate of progress had a set back about a decade and odd back. This was also the time that witnessed huge educational discussions;—inefficiency in schools, failures and the S. S. L. C. scheme, Unemployment, National Education movement, agitations for increased salaries and grants, Educational Boards, Model High Schools Scheme, P. S. Commission though it did not touch the borders of private schools, Girls' Education, standardisation of services in the profession, &c. A detailed investigation of the situation shows that, naturally enough, many more aided schools were not started. Even the Missionary was advised not to trust to mere proselytisation. The people had lost faith in these schools and no new types answering to the unexpressed feelings of the people were presented. Hence the lull, as I think. It could not be due to indifference. I trust the Indian is not degenerate enough to be so callous to the demands of the intellect. There had been no proper diagnosis of the causes, at any rate, on the scale required. Only, there was no numerical expansion and prestige was at stake. Hence the big rush to Local Boards, even on the net cost principle and the Government Girls' Schools. But if the Government had paternally risen in proper response to the increasing cost, and changing feelings regarding the subjects of schooling and the examinations, &c., the progress of expansion might have been kept up. The whisper still goes, "not the quantity but the quality."

The people have ceased to confound literacy with education. Pursuing this line of thought I am afraid that the problem of organising the education of the country on "Aided School" system has not had a fair trial: hence also the recent demand, compromising in its nature, for unification of the service.

Now that a better recognition is being accorded to the claims of Education, the D.E.C. may be helped to face the situation successfully and be the precursor of Reforms to follow. The aided school system may be tried fairly, specially in urban areas. Let there be a closer scrutiny by its members also and far more liberal grants. Its advantage in respect of localisation of effort should be freely availed of. Efficiency should be specially encouraged, even apart from the 50 per cent. enhancement system. Even in rural areas, wherever possible, it may be tried. It brings the parent and the school into closer touch. Dussarah, &c., had better be observed. It gives facility for special types and curricula and vocational training. "As is the teacher, so is the pupil" but here, the parent also is to be 'so.' The Teacher's level should be raised intellectually and economically. He should be free from a perpetual state of bondage by liberal grants. There should be no more of Elementary Lower Grade. Education should cease to be a sport of tossing winds.

The posts of supervisors of Elementary Schools were provincialised about 15 years back and are now abolished. Perhaps, the Local Self-Government bodies will have to reappoint such. Thus again a going back.

Again the cost under 'contingencies' is a dead weight that lightens the scale of the teacher. Certainly, light, ventilation, cleanliness and high level are absolute requisites. But the "dual-desk" costly at purchase and

costlier in keeping may be dispensed with as much for educational reasons also. It does not allow place-taking in whose educational efficacy, I, for one, strongly believe. The village accountant's desk suited to writing in a posture of sitting on the floor will do for writing purposes and if the floor is damp—to be always avoided—reversible desks fitted to benches will do. After all the Indian's dress, habits and even spiritual aspirations admit of easy sitting postures on the floor.

A correct and efficient system of Elementary Education lays the sure foundations of a nation's prosperity and "well-begun is half-done" is true with the D. E. C. as elsewhere.

May this experiment in management and administration of Elementary Education be not a failure like the S. S. L. C. scheme in Secondary Education!

D. V. JAGANNADHAN.

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THE SCHOOL—A SOCIETY AND SOCIETY CENTRE.

BY MR. JOHN M'BHAKTUL, B.A., B.T.,

H. E. H. the Nizam's Educational Service.

A distinction:—The school is not the building, is not the furniture, but is the society, which is brought together for a definite purpose, commonly for instruction. *Ipsa facto* certain influences come into operation. "Sympathy of numbers" makes the mass units move *en masse*. The social factor determines the individual development, as it environs it. The collective mind of the society is more easily under the influence of emotion than of thought and is quasi-intuitively led by a character which catches its imagination. It thus makes the intensification and extension of the teacher's or the senior pupil's influence, possible. The *esprit-de-corps* conserves the society and demands the individual reckoning with it of every influence that does not fall in quite with it. If the *esprit de corps* is healthy every good influence receives furtherance and every evil influence loses its bearings. If it is unhealthy, every evil influence finds a nursing ground and good influence no response. Emulation and "social contrast" work hand in hand, one implying the other. These influences exist whether the school is a society of bandits for instruction in organised burglary, or a school of gentlemen for organised exercises in leisure pursuits or the instilling of cultural ideas. It is not the aim of the school to develop these influences but to use them for social purposes and thus direct them to moral ends.

The social purpose of schools:—The purpose of the school is defined as education in the full sense of the word; and "the high

function of the teacher is to prepare the child for the life of a good citizen, to create or foster the aptitude for work, and for the intelligent use of leisure and to develop those features of character which are most readily influenced by school-life, such as loyalty to comrades, loyalty to institutions, unselfishness and orderly, disciplined habit of mind." Inasmuch as this social aim is also the moral one and is as wide as our contact with others, immediate or remote, it includes not only such nameable traits, as truthfulness, honesty, loyalty, unselfishness, sympathy and appreciation of what is noble, but also the *active capacity to do what is socially fitting*. In working out this aim, the school-master has to take into consideration the psychological aspect of the problem—the starting point, *viz.*, the instincts of the child, and the sociological aspect, the finishing point or the product that society wants the child to be. The child's instincts which produce their own natural reactions, have to be re-adjusted, according to the best dictates of social experience. Though these in the individual follow largely the order in which they appeared in the race, the changed environmental conditions necessitate the manipulation of the materials for reaction, so that in their progress from the self-preservative to the adaptive and adaptive to the social, the redistribution may take the shortest line and the best social values may be secured for each reaction with the least possible waste. This re-adjustment of values from the untutored natural to the tutored social, follows an ideal, which, while being egoistic in so far as it is the best form of self-reproduction aimed at transcends all forms of the self-expressed—else it ceases to be an ideal,—and is therefore, an ever-growing and never realised

able complement of adult insufficiency. Further there is a constant re-adjustment—wheel within wheel—to make the unstability of the equilibrium between the ideal and the actual as little as possible.

The double aspect of the school:—It follows from what has been said that the school has to be viewed at in two ways: (1) As an organised society, with the social ideal described above, with the social spirit in all its various forms, permeating the administration, the method and the curriculum. (2) As a social centre from where the ideal of social service is preached and practised and adult insufficiency is exposed. It should be "a city that is set on a hill" and "a candle set on a candle-stick."

(A). *The school—an organised society:*—Mere aggregation of numbers does not define a society. The individuals of a society are inter-related and their activities are directed to and regulated by the common ends in view. It gives scope to co-operation for mutual betterment and offers opportunities of service. It co-ordinates and correlates its own activities and controls them. It allows an amount of individual freedom compatible with the welfare of the whole, and withdraws more and more its control as the society becomes more and more complex and its parts autonomous.

The school as a society has the common purpose of preparing the individual for "complete living" and affords as such opportunities for service, which make learning by doing the method. Examination systems which lend point to competition have set an antagonism between the passive and the active aspects of school-life. But a consideration of the school, as a society cannot but emphasise the field open even at present for

social service in that society, to secure healthy conditions of work, to make pleasant, profitable and helpful life possible, to brighten and cheer the life of the less favoured, to help one another to self-support and independence and thus prepare oneself and others to be good citizens. Further the social life of the school may be made more and more complex as its parts become more and more autonomous.

Ways and means:—It cannot be said that this social aim is altogether neglected. Its achievement is rather attempted by indirect and inefficient means. In so far as the social coincides with the moral, it is thought of being secured in early stages of schooling, by means of stories and religious teaching and in later stages through the lessons that history inculcates, the subtle moral influence of the teacher and the general discipline of the school, which vents itself in punishments and rewards being the constant factors. Yes, the corporate games, which compensate for and emphasise the inability to do any productive work—work as opposed to play—and the debating societies, which discuss subjects, having hardly any relation to life either within or without the school, are supposed to offer this social training more than anything else done in the school. I do not question the compensatory value of these activities for the "active principle" of work is "play" and of the other forms of self-expression is speech. Further than this the organisation of the school is limited to the time-tables and in the case of rare "Model Schools" to class syllabuses which try to make a time distribution for the year's work and thus regulate it. The masters are autocrats and the headmaster is the head autocrat. Thus there is very little co-operation between the

teachers and the pupils and among the pupils themselves, in the organization that should be calculated (1) to regulate the work, (2) to control the school society, and (3) to look after the general welfare of that society. Hence the main opportunities for social service are either lightly passed over or are altogether neglected.

The proposals :—The proposal, therefore, is that each class should be regarded as an autonomic unit, and the whole school as an articulate body for these three purposes and to establish separate Regulative Committees, Municipal Committees and Administrative Committees for the Classes and Combined Committees and Councils to co-ordinate the whole social life of the school.

(1) *The Class Regulative Committee* :—The rôle of this Committee is to create co-operation in the class between the teacher and the pupils and among the pupils themselves. The Monitor of the class and the Captain of the games help the teacher in some ways, but the Class as a whole never feels like the corporate body. It is not pained at the backward boy nor does it take pains to help him. The bully is not considered a pest to the class nor is there an articulate opinion about a teacher with whom the class cannot co-operate. The need of such an organization is felt especially in the higher classes where the class teacher yields place to the subject teachers and the co-ordination in the various subjects may be jeopardised by the neglect or thoughtlessness of any one of them. Further there is at present no form of organised efforts made to counteract the evil influence fostered by rewards and punishments too often resorted to in the schools. The work of this Committee will be :—

(a) To look after such boys of the class as

fail to do their work, try to find out the cause of the failure and to help them.

(b) To stop bullies by creating public opinion in the class against such as make mischief under the nose of the teacher, especially, the junior teacher or the Vernacular Moulvi or Pandit. The school-master has often noticed that there is determination in the class not to reveal the mischievous, and therefore, from the view point of the boys, the funny element of the class. This determination must be won over by the teacher and public opinion created and utilised against such elements.

(c) It is the business of this Committee to see that the work done in each subject is commensurate with the time spent and the time at disposal. There is a tendency in certain quarters to lay the blame for the little work done during a long whole term, at the door of the pupils. The teacher is more responsible than the pupil for such delinquencies. As the teacher can have his say in the end, the pupils' representatives should be given opportunities to say their own say about the irregularities in the work during the term to their subject teacher and finally to the Headmaster. This is specially necessary where the responsibility for the progress of the class as a whole is divided among a number of teachers and where a single subject has had to be handled by a number of teachers for unavoidable reasons.

(d) It has to see that the extra-zealous teacher of some subject does not overburden the pupils with his subject-work at home and thus deny them the time necessary to attend to other subjects as well.

(e) It also looks after the attendance of the boys at games and sees that every one makes a liberal use of the class library.

(2) *The Class Municipal Committee* :—Certain hygienic conditions are not within the control of the school-society. But the shabby arrangements made for the supply of fresh water, to keep the class-rooms, the verandah, and the compound clean, to see that the refreshment rooms are tidy, &c., are too notorious to need detailed statement. The business of this Committee will be to look after the general welfare of the class, viz. (1) that the hygienic conditions of the class-room are as good as possible; (2) that pure water is supplied for drinking and that the vessels used for this purpose are constantly kept clean; (3) that the boys of the class do not buy and eat dirty sweets, &c., generally sold at the gates of the school; (4) that the refreshment rooms are kept clean and tidy; (5) that the class latrine is daily attended to by the sweeper; (6) that the class boys all appear in clean clothing; (7) that the poor deserving boys of the class have their claim acquitted duly on the poor fund of the school. It is not uncommon to see well-to-do boys coming to the school in dirty clothing. For what environs us,—the home or dirt—in our childhood we reconcile ourselves to and love.

(3) *Administrative Committee* :—As at present the co-operation of the boys in matters disciplinary is not invited, there are constant complaints brought before the class-teachers or the Headmaster to settle which these have to act the part of detective officers and the boys act the part of self-protective co-operators. Hence much time is wasted and if time is grudged, moral issues are confused. This happens more often where the only way of dealing with the offenders is punishment and the only one who can legally punish is the Headmaster. For the prevention of

offence more than the detection and handling of it, an organization of the kind is an absolute necessity. It branches off into two :—The Police and the Judicial. The rôle of this Committee will be to prevent, detect, and punish misbehaviour, like stealing, use of bad language, writing on the school-walls, malpractices, both private and in the examination hall. The importance of this Committee spells disaster, should the selection of the members of this service be inexpedient or the vigilance over the Committee be lax.

(4) *Central Committees* :—Similarly, there will be the Central Regulative Committee; the Central Municipal Committee and the Central Administrative Committee, consisting of the elected representatives returned from and by the Class Committees.

The business of the Central Regulative Committee will be (1) to see that the work especially in the Play-ground of the whole school is co-ordinated; (2) to prepare budget estimates for the games, the money sanctioned by the Government for this purpose being considered only a grant; (3) to make suggestions for the boys' library; (4) to bring after careful consideration to the notice of the Headmaster, the case of such boys as have not received promotion, though deserving of it.

The work of the Central Municipal Committee will be similar to that detailed above for the Class Municipal Council, with the field extended and it includes the preparation of the annual budget of the poor fund and the management of the fund, i.e., raising money and expending the same.

The Central Administrative Committee will consider the inter-class delinquencies and such offences as could not be traced to their origin by the Class-Committee. It will also look after

the behaviour of the boys of the whole school outside the school premises and concert measures for reformation.

(5) *The General School Council*:—All the three Central Committees will form the General School Council, which has the power to legislate within the bounds laid down by the Headmaster for the proper working of the School Society, and pass after due consideration the budgets prepared by the Central Committees. The proceedings of the Council after receiving the confirmation of the Headmaster become binding on all concerned.

The working of the scheme:—To carry out this form of social life the writer's own way is to remove in each class—class conditions, one period a week and turn it into a debating society, as it were, with an elected President from among the pupils of the class. According to previously settled regulations, the various Committees transact their business in the presence of the rest of the boys, as often as necessary but at least once a month. When the Class Committees have no business of this kind, general subjects are discussed by the whole class, according to a previously arranged scheme. Similarly once a month the general School Council meets in the presence of the rest of the boys of the school and its proceedings, with the seal of the sanction of the Headmaster, are filed in a book form along with the written essays, produced by the General Debating Society on the Magazine day, to become the monthly magazine of the school. The proposals are not utopian, but have been partly tried by the writer and can be progressively realised by any good-organiser.

(B). *The school, a social centre*:—The school is not only a society in itself, it is also the centre of a larger society focussing its

forces. It is a reflector and should articulate with the bigger society in such a way that the latter draws its inspiration from it. The fundamental aspect is that the activities of the school children should be calculated not only to be of developmental value, but also of equipmental value. Hence they should form an introduction to the larger activities of a larger society. The School Society incorporates itself into the larger either by projecting itself into it, or by making itself an integral part of it. This sets up an identity and that an antithesis. It is generally in the latter way that attempts are made to render the school a social centre. The means adopted may be classified as:—

(1) Through making the school the community centre:—The school is built in a central place and certain parts of it are made accessible to the interested public. The library may also be the seat of the public reading room: the play-grounds open to all. Lectures may be arranged specially with a view to invite the public or the Debating and Literary Society meetings may be opened to them. Circulating libraries may be located and managed by the schools and the guardians of the pupils and public officials invited to Annual School-Gatherings, Prize-distributions and Competitive games. Old Boys' Association may specially try to be in touch with the ex-pupils of the school, who have entered life.

(2) Through special forms of social service. The service may take various forms. It may be running a night school, acting a bigger brother to a smaller school-fellow, writing letters of illiterates, organising games for smaller children, &c. These services are not rendered primarily with a view to make boys learn by doing and as a preparation to complete living.

(3) Through the assuming of social leadership. The educated are the natural leaders of the people. The school-master is in some places, if not the only educated person, the best educated person and he therefore can naturally take his place as the leader of the community. Further the teacher has a certain amount of leisure time at his command, which others may not have. Hence he can spend some of this time in social service, which leadership entails. Thus he can be the originator and worker of a co-operative society, a society for the protection of animals or to look after sanitation, &c.

The last means mentioned above is the nearest approach to the school identifying itself with the larger society. For here the forms of service synchronise to some extent with the activities of the community. Otherwise there is a marked antithesis between the activities of the school and the activities of the society outside. A child so prepared in the school cannot enter life, but with a sharp readjustment. It may be noticed in passing that this form of service is liable to the criticism that it is rather open to the school-master than to the school-pupils.

The Boys' Scout Movement:—Of late there is some systematic attempt made to minimise this antithesis. The Boys' Scout and the Girls' Guide movements seek to give more civic aspect to the school ideal and to bring various forms of Social Service within the pale of school life. The Scout movement as started by Lt.-Col. Sir R. Baden-Powell had the aim "to help boys of whatever class to become all round men." The boys are taught various rudimentary occupations to be of service to themselves and others. They are taught to swim, to row, to shoot, to use tools and bandages, to sew, to cook, to cycle, to ride, to wrestle, &c., all with practical purposes in view. Inasmuch as these are accomplishments needed by pioneer colonists, like

the Pilgrim Fathers, the ideal either points "back to nature" or to greater out-door work in school life. In so far as the conditions imposed for the activities are hypothetical or of rare occurrence in life and as the organisation insists on a discipline more of military nature, it contains an unreal substratum. As the aim is more to create a civic habit of no bread-earning value than to arouse a civic idea that can bloom into progressive adaptive thought, the movement is profitably limited to the pre-adolescent stage and if extended beyond that, is likely to confuse the display of special civic aptitudes of economic value. In this misuse of it, it tends to produce professional Scoutmen of the Y. M. C. A.-Secretary type. It is an attempt to supplement the unpractical literary education which gives no civic habit, with something more practical. As the aim is to make boys "all round men" it refuses to abide by the latest dictates of psychology or the latest demands of society for specialised men. To that extent therefore the antithesis between the school and society still remains.

Socialising the Curriculum:—All these are make-shifts. They recognise one thing:—the necessity to socialise the curriculum and exhibit another thing:—the tenacity of human nature to hold on to what is old or honoured by practice. Anything but the absolute right is quite welcome. The right thing cuts the custom. The tendency to prepare their young ones for life is not limited to human beings. This is how a cat teaches the kittens to live. She half kills a mouse and sets the kitten to play-catching the mice. It places the kitten in actual conditions of life with slight modifications (1) to make failure impossible, for she half kills the game, (2) to make starvation impossible, for the kitten is still under her protection, (3) to make traiping sure. Do the schools do any of these things? I expect the

cat teaches all her kitten morality in the same practical way. The cat in her generation is a better teacher of her brood, than man in his generation of his progeny.

Vocational training:—If therefore man is to be trained to live, no make shifts will do. Direct socialisation of the Curriculum is an absolute necessity. Introduction of Vocational training into schools is imperative. The failure, the blasting of hopes, the sinking of spirits, the misery of disappointment that attend the sharp readjustment between the sheltered school life and the exposed adult life plead in unmistakable accents for a change in this direction. Constructive activities are not without their supreme moral value, as they go in association with others, define the operative's limitations, and reveal social ties. Further the need of Vocational training in the more specialised societies is that the mechanising influence of specialisation has to be counteracted by the school-training and in the less specialised societies is that the very process of specialisation has to be fostered—to increase the chances of success in competition.

The school society as constituted above gives scope to certain forms of Vocational training. Office work as entailed in the maintenance of the organisation chalked out above, when supplemented with the use of civilised implements as the typewriter, &c. methods as shorthand, will give almost thorough preparation for the posts of writers, accountants and reporters. The adoption of "Cottage system" in the Boarding institutions is a thorough introduction into practical domestic economy. But a full stop cannot be put here. The other vocational activities of the society have to be introduced. As this cannot be done at once, and eventually has to be done the school can ally itself with the industrial centres of the locality and send its boys, some hours a week to see, to do, and to

learn the processes by which things are manufactured. There is no school in India, which cannot in this way ally itself with the farmer or the weaver. Some places can have the use of steam driven mills, &c. The long holidays, the lag end of the school year after the annual examinations can even now be profitably used in excursions to the industrial centres. But this is again a make-shift, only anticipatory of better days.

One objection:—But boys do not take to these activities and parents object. Yes. Boys do not take to anything which does not help them directly in their examinations. What else can they do when so much premium is put on examinations? They do not take to games. They do not attend the school societies, nor mind very much to go on excursions. Why? These do not pay. They do not help them to pass examinations. Is it the aim of the school to make boys pass examinations? If so, good-bye to everything good in school life. Cram—cram—cram, for that is the best psychological way to pass examinations. Parents object. Parents are "gentlemen," clerks, lawyers, and teachers. They want their children to be the same. Quite natural. But schools have broader outlook; in that they must reveal adult insufficiency they are cities "set on hill-tops."

CLOUD MESSENGER.

A Critical Appreciation of Kalidasa's *Meghasandesa*.

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STUDENTS OF THE INDIAN UNIVERSITIES.

IT is very common among the students of the Madras University to boast that the standard set by their University is very high and that the graduates of the University are trained to a very high degree of excellence. But it is not uncommon to see the so-called 'brilliant students' fail miserably when they are set to perform a piece of original work. The more high they stand in the University Registers the more incompetent they appear to be, to grapple successfully the problems of life. One is at a loss to think why this is the case. Does the brilliant student become a mediocrity as soon as he leaves the portals of the University? Why is he not as successful in life as he was at his examinations? Or is the brilliance of the student only of that sort which only makes him pass examinations but which cannot help him to grapple successfully the problems of life?

Again, it is a common saying that the Indian student bids "Good-bye" to his study as soon as his University course is over, while the English or American student begins his real study only after he leaves the University. Why is the Indian student so very different from his brother student in England or America? It is false to say that the Indian student is not painstaking.

The difference in the results produced is due entirely to the wrong methods adopted by our Universities. Our Universities do not train us in methods of observation and inference. They do not develop our thinking powers. One who has completed one's University course has really passed through a number of ordeals in each of which one's power of keeping in memory undigested facts, is tested to the utmost. He who is able to cram the greatest number of facts within the allotted time, ranks first in the Registers of the University. Therefore let us not be carried away by the fond notion that our University graduates are really capable persons. There is only one thing which they can do successfully, i. e., clerical work under the Government.

T. K. SREENRANGA CHARIAR.

THE ART OF QUOTATION OR MEMORY-WORK IN LANGUAGE-TEACHING.

IN these days of mental economy, when the maximum amount of knowledge should be gained by minimum effort on the part of the learner, the art of memory has indeed fallen on evil days, and has altogether become a lost art. The reaction that has at present set in against the old methods of teaching in schools has so degraded this art and so diminished the importance of memory-work that the very word itself has come to signify something imperfect, second-hand and therefore contemptible in the attainments of learners. This reaction, while it rightly urges the exercise of the pupils' self-activity, their powers of originality and invention, while it really aims at making them self-reliant, is also in a way responsible for the neglect of getting by heart what is good and beautiful in literature. In this general tide of reform which has completely washed away traces of pure memory-work in History and Geography, the art of memory could not hold its own even in the teaching of language and literature, where at least this so much cried down process has its legitimate place.

The results of such neglect and disregard are sad enough. Both in the case of their mother-tongue and English, most pupils when they leave school are so poorly furnished in this respect, that it is no exaggeration to say that they cannot correctly say by heart even twenty lines of good prose or verse. And in comparison, pupils trained in the old school seem far better equipped. Old Matriculates can be met with who can correctly quote from their memory on the spot,

not less than a hundred lines in poetry and about half as much in prose.

The importance of apt quotations, either in speech or writing is too widely acknowledged by men of all times that it need not be separately dwelt upon here; one thing however should be borne in mind. A pupil who gets by heart pieces of prose and poetry should never use them frequently either in his compositions or answers, or in his speech, at least during the early part of his school life. Such an apt and happy use of quotations in writing and speech is the special gift of a few authors and speakers in conversation like Charles Lamb and Hazlitt or Coleridge and DeQuincey. All that the pupil can do is to furnish himself with a store-house of memories which he can use, appreciate and enjoy at a later stage.

The advantages of such memory-work more than compensate the labour it involves. This ability to recite and remember, quote and illustrate from the choicest authors gives the pupil a sort of self-reliance in the use of language in having something to fall back upon, something to delight in, something which lies ready at his command. In addition to this a passage well remembered unconsciously influences the composition and style of the individual by furnishing him with models ever ready for his use. Thus the more of good literature the pupil gets by heart in the early part of his school life the better for him in later stages both in the command and the use of the language, and the formation of his tastes.

The prescribing of passages in poetry in the Selections in English used by the S.S.L.C. candidates, the questions in the examination implying direct quotation are hopeful signs that the importance of memory-work in its legitimate place is duly coming to be

recognised. The publication of such books as "Prose Passages for Repetition, chosen and arranged by Fowler" (Macmillan & Co.), and "English Prose Extracts for Repetition," by Blackney, (Blackie & Son), shows that prose too may be easily got by heart when it is rhythmical and attractive. Such prose-pieces are more useful to candidates who are required to write good prose, than passages from poetry.

It is a fact that we read more of prose and less of poetry, and yet we remember less of prose and more of poetry. And it is also a fact that the rhyme, rhythm and compactness of poetry makes it more easy to remember than prose. In spite of these facts the value of prose is immense to a student of language, and time spent in getting prose by heart is not wasted.

In the college classes when the best authors such as Shakespeare are studied, the work of getting by heart is more necessary and more valuable than in the lower classes, though in reaching the University classes the pupils pass that stage when their brains are plastic enough to retain impressions permanently. Yet there is an advantage here, for the pupil is old enough to form associations which aid his powers of recall. No doubt, in the University examinations, much value is attached to illustrations, and direct quotations from the text in answering critical questions on Shakespeare. And more direct quotations on genuine memory-work, are not out of place in papers, which though aiming at pupils' originality in answering them, are seeming to encourage the candidates' reading of second-hand summaries and second-rate annotations.

Thus to give memory-work its due place in the study of literature, to encourage the getting by heart of literary passages of merit, both in prose and poetry, both in the school and college classes, to make the pupils better equipped and more self-reliant when they leave school, to furnish them with ready matter for appreciation and for the formation of their tastes, should be the work of all language-teachers. And in language-teaching memory should regain its lost ground.

M. KOTILINGAM.

HISTORY AND CIVICS TO CHILDREN.

INTRODUCTION.

"THE history of the world is but the biography of its great men." Thus runs the maxim that forms as it were the keynote to the teaching of History to young children. There are other points set down in method books, which teachers of young children have to remember during the course of history teaching. They may be put thus in brief: (a) All lessons in History in the earlier classes should be treated in the form of stories connected with the heroes of the past and present. (b) Also stories may be told about famous temples, buildings and palaces built by the ancient Rajahs. In the course of telling these stories we have to touch upon questions like 1. Who constructed them? 2. What in their life made them take a foremost rank in the history of those times? or still, what kind acts have these rulers performed in those days that make us remember them now? (c) Short lessons on old coins may be given to children dealing with the life of kings in whose times the coins were current.

Starting with these outlines as the basis, we are to frame our syllabus and in so doing, are confronted by the following problems:—What kind of stories shall we include in a scheme of lessons under the heading History? Shall the stories of heroes, heroines, kings and rulers be restricted to those that find a place in the pages of a text-book of Indian History? Or shall they also include the other famous ones that find their places in the foremost ranks of the Empire and nay of the whole world? Let us examine each in its broader features.

STORY, HISTORY AND MORAL INSTRUCTION.

In the time-table we have set apart periods for story-telling, history teaching as well as

moral instruction. All lessons under these different heads do form a series of story lessons and hence our suitable choice of lessons under these three different heads depends upon the object of teaching them. What then is the object of story-telling? Perhaps it is a means of enriching the child's expression in language by creating opportunities for the child's hearing and talking. A second consideration would be to provide for the child some interesting deviation from the monotony of the other lessons that require his keenness of observation and memory. Thirdly such stories also kindle the imagination of the child, strengthen his memory and aid him in the correct reproduction of anything heard by or told to him. Last but not least, they also aim at teaching the child some morals which he alone could draw without the initiative of the teacher.

The aim of teaching historical stories is practically the same as in story-telling; but all the stories under this head are of a true nature as all lessons centre round a man or a thing either of the past or the present. So, herein there are greater facilities for achieving our objects as enumerated above. The ideal in history teaching, however, will be to make the child distinguish the right from wrong, the just from the unjust, the good from the bad in human society; and also create in him a taste for a historical sense, namely, of connecting the cause with the effect, though this latter is entirely reserved to a higher stage. In a way, these lessons also teach him some morals. Thus it is indicated in the words of an eminent author,—'History is morality teaching by example.' By a description of the life of eminent heroes and their heroic deeds we aim at creating in the child an admiration for those lives and by a choice of true appropriate lessons, we strive to make him god-fearing, pious, unselfish, law-abiding and patriotic.

Our aim in the introduction of moral stories is similarly to foster in our children some general principles of good behaviour and conduct that are to be carefully observed by them in the family, the school, the society and the world at large, they move in. Our object here is to be achieved only by means of story-telling suitable for the occasion.

Thus all these lessons first lead us to infer that though they are different in form, yet show an interdependence to each other in so far they apply to the education of the young. Secondly each in its turn tries to convey to the children some moral precepts though it is not the business of the teacher to draw out his own conclusions or morals and force them on the minds of the youngsters in his charge.

STORY-TELLING METHOD.

Thus after making ourselves clear on the objects of teaching the above three different lessons, we could see that the general method to be adopted in the instruction is the method of 'story-telling.' Hence the Kindergartner should possess sufficient knowledge in the art of story-telling. There are what are known as 'steps' in story-telling. It is only quite a beginner that can confine his teaching to these steps and proceed step after step. If this method of developing the story step by step for a continued length of time is followed, the teaching would rather look mechanical and artificial than natural. The educator must himself enter into the spirit of the story and take the children along with him throughout the story. The story should be told as a continued whole, the teacher however stopping at places where the children have to grasp a difficult idea in the story. It is only then the children could enjoy and appreciate the story. But again, he in his enthusiasm should not forget that he is telling the story to children that are too far below him to comprehend what he is driving at, and hence he

has to adapt himself and the story to the level of the children. If we, for a minute, recollect to our own minds the days when we had some interesting story-hours from our mothers, grand-fathers, or grand-mothers, perhaps in a moon-light night, the several parts of the story whose interest enthralled us come back to our memory step after step. This is not due to any method or particular steps adopted by them. But their very manner of talking to us in a childish language, of acting the story before us, vividly describing the several scenes in the story in a most natural, interesting and appealing a manner, and of lastly bringing themselves down to our own level—all these have left strong imprints on our minds. Such a method would be the most efficient way of story-telling. The above observations may guide us in the art of story-telling. Apart from this, the method still more depends upon the teachers concerned and experience alone can teach us the several points to be learnt and adapted after a series of story-lessons to children of various grades.

SELECTION OF TOPICS FROM THE HISTORY OF INDIA.

Let us now deal with the choice of suitable lessons for children in connection with the subject, *i.e.* history teaching by means of story-telling. To begin with, we have in our own midst that vast store of learning and thought as embodied in our famous epics, the Ramayana and the Mahabharata. They contain stories for story-hours, stories for moral and religious training and stories for history lessons. We have therein, stories of rulers, princes, kings, heroes and heroines whose lives have stood the test in the past. From these and other story books amidst us we can surely make out a fairly good list of stories suitable for children. For example, we could tell children stories concerning the following: Arjuna the Archer, Krishna the Divine, Hanu-

man the Swift, Ekalaiya the revered student, Harischandra the just king, Bharatha the dutiful brother, and perhaps Beeshma the devoted son or otherwise called Beeshma 'the terrible,' so on and so on. We may thus count upon so many 'golden deeds' in our own past history inasmuch as the qualities of self-sacrifice, devotion to duty and righteousness shine in the lives of those personages.

Coming down still further the history of ancient India we can deal with the life of Buddha, his doctrines and anecdotes connected with his life. We also see that the same doctrine, 'Do not be cruel to animals' as once preached by him was again inscribed in rocks and pillars by Asoka 'the pious king.' In their lives shine forth acts of generosity, piety and kindness which children will recognise. But never should we dwell in the course of teaching, in explaining to children these fundamentals and preach them sermons. These abstract ideas would be brought home to them only when they think about these lessons at a later period and it rests with the teacher's ability or more precisely with his art of story-telling, to inculcate in them a strong desire to review the lessons during their evening leisure hours.

HEROINES.

In the lives of the famous heroines of our country, taking for instance Chand Bibi and Panna, the children could see the very many great qualities that are really to be admired in our sisters of the past. The courage of the former as exhibited to us by the manner in which she saved her city and the citizens thereof, the way in which the latter testified to her loyalty—all draw the children's attention and rouse their enthusiasm. The stories of these and similar heroines are not only necessary in a curriculum for the education of girls, but can also find a place in the education of boys as well. Some of the

Rajput stories may be told to our children under this heading.

We have then stories of Sivaji, the uncrowned king of the Maharashtra, and Ranjit Singh, the Lion of Lahore, whose lives full of adventures, conquests and of efficient administration are sure to be applauded by children. The former's early life, how he collected a band of Mahrattas around him, how he built up a fortress on the hill top and his series of adventures—the latter's childhood and how he lost his eyesight, his illiteracy and how he governed his kingdom in spite of that defect, how he collected a big army and trained them under various European experts and still more how he signed the paper—and all stirring incidents connected with the life of these two, must appeal to children's imagination.

Stories of a similar character may be picked up from the Mogul and the British periods.

SOME ANECDOTES CONNECTED WITH HISTORICAL PERSONAGES.

Apart from our telling stories regarding the administration and exploits of a ruler, short and interesting anecdotes connected with his person would be found quite interesting to children as, in these anecdotes, they can see how the real man shows himself in his true colours.

1. Buddha carrying a lamb.
2. Alexander and Porus.
3. Alexander and the robber.
4. Sultan Mahomed and the owl.
5. Baber—the story connected with his death.
6. Ranjit Singh—how he took possession of the Kohinoor.

In addition to the fact that these incidents add substantial information to the story-teller, these short and striking occurrences afford

us scope for the teaching of morality by practical examples.

OTHER TOPICS OF INTEREST FROM INDIAN HISTORY.

1. *Buildings.*—Children could be shown pictures of famous buildings both near at home and at a far distant place within their own country. As for instance, short lessons can be given on the present ruins of the palace belonging to the old Rajahs of Tanjore, the Thirumalnayakan Mahal in Madura and the Taj Mahal of Agra. We can also tell children short stories on the Mahabalipuram ruins and show them the pictures representing scenes of archæological interest. The rock fort at Trichy, the church dedicated to St. Thomas in St. Thomas Mount (Chingleput District) may also form appropriate lessons under this heading.

2. *Conversational lessons on historical pictures.* If we could get at pictures depicting royal processions, coronations, soldiers' marches, of battles or of wars, we could easily carry on an informal talk with the children. There may be questions between the teacher and the taught which will look like a short discussion in a family group.

3. *Children's collections of coins, stamps, and pictures of historical interest.*—All these stimulate the children's spirit of inquisitiveness to some extent and put them on their alert to get hold of some information about them and to think about them in many ways. It may be the order of arrangement, the nature of the description they have to write about, a picture or the knowing of a particular king or queen or any picture either in stamps or coins that would stimulate their curiosity to know. They may be encouraged to collect and preserve any old coin they come across or rather any coin that they may unconsciously get in exchange though not current in their locality. Mention may

be made of திராசுக்காசு, தென்னேமரக்காசு, etc. They could see that the oldest copper coin current now is the quarter anna coin dated 1835, that there are only two kinds of half-anna coins and on these some simple lessons could be given on the rulers of those times. 'From the Company to the Crown'—A lesson that would comprise shorter lessons as, the formation of the East India Company, the reign of Queen Victoria, etc., may be made impressive when such coins are shown to them. This is only a means to an end.

PHILATELY OR COLLECTION OF STAMPS.

Collection of stamps, old and current, is also a point of interest to children. They could begin from the up-to-date ones to past ones and arrange them both according to their countries, times and values as follows:—

INDIA.

George V	½ anna	½ anna	one anna
Edward VII	"	"	"
Queen Victoria	"	"	"
East India Co.	"	"	"

It is not our intention that all the children should be turned into philatelists all at once. But we only make a beginning of it in the lower classes and thus help them in another way to develop their instinct of collection and those that are really enthusiastic about it, may set their hearts upon it in earnest and realise any value or pleasure they may derive from such an undertaking. Though this collection is more connected with Geography teaching, yet in the case of children, we could surely ask them to undertake this work inasmuch as our aim is to quicken in them the instinct of collection. By way of side remark we could tell them that our King George V is a devoted student of philately and that he, on his visit to Australia in his capacity as the Prince of Wales, was presented with a good collection of all

Australian stamps by the Federal Australian Government, as a souvenir.*

Regarding the collection of pictures of persons and other things of historical importance, it must be urged that in collection, formation of picture-books and in writing down short descriptions, neatness of execution is very much to be cared for, more because these interesting hobbies are to be taken up by the pupils of the higher classes.

SELECTION OF TOPICS FROM ENGLISH HISTORY.

The opinion here seems to be divided. Some view this under the aspect that, in educating our children, we should only present things that are indigenous to them, that the instruction should first proceed from what is familiar to them and near at hand and gradually from things or occurrences that have taken or are taking place in their own country. They again say that there are sufficient lessons that can be given to our children, from the history of our own country, ancient and modern; and hence they object to including stories from English History. While on the other side there are also a few others who contend against the argument by saying "Shall we not give them a broad outlook of men and things in other lands as well? Will not these stories in addition to the tales from Indian History be recollected with a sense of delight in their after-life, at least by those children who are by circumstances compelled to leave their education after the Elementary School course? Do they not feel proud in having known something of the men and things in lands far distant from their home and country? Do we not give our children lessons in Geography, dealing with the other important countries besides local geography?"

* From the Central Hindu College Magazine—May 1900.

Hence we, as practical teachers, have to strike a medium course. The basis for history teaching should only be topics from Indian History and as children progress year by year we may proceed to things that had taken place long ago and far off from our native land. If such a compromise is agreed upon, we can chalk out lessons on the lives of some noteworthy characters irrespective of either the time and place of their birth or their field of activity. Under this list we include stories of men and women that had taken their place in the foremost rank of the greatest men of the Empire and may be of the world, and lives of people who have fought great battles, and won great victories. These stories reveal to children the heroic spirit of those distinguished men and women in serving their country's cause and show to them how really they deserve to be good examples to themselves. We shall now take some concrete instances.

SOME LESSONS FROM THE GREAT EUROPEAN WAR 1914: TO 1918.

Without deviating from the first principle, namely, of proceeding from the present to the past, we shall take the great European war as our starting point and examine into some of the lessons that can be suitably taught to the children of the lower classes.

During the first year, children have been taught the story relating to the battle that took place between the Pandavas and the Kauravas on the battlefields of Kurukshetra and have been told about the bravery of the archers, the charioteers and that of the men on elephants and horses and thus they were led to have some knowledge of the ancient implements of warfare. In the succeeding year they would have heard the story of Alexander and Porus and the battle that took place on the banks of the Jhelum. We can then in the next succeeding year, intro-

duce to children some of the recent inventions in modern warfare by means of good pictures, thus presenting to them a comparative knowledge of the past and present mode of warfare and their corresponding advantages or disadvantages as the case may be. Again, by means of pictures and models, they can be brought to see the several improvements in travelling by land and sea, starting from the bullock cart or the catamaran in each case and ending with the motor-car and the mail steamers of to-day. Pictures or photographs of aeroplanes flying over sea or land would make children realise how the conquest of air has been successfully achieved now-a-days by their invention, and they could also be told of the immense service they did in the recent war. Already they had studied in the lower classes or at least heard about the *ஆதாய விமானம்* wherein Rama, Sita, etc., returned to Ayodhya from Ceylon after the *Ravanashamharam* and if they should remember this story, they could easily believe or imagine the existence of some kind of an aeroplane even in times as far back as the Ramayana.

Then at a later stage of the Elementary School course, the above lesson may be developed so as to give them some more information concerning the subject, probably under the headings, the immediate causes that led to the war, the nations involved in the fighting, the important countries or continents where the battles were fought, the story of the cruiser *Emden*, and the main causes which drove Britain to engage herself in the war, etc., together with some stirring incidents in the war. These lessons though not professing to contain the elements of storytelling and moral-training, provide the children up-to-date knowledge in the history of the countries and nations of the modern world.

HEROES OF BRITISH HISTORY.

As for real stories to children we shall go back from this war and read through the lives of daring heroes and eminent men. For example, we shall take the stories connected with the lives of Lord Kitchener, Lord Nelson and Sir Philip Sydney. We have in the life of the first his dictum 'Be Prepared' which is also the motto in scouting for boys. A short account of his life and career will enlighten our boys on the noble qualities of a statesman and a soldier. Secondly, we have in the life and career of the most illustrious English Seaman, that ready response to one's duty, which is truly brought forth in his famous signal 'England expects every man to do his duty.' Short stories indicating the courage of his childhood, his thirst for adventures, especially on sea, and of the battles he fought, would surely induce our children to admire this hero. His story will lead to the story of the heroic youth Casabianca. The story of Sir Philip Sydney and the dying soldier would reveal to children the generosity and kind-heartedness of a soldier to his brethren. Stories of a similar type may be picked out from books containing stories from English History. More stories that enlighten children other human virtues, whether of kings, soldiers, commanders, or of village peasants may well be added to the list.

Heroines:—Corresponding to the heroines and queens of our country, we could tell children some interesting accounts about Queen Boadecia or Joan of Arc, etc. The former shows the children the bravery and the martial spirit of a queen while in the latter comes out the patriotic spirit of an ordinary woman. Even though the latter does not really belong to England, yet the part played by her in France during the war in her time, remains in the heart of every Britisher even to the present day. In the life

of Florence Nightingale, the deep sympathy she exhibited towards both the animal world, and mankind, children will learn another important virtue. Another instance from the many occurrences of the recent war may be herein cited in order to show the work of women in the Great War and of especially those engaged in Red-Cross work. There is the story of Edith Cavell, an English nurse, who was shot down by a German officer for helping her countrymen from being caught into the enemies' traps.

Thus far, we have laid out in brief the course that we may take to in drawing up a complete scheme of stories for history-teaching. [See Course of Lessons as appended at the end with suitable reference books.] In passing, we have to consider the following points that are to guide us in the shaping of our lessons on the lives of historical personages. The first point is this:—Because our aim in giving an account of these lives is to make children imbibe some of the noble ideals of these great men and women, we have only to present to the children the bright side in the life of these men and any other point dealing with the dark side that arouses criticism and dispute, should be left to the advanced age when children would have an opportunity of studying history in a fuller and critical manner. There are some who maintain that we should also give children a fair amount of opportunity to compare and judge for themselves the bright side with the dark and they can thus learn what is good and must be followed, and what is bad and hence should be avoided. For example, in the Ramayana, there occurs now and then some disputable points, just the one like the slaying of Vali, which are however justified in many ways. In many cases, it is far better that such disputed points are left to be discussed at a later stage.

There are also other points that ought to guide us in our effort to successful teaching in the class-room:—

1. The concentric system of teaching and the chronological order of teaching or otherwise, both as applied to children.
2. How class-lessons may be made impressive to children.
3. The introduction of dates—their necessity or otherwise.
4. The value of a text-book, etc.

As for the first it may be remarked that we tell a short story in Class I and take the same story in the next higher class in a little more elaborate form. The same stories are again studied in the higher forms with still more details and hence we may surely adopt the concentric system of teaching in the lower classes. Thereby it facilitates us to go through the same stories, if they occur in our scheme of work, with more information added to them.

Nextly, for our children, to begin with the ancient times of the Ramayana and Mahabharata is not at all a difficulty since they are quite at home in the stories of those times from their early childhood. Our duty as teachers would be to elicit what all they have known and heard at home about Rama, Sita, Krishna, etc., and proceed, thus imparting to them a systematic knowledge about those people. Moreover we do not give our children actual dates but only present everything in story form. As for dates, we shall talk about in detail later on. Regarding stories from British History we took the Great War as the starting point, that being an event of recent date and there being a probability of the children having heard about it at home.

(To be continued.)

S. JAGANNADHAN.

"AN APPEAL TO THE LEARNED PUBLIC."

The STATUS of F. A.'s and Intermediates in Public Service.

NOW that Intermediate Education is to be separated from the University and to come under Secondary Education, it is just and equitable that the old F. A.'s and the Intermediates should be distinguished and their educational attainments are recognised as such from the would-be Intermediates.

Owing to the poverty, age, and other considerations, many a young man, in the bloom of their lives, have to bid farewell to their studies and to enter life in earnest, by force of circumstances. But what is their status in life now? The legal profession has been shut to them by abolishing the Second-grade Pleaders examination in 1911. No distinction is made for them either in the clerical establishments of Government service or in the teaching profession. Graduates are generally started as Revenue Inspectors in the Revenue Department or as clerks in the Secretariat with the prospects of becoming a Sub-Magistrate or a Tahsildar. As a teacher, the graduate will be started on Rs. 50 per mensem at the outset and will be started on Rs. 100 per mensem as an L. T., from which he may hope to get Rs. 250, if not more. An under-graduate, in spite of his costly study for two years in a college, fares no better than a Matriculate or an S.S.L.C., at the present day. There is neither encouragement nor hope for him and for all his life, he becomes a discontented, miserable and gloomy-looking person. Whenever he looks for encouragement and sympathy, he meets with failure and disappointment and hence he becomes dejected and dishonoured. Formerly F. A.'s were allowed to teach even High School classes,

as it had been in case of the late Mr. S. Sreenivasa Ayyar of Pachaiyappa's High School, Conjeevaram, the author of Problems in Arithmetic and Rudiments in Algebra. Under the old regime Sir Subrahmania Ayyar, and the late High Court Judge Muthuswami Ayyar can rise to the Bench even as F. A.'s after studying the law and practising as Lawyers for some time. Even in Medicine and Engineering the F. A.'s were distinguished from the Matriculates as they were allowed to join the Overseers' Class and the M.B. & C.M. and L.M.&S. classes but these avenues of life are restricted to the rich few, not being within the grasp of all. In clerical ranks, no restriction is made between him and his brother Matriculates or S.S.L.C.-holders; and he cannot even hope to rise to the higher branches of clerical establishments. In the teaching profession, though there was a second-grade collegiate training class for F. A.'s, it was suddenly abolished some time ago and F. A.'s and Intermediates are now trained together as secondary-grade men and as such their educational attainments do not receive adequate recognition either from Government or from the public. In the lower ranks of the Inspectorate, though the Inspection Code states that the late F.A. examination or the Intermediate examination shall be the minimum educational qualifications for the post of the Sub-Asst. Inspector of Schools, this rule is more often observed in breach than custom, owing to the influx of graduates who are L. T.'s. Instances are not wanting to show that F. A.'s discharged their duties efficiently even as Assistant Inspector of Schools. Whereas Mr. G. Sesha Ayyangar, the Headmaster of the National High School, Trichinopoly, could successfully hold the position of a Headmaster of a High School in spite of his being

an F.A., now even an experienced F.A. or an Intermediate cannot even hope to become the Headmaster of a Middle School. These are some of the disabilities which the F. A.'s and Intermediates are labouring under, and the sooner these are removed, the better it will be not only in the interests of the sufferers who belong to the middle class of people but also in the interest of progress and spread of higher education. While highly appreciating the services of L.T. Headmasters who are in charge of Middle Schools, I, for one, cannot at all understand how far they shall be able to give tone and efficiency to these institutions inasmuch as they use it only as a stepping-stone to other walks of life or till a better opportunity occurs. Even if we presume that they stick to the profession, they are as a class a sort of happy go-lucky persons enjoying a fat leisure each day, domineering over their assistants with an air of superiority and killing their time with unnecessary or superfluous correspondence work. The so-called supervision work cannot at all be effective since the L.T.'s are only specialists in particular subjects. The sphere and activities of L.T.'s should be directed to High Schools and College classes in the field of higher education and this is quite in keeping with their attainments and merits. To put them in charge of Middle Schools, is like putting a round man in a square hole and a costly experiment too. What harm is there in making experienced F. A.'s or Intermediates to be the Headmasters of Middle Schools, especially men of proved ability and character? That rule of M. E. Code which requires that the Headmasters of all Secondary Schools shall ordinarily hold collegiate trained teachers' certificates was brought into existence with a view to restrict the spread of higher education

even among the middle class of people. Now that education has become a transferred subject under a popular Minister, will not the Minister in charge of education look with sympathetic eyes and see certain changes are effected in the above rule? Will the present Director of Public Instruction or a Member of the Madras Legislative Council introduce certain modifications in Rule 23 of the Madras Education Code so as to allow even experienced F. A.'s and Intermediates to become Headmasters of Middle Schools after they have put in not less than 5 years of service. To safeguard the position of old F.A.'s and the Intermediates, I offer the following humble suggestions:—

- i. To start the Intermediates on a slightly higher salary (about 20 or 25 %) than that of S.S.L.C.'s or Matriculates as it had been done in the case of graduates.
- ii. To fix their scales of pay and efficiency bar on a higher level than those of Matriculates and S. S. L. C.'s and earmark their salaries and emoluments.
- iii. To keep open the higher branches of the clerical service in all departments admitting their claims next to that of graduates.
- iv. To admit them to the lower ranks of the Inspectorate in the Educational Department next to that of L. T.'s.
- v. To start them on a scale assigned to the senior clerks or the Supervisors of Schools of first grade in the Educational Department.
- vi. To throw open the headmastership of Middle Schools (as per *supra*) to men of experience and proved ability.

I appeal to the learned public and the Government in order that they may secure the utility, harmony and good-will of a middle class of people whose co-operation is quite essential, if at all the society is to progress on right lines by the spread of education among the masses. It was the stalwart and worthy young men of the middle class that brought Great Britain not only victory in wars but the greatest riches, name and ever-dying fame. Is it too optimistic to expect the same from the young men of the middle class in India? I hope my words will not be a cry in the wilderness.

M. NATESHA AYYAR.

THE EDUCATIONAL STAFF UNDER THE LOCAL BOARDS AND MUNICIPALITIES.

THE lot of the teachers in the Local Boards and Municipalities is by no means enviable and their status from any point of view, material, social or moral, is undeniably low and indescribably wretched. Very often the remuneration they get, scarcely suffices to keep the wolf from the door. Their place in society is next to nothing, either because they "live and move and have their being" in the midst of youths, credulous and innocent, or because they are eminently unfitted to meet the demands of society. As compared with the Government servants, they have all the disabilities of the Government service *minus* its privileges such as promotions, transfer and pension to boot.

With a view to standardise the salaries of the Educational staff and to place them on a better footing, a Local and Municipal Conference was held at Madras on 21st July, 1920, whose resolutions have been communicated to all Local Boards and Municipalities under date 2nd August by a G. O. These resolutions provide for the provincialisation of the service of Headmasters *only* and the standardisation of the salaries of Headmasters by giving them a grade of Rs. 200—300 and to the L. T. Assistants a grade of Rs. 80 to 150. While the provincialisation of the Assistants has been deemed unnecessary, they will be the class from which the Headmasters will be *ordinarily* recruited.

Far from tending to ameliorate the material condition of the teachers in any way, the resolutions are not only not encouraging but are calculated to produce more evil than good. The start proposed for

the L. T. Assistant-masters is lower than the average bid for one in the market to-day and is not likely to attract the talented youths. Again the maximum of the grade for the L. T. Assistants scarcely comes up to the level of the initial salary of the Headmasters. Neither is it invested with the halo of provincialisation. Under these circumstances their status is bound to go down considerably. Having worked—as often they are overworked for the major portion of the day-time—and having utilised their mental and vocal powers enormously, the teachers become fit for nothing, no, not even perhaps for chit chat, light recreations in clubs and associations, much less to speak of their part in any manly games. The Educational staff *minus* the Headmasters in the Local Boards and Municipalities all over the Presidency have the same tale to tell. They have to work every 24 out of 30, or 27 out of 35 periods. If hard, monotonous soul-taxing, patience-taxing work be their wretched portion in life, is it not proper to hold out to them good prospects? Is it not likely that the anomaly of a dull monotony in the teachers' life—when the teachers are expected to be enthusiastic and energetic—likely to be perpetrated under the new arrangement also? Is it not likely that the poor remuneration—barely Rs. 80 in these hard times—would lead to the penury of heart and the bankruptcy of soul in teachers, a class to whose hands are entrusted the destinies of the rising generation?

While thus it has been shown that the material condition and the social status will not be improved and elevated, the relationship between the Headmaster and the Assistants is likely to become embittered also. In making the start for the Headmasters

Rs. 200 and Rs. 80 for the L. T. Assistants, the Conference has taken—to say the least of it—the most unwise step. For the L. T. Assistants have the same academic and departmental qualifications as the Headmasters. The experience of the two too, is the same and in some cases, unlike the Headmasters who have come, to occupy that position by sheer flux of time or luck, or unlike some others "who have learnt nothing and forgotten nothing," the teachers show better work, display better enthusiasm. The springs of enthusiasm will be dried up when these distinctions, such as the material enhancement of salary and provincialisation of services, are made the sole monopoly of the Headmasters. The good work turned out by a school and its healthy traditions is as much due to the Headmasters as to the Assistants and if in it, one class is to reap the benefit while the others are made to work in the sweat of their brows, there will be little or no scope for the promotion of cordial relations between the Headmaster and the Assistants. Already the disparity in the incomes between them though small has resulted in haughtiness and high-handedness on the one hand, and on the other hand, heart-burning and resistance though feeble.

Already the Headmasters have ceased to take as much teaching work as they used to have before. Instead they take delight in spending their time on correspondence work which is being rapidly multiplied wantonly in some cases, and in supervision work where they fancy they are the masters of the situation. Often they are Inspectors in the school-home, only they are stationary instead of itinerant. If this be the work turned out by the Headmasters—as it verily is—and if under these circumstances, their salary is increased out of all proportion to the teachers, when there is no corresponding increase in the salary of the Educational staff, insecurity and danger will step into retreats where peace and harmony to a certain extent at any rate hitherto reigned. Provincialisation is the "apple of discord." Discord and strife will become rife. It is a consummation devoutly to be wished therefore that the salary of the Educational staff should be materially enhanced and standardised and that the whole teaching service should be provincialised, when only the otherwise dull, dreary monotony and drudgery of a teacher's life will be rendered less inactive, less inert, and less insensate.

AN ASSISTANT MASTER.

RUDIMENTS OF ALGEBRA

With a Chapter on Graphs

by the late S. SRINIVASA IYER,

Author of "Problems in Arithmetic"

Revised by B. HANUMANTHA RAU, B.A.
Professor of Mathematics, College of Engineering, Madras.

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Reviews and Notices.

BIRDS OF AN INDIAN VILLAGE, BY DOUGLAS DEWAR (OXFORD UNIVERSITY PRESS.)

Nature has fortunately blessed India with a wonderful variety of animal and bird life and it does seem a pity that no adequate attempt should be made in our schools to train the pupils' powers of observation. The Oxford University Press must therefore be congratulated on the production of this excellent handbook giving descriptive accounts of the usual birds which make the atmosphere of an Indian village full of interest and liveliness. Douglas Dewar is such a well-known authority on all matters relating to bird-life in India that he needs no introduction at our hands. Readers of papers like *the Pioneer*, *the Times of India* and *the Madras Mail* will have noticed the numerous contributions on the subject from his pen under the well-known initials "D. D." The book is enriched with a number of beautiful illustrations which will help the pupil to recognise the birds at first sight when meeting them in the fields. We have great pleasure in recommending the book for use in our Middle and Secondary schools, and we hope that the publishers with their usual enterprise will also produce translations of the book in the various vernaculars of the country so as to enable the use of the book in our Elementary schools also. The usefulness of the book does not by any means end here. It is well-known that grown-up people often reveal phenomenal ignorance of little details relating to animal life, and this little book should therefore be read with real benefit even by them.

PLUTARCH'S LIVES, EDITED BY DR. GILES (CAMBRIDGE UNIVERSITY PRESS.) 3s. 6d. net.

Since the appearance of the translation of *Plutarch's Lives* by Sir Thomas North in the Elizabethan period, it has been a rich mine for the student of literature and the poet and the dramatist. Generations of Men of Letters since Shakespeare's time have delved into its treasures and brought forth material which has commanded the admiration of the world. No better book can therefore be imagined for the purpose of kindling enthusiasm in the hearts of the young and appealing to the recollections of the old by its magnificent review of some of the splendid events of the past. This volume of selections published by the Cambridge University Press will therefore be welcomed as furnishing admirable opportunities for an early introduction

of the student at school or college to one of the greatest books of the world. It is of course taken for granted that the book will be read in the original afterwards. This edition keeps up the high reputation of the publications of the Cambridge University Press. The selections are well-made. There is a short but illuminating introduction and valuable notes at the end.

HENRY IV, PART II, EDITED BY WINSTANLEY (HEATH AND CO.) INDIAN AGENCY: P. T. I. BOOK DEPÔT, BANGALORE. 2s. 6d. net.

The Indian student of Shakespeare does not take very kindly to his English historical plays probably with the exception of *King John* and *Henry V.* But there are numerous reasons why the student of literature should be drawn in interest to his historical plays. They constitute an eloquent commentary on some of the most stirring incidents of English History; they are epic in construction and in spirit; there is hardly any literature capable of greater inspiration to patriotism. Here is a handy edition of the *Second Part of Henry IV* issued by Messrs. Heath and Co. in the well-known series of the *Arden Shakespeare* under the general editorship of Dr. Herford. It can be safely placed in the hands of all students of Shakespeare.

BOYHOOD STORIES OF FAMOUS MEN, BY MISS K. D. CATHER (HARRAT). INDIAN AGENCY: P. T. I. BOOK DEPÔT, BANGALORE.

Miss Cather is a well-known writer of articles and books for children, and many a boy and girl has bent over her pages with breathless excitement, reading the wonderful stories she has told of the past as well as of the present. She has brought together in this volume biographical sketches of a number of well-known artists whose productions are now the pride of Europe. They are mostly persons who have shown amazing proof of their later accomplishment and genius even in their childhood and therefore the book is particularly valuable. The volume includes accounts of the boyhood of the following painters, sculptors and musicians:—Titian, Chopin, Giotto, Thorwaldson, Mendelssohn, Murillo, Mozart, Guido, Reni, Tintoretto, Andrea Del Sarto, Claude Lorraine, Stradivarius, Rembrandt, Roza Bonheur.

READINGS IN ENGLISH SOCIAL HISTORY, VOLS. I & II, BY R. B. MORGAN (CAMBRIDGE UNIVERSITY PRESS.) 4s. 6d. net each.

When Macaulay started writing his *History of England* he complained in the preliminary paragraphs that historians in the past had committed the mistake of confining their attention only to kings and battles and neglected to give any account of the real life of the people whose history they were supposed to narrate. It is significant that Green should have written an *History of the English People* and since his time many successful attempts have been made at presenting an account of the social life of the people in the various periods. While the subject is of the utmost importance to the student of History, it cannot also be neglected by the student of Literature. There can never be a full and proper appreciation of the best writings of the period without a knowledge of the every-day life of the people amidst whom the literature was produced. These two books which deal with English Social History from the beginning to 1272 and from 1272 to 1485 respectively, are sure to find a large circle of appreciative readers. The readings are all from contemporary records and the accounts therefore are particularly faithful. That the extracts are chosen from productions some of which have been written without any professed literary aim should not be considered any disqualification, because there is a quaint charm about them which one is sure to miss in more sophisticated writings. The books are also enriched by a number of illustrations which add to the vividness of the descriptions.

LAMB'S MISCELLANEOUS ESSAYS, EDITED BY HAMILTON THOMPSON (CAMBRIDGE UNIVERSITY PRESS.) 6s. net.

Mr. Thompson has already edited for the Cambridge University Press two admirable volumes containing respectively, the *Essays of Elia* and the *Later Essays of Elia*. He has now added a third volume containing the *Miscellaneous Essays* of Charles Lamb, thus more or less completing at least the more important prose works of the distinguished essayist. The volume is a model of what college editions of a literary classic ought to be, containing as it does, a good biographical and critical introduction and valuable notes in the end. Charles Lamb is so allusive and draws upon such inaccessible sources of learning that the guidance of a com-

mentary is generally very essential. It is a pity that the publishers should have found it necessary to fix the price of the volume at 6s. which will not make it a very popular student's edition.

REPRESENTATIVE CLASSICAL ESSAYS, BY F. F. MONK (MACMILLAN & CO. LTD.) 3s. 6d.

It is an old complaint that of the making of books there is no end, and collections of essays and poems are apt to come under this general condemnation. But the needs of our students are so varied and there are such different kinds of tastes to be administered to, that collections of essays under review are always welcome provided the selections are good and the student is enabled to appreciate the passages selected by being furnished with the necessary help and guidance. Mr. Monk's selection must on the whole be considered a success, though we wish he had made the book more modern by bringing it nearer our own times. The last writers included in the volume are Irving, Hazlitt and Leigh Hunt and surely the student who does not travel beyond these writers misses some of the most splendid things in nineteenth century literature. We hope that if a second edition of the book is called for, Mr. Monk will include specimens at least from Macanlay, Carlyle, Ruskin, Matthew Arnold, and Stevenson, even which will not make the book sufficiently exhaustive.

PRACTICAL AND THEORETICAL GEOMETRY. PP. 256 + 104: BY C. GODFREY, M. V. O., M.A., AND A. W. SIDDOES, M.A. (CAMBRIDGE UNIVERSITY PRESS).

The practical portion beginning with lines and angles and ending with plans and elevations of solids consists of a large number of carefully arranged exercises with short explanations here and there. The theoretical portion consists of the proofs of some 54 theorems and a few constructions followed by a collection of 327 examples. The treatment of the practical portion seems to be more or less thorough, while that of the theoretical portion is meagre. So far as Practical Geometry is concerned, the book can safely be recommended for use in schools.

ELEMENTARY DYNAMICS. Pp. 224: BY J. W. LONDON, M.A. (CAMBRIDGE UNIVERSITY PRESS, 1920).

This is an elementary text-book on Dynamics *proper* and is primarily intended for use in Engineering Schools and Colleges. It consists of 9 chapters together with 100 miscellaneous examples. A rudimentary knowledge of calculus is assumed throughout the text. The examples are mainly of a practical nature and special prominence is given to graphical methods of work.

The book may profitably be used for occasional reference by students preparing for the B. A. degree examination of any Indian University.

A CONCISE GEOMETRY: Pp. 319: BY CLEMENT V. DURELL, M.A. (BELL & SONS).

The book is mainly a collection of exercises on plane elementary geometry divided into 4 books. The riders on the theory portion of the 4 books are given first and these are followed by construction exercises on each book. The exercises are all well arranged. Proofs of the connected theorems and constructions are given at the end of the book. The author thinks that this arrangement will be of advantage to the student. But perhaps it is adopted with a view to show that the book is written on new lines. Else there is no proper justification for a production of this kind in the already-overcrowded market.

STATICS AND DYNAMICS, FIRST PART: Pp. 335: BY R. C. FAWCETT, M.A., B.Sc.: (BELL'S MATHEMATICAL SERIES FOR COLLEGES AND SCHOOLS, 1919).

This book is intended for use as an elementary text-book in schools and colleges. The Statics portion consisting of 157 pages is divided into 6 chapters including a short introductory chapter, and the portion devoted to Dynamics *proper* consists of 10 chapters extending over 177 pages. The elementary principles are clearly explained and special stress laid on experimental and

graphical methods. Historical notes are added in suitable places. The exercises, which are mostly numerical, are well arranged.

The standard does not seem to be very much higher than what is expected of a student preparing for the Intermediate examination of the Madras University.

EUCLID IN GREEK—BOOK I: WITH INTRODUCTION AND NOTES, BY SIR THOMAS L. HEATH, F.R.S. (CAMBRIDGE UNIVERSITY PRESS, 1920): Pp. 239: 10s. net.

The introduction which consists of 39 pages gives an account of the life and work of Euclid, early history of the elements, contents of Euclid's elements, later history of the elements and changes in the text. The text itself written in the Greek language consists of 23 definitions, 5 postulates including the famous postulate of parallels and 5 axioms or common notions followed by all the 48 propositions of Book I. The notes by Sir Thomas are copious and cover 116 pages.

The student of Mathematics who wishes to learn the Greek language will find it advantageous to study the book.

WORK, WEALTH AND WAGES OR FIRST LESSONS IN ECONOMICS FOR CHILDREN, BY E. F. ROSS, B. SC., L.C.P.

This booklet on the Elements of Economics deals in a simple style with the main factors of the Science as Labour and Wages, Money and Capital, Exports and Imports, Rent and Interest, &c.

It is intended by the author as a hand-book for the pupils of High Schools. In design, language and treatment it is best calculated to answer the purpose for which it is intended. As it has been the purpose of the book only to explain the general principles of the science to Western students, the author has not felt the necessity for illustrations from the actual conditions in other lands. Still as a mere hand-book written in a very lucid style, it is not surpassed by very many of the kind in the field.

The Educational Review.

The University of Bombay, in the adoption of changes suggested on a consideration of the Calcutta

University Commission's Report, has introduced some features worth special examination. The first two years of the College course are to be removed from University work; the last year of the High School is to be removed from the High School course and the first two years of the present College instruction and the last year of the High School are to be transferred into separate Intermediate Colleges. While there is something to be said in favour of this arrangement, it may be pointed out that the change is not of much significance and things in this matter may be left as they are. The first two years of the College course may very well form a separate institution by themselves as in the case of the present Second-grade colleges in the Madras Presidency—an arrangement likely to cause the least disturbance to the existing state of affairs. The addition of the High School class to the two Intermediate classes is likely to bring down the level of the latter rather than raise the level of the former, under the limitations of the poor circumstances of Indian institutions struggling for financial help. Elsewhere arrangements are being made to combine the first two years of the College course with the last two years of the school course and form these four classes into a new species of institution.

The great danger is that this kind of shuffling of classes is apt to be construed into a big reform by itself and that is a flattering unction against which some of our zealous reformers should guard themselves.

Even the University of Madras is showing an occasional slackening of its unreasonable rigour in examinations. But the University has not yet been touched by the new spirit of making it easy in sufficient measure for under-graduates to get the benefits of higher education,—a tendency coming into prominence in almost all other Universities in India. The University of Patna has added a new facility to its students which is worthy of imitation by other Universities in India, though in some of the examinations in Madras the facility has been enjoyed already, to the full extent in the B.A. and partially by the system of examination by groups at the Intermediate. The Government of Bihar and Orissa have just sanctioned the resolution of the Senate of the Patna University that candidates who failed in the I.A., I.Sc., B.A. & B. Sc. examinations, but obtained at least 45 % of the maximum marks in any subject, shall not be re-examined in that subject but shall be eligible for re-examination in the remaining subject or subjects at the supplementary examination of the same year or at the annual examination of the succeeding year. It does seem a bit hard that a student who has failed in a

single subject should be compelled to wait for a whole year to be able to appear in it again and the system of supplementary examinations should go a long way to remove this grievance. Another direction in which the Patna University has made a new departure is the abolition of the age-limit for the Matriculation examination, the Government of Bihar and Orissa having just sanctioned this alteration also in the Regulations. We suppose the idea in prescribing an age-limit is to see that undeveloped children are not pushed up to the higher classes to the detriment of mind as well as body. But this is a matter which had probably better be left to the discretion of parents without this intrusion of solicitude on the part of the University. We hope that other Universities will also begin to drop this restriction on young aspirants to collegiate life.

The Bureau of Education of the Government of India has just issued its report on the progress of Indian education in 1919-20. The year was not one of peaceful development in the country but it is satisfactory to note that progress in education has not been impeded very much. In fact there has been an increase in the number of educational institutions as well as in the number of pupils in all stages of instruction. The following table represents the increase of strength in the number of institutions:—

Colleges 7

High Schools 127

Vernacular	} 415
Middle Schools	
Primary Schools	5073
Special Schools	389

There has been an increase of 269,648 pupils, the increase being found in all Presidencies of the country except in the North-Western Frontier Province where the disturbed conditions prevailing last year easily explain the circumstance. It is also gratifying to note the increase of expenditure on education, the following table showing the amount of increase as well as the sources of increase:—

Provincial Funds	Rs. 88,36,604
Local Funds	Rs. 39,00,776
Fees	Rs. 14,14,755
Other Sources	Rs. 43,81,952
Total ...	Rs. 1,90,33,887

It is interesting to note that the Patna University only of all the Universities in India reports a fall in the number of students and the reason assigned for this decrease is "an impression current among students that the standards required for a pass in the various examinations of the Patna University are higher than those of the Calcutta University and there has in consequence been a considerable migration mainly to schools and colleges in Bengal."

Taking cover under the policy of religious neutrality, Government has till now shown considerable reluctance in lending a helping hand to the cause of religious

education in schools and colleges. The Government of Bombay has just now made a welcome departure from this policy of convenient indifference and issued the following Press Note which has made it easier to impart religious instruction even in publicly-managed schools and colleges:—

The Government of Bombay (Transferred Departments) have had for some time under their consideration the question of allowing religious instruction to be imparted in publicly-managed schools and colleges. While they have no intention whatever of receding from their attitude of strict religious neutrality, or from the principle that schools and colleges under public management ought not to be used as a means of fostering any one religion at the expense of others, and while adhering to the opinion that religious instruction ought to be, and can best be, given to children by their parents or by the regular teachers of religion, they have decided that the existing embargo on such instruction in publicly-managed schools and colleges may to a certain extent be relaxed. They have accordingly been pleased to issue the following orders:—

(a) School and college premises may in future be used for religious teaching or simple prayers if well-constituted outside bodies offer to make provision for such teaching or prayers either just before or just after school hours, provided that (1) there is no local objection, (2) the teachers appointed are acceptable to Government or the local body concerned, and (3) no ceremonial observances are included. A slightly greater latitude may be allowed in the case of hostels in regard to the last proviso;

(b) The services of a teacher in the service of Government or a local body should not, however, be utilised for imparting religious instruction;

(c) Religious teaching or observance cannot be made compulsory for day students, but in the case

of students residing in hostels compulsion may be allowed under proper safeguards, only if the parents or guardians so desire;

(d) The time spent by any student on religious teaching or observance should not be deducted from the prescribed period of the curriculum which should be fixed on educational considerations alone.

We have seen the Madras Government profess its sympathy with religious education, but as far as we know nothing is being done to offer facilities for the purpose in public institutions.

The education imparted to Indian Cadets at Sandhurst must be looked upon as a matter of some importance as it is very essential that the experiment of granting commissions to Indians must prove a success for the welfare of the country. Some important modifications have been made in the syllabus of studies and courses of instruction and the Army Department is issuing a note embodying the changes:

The principal modifications in the new syllabus are as follows:—The qualifying marks in English have been raised from 33 per cent. to 50 per cent. This has been done in the interests of Indian candidates; the reports of Officers Commanding Companies of Gentlemen Cadets and of the Commandant, Royal Military College, upon Indian Gentlemen Cadets having indicated that in many cases considerable handicap has resulted from insufficient command of English. In the English Examination under the old Regulations four papers were required to be taken: a general paper, designed to test general knowledge, and intelligence; an essay—three alternative subjects being given and the candidates being required to choose

one; reproductions of a passage read out to the candidate, and dictation.

Under the new Regulations three papers only will be set, dictation being omitted. In geography, in addition to a general knowledge of the world, will be required a knowledge of the geography of India in detail, particularly of the frontiers.

These are the only modifications in the obligatory subjects, practically no change having been made in the requirements in Indian History, Mathematics and the Indian Vernaculars.

In the optional subjects Arabic has been added to the languages which may be taken, *i.e.*, a candidate may now elect Persian, Arabic or Sanskrit. Physics and Chemistry remain practically as before. A candidate may now elect to take as an option a General Science paper.

An Intermediate paper in Mathematics may be taken, but for the Higher Mathematics paper, which may be taken by the English candidate, in addition to that in Intermediate Mathematics, has been substituted for Indian candidates a paper in British Imperial History. This has been done because previous examinations have revealed a great lack of knowledge of rudimentary facts relating to the development of the British Empire. Without this knowledge the young Indian Gentleman entering Sandhurst must be seriously handicapped when compared with his British comrade. "The British Empire" by Sir Charles Lucas is recommended for study by candidates taking this subject.

However much one may be opposed to some aspects of the present Non-co-operation movement in education in India to-day, there is nothing objectionable in the foregoing of Government grants and relying on private resources for the maintenance of educational institutions.

Foregoing Government Grants.

The Nadiad Municipality in Bombay recently decided upon foregoing the Government grant given for the maintenance of educational institutions managed by it, but the Government have not been fighting with the Municipality over it and have allowed it to have its own way. The general attitude of the Government is summed up in the following principles:—

(1) They approve the proposal that a Municipality which is able and willing to do so should defray the cost of primary education from its own funds.

(2) The powers of inspection and control vested in Government by Statute must remain unimpaired and unaffected by any such decision on the part of a Municipality and they will be used.

(3) The rights and emoluments of the existing staff of teachers in Municipal Primary Schools must be safeguarded.

(4) Facilities will be provided by Government for the children of those parents who do not wish to send them to Municipal schools.

We do not of course understand the special solicitude for those opposed to the nationalisation of schools implied in the last provision.

The University of Dacca has just issued its preliminary prospectus and there are features in it which deserve some attention. Special care is being paid to residential discipline by the appointment of Provosts to look after halls of residence. One of the fears entertained about the Dacca University when

The Dacca University.

the scheme was launched was that education in a residential University was likely to become prohibitive in cost and beyond the reach of the poor student. But the fees that are being charged are comparatively low, the amount charged for all under-graduate classes being at the uniform rate of Rs. 8 per month for an year of twelve months. The room-rents vary from Rs. 2 to Rs. 4. The arrangements for food will be in the hands of the residents and the cost divided among them. The subjects of the B.A. course have been arranged in well-considered groups, English Literature being a subject occurring only in some of the groups—

- I. English Literature, History, Politics.
- II. English Literature, Philosophy, Politics.
- III. Sanskrit, or Arabic, or Persian, Mathematics, History.
- IV. Sanskrit, or Arabic, or Persian, or Islamic Studies, History, Philosophy.
- V. Sanskrit, or Arabic, or Persian, or Islamic Studies, English Literature, Philosophy.
- VI. Sanskrit, or Arabic, History, Politics.
- VII. Philosophy, Politics, History.
- VIII. History, Politics, Economics.
- IX. History, Philosophy, Principles of Education.
- X. Mathematics, Philosophy or Politics, Economics, and such other groups as shall from time to time be determined by the Faculty.

Arrangements are being made for tutorial work and what is more important, the work done in the class during the years of the course will be taken into consideration in settling the results

together with the marks at the University examination. We wish the University all success.

In spite of numerous obstacles, the working out of the **The Fisher Act.** Fisher Act is proceeding rapidly in England. Those interested in studying the latest developments of educational policy in England ought to study the new publication by the Oxford University Press on *Working out of the Fisher Act* by Basil A. Yeaxlee. A special feature of the Act is the compulsory provision of Continuation Schools to ensure boys and girls receiving the benefit of education after leaving the Primary schools. Adolescence is such a critical period in a person's life that it is extremely unwise to think of neglecting education at the time. In the absence of continuation schools, society is only receiving a continuous supply of half-educated boys and girls who can be easily led into vice and crime by the influence of bad company and other adverse circumstances.

We have had occasion more than once to comment on the undesirable state of affairs introduced into the

Our New Minister.

political life and consequently into the administration of the Madras Presidency, by the fomentation of caste-prejudice. Ministers and representatives in Councils seem to have been chosen, neither on account of their ability, nor on account of any fitness for the offices concerned, but on considerations of caste.

Dewan Bahadur Subbarayalu Reddiar, M.L.C., who was a lawyer in the mofussil and who could not be expected to be conversant with the present day problems of education, was suddenly elevated to the position of Minister of Education. As was anticipated he did nothing for educational progress during his year of office and it is not to be expected that his successor, Rao Bahadur A. P. Patro, who is also another lawyer from the mofussil,

will set the Coom on fire. It was expected that on the resignation of Mr. Reddiar the Government would have profited by their experience and appointed a suitable person to the post. But the only difference we see in the appointments is that the outgoing minister was from the South while the incoming one is from the North. One has to put up with these things in a spirit of philosophic resignation and hope for the best!

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"KINDERGARTEN TRAINING."

I CONSIDER it a very great privilege indeed to be invited here all the way from Madras to speak to you about one of the most important branches of child welfare work, namely, the education of the child. It is one of the most hopeful signs of the times that the child is attracting more and more attention from the public at large and it is at last coming to its own. The kind interest taken in the "Child Welfare Exhibition" by the Government is abundant evidence to show that those in authority are not uninfluenced by this wave of feeling; and that they are trying their best to encourage the movement in such a manner that the greatest good may be had from it.

And so it behoves all of us to take some interest in the various systems of educating the child during his early years. One of the most famous systems of education is the "Kindergarten system" which was founded by Froebel in the early years of the nineteenth century and which

is perhaps, at the present day, the most popular of the various educational methods of the world.

It is to this system that I wish to draw your attention to-day.

THE KINDERGARTEN SYSTEM AS APPLIED TO INDIAN CHILDREN.

"Men may come and Men may go

But I go on for ever"—

says the Poet of the Brook and surely the same is applicable to the great fundamental principles governing the world. Kingdoms and monarchies may rise and fall, fashions and manners may change, but those principles which form the very foundations of society remain unchanged. Of such is the principle of education in Man. From time immemorial Man has considered it a sacred and solemn duty of his to educate his children in such a way as to enable them to lead the fullest life possible. Hence have arisen in different countries, and in different ages the great ideals of the world,—the Greek ideal of the graceful Athlete, the Roman ideal of the Sturdy warrior, the dogged perseverance of "John Bull," the meditative ideal of the Eastern Saint and so forth. A close examination of all these ideals

* A Lecture delivered by Miss O. Gordon, Teachers' College, Saidapet, Madras, at the Maternity and Child Welfare Exhibition, Delhi, 1920.

shows that though the underlying principle is the same it has been considerably modified so as to suit the varying conditions of the nations of the world.

Similarly, with reference to the education of the child, the guiding principles are the same throughout the world. Especially during the past hundred years and more with the rapid strides taken in Science and the application of the scientific method in every walk of life, the child has become an object of reverence and intense study, and it is on the basis of the conclusions arrived at by such methods that the present educational systems rest. The famous system of Dr. Montessori (for the education of defective children), the Wolf Cub Movement of Sir Robert Baden-Powell, the Open Air and Play Schools of the United States, the well-known Swedish Drill Schools and lastly the Kindergarten System founded by Froebel—different though these may be in detail, all of them rest on the broad principles of child nature such as the paramount need for self-activity and self-expression. For,

"Growth is ever an unfolding,
In the Germ the whole doth lie,
Little blossoms upward tending,
Spreading out towards the Sun
Show the road that we must follow,
Nature's processes are but one."

It would therefore be nothing but an egregious blunder to think of the Kindergarten as a subject like History or Arithmetic, or to devote to it two hours on a time-table, as is actually done in several schools to-day. The fact is, that Kindergarten is not by any means a subject but a system of rational education for the young. The aim of all education has been to draw out the best in the child, i.e., 'to manifest the eternal in the temporal, the infinite in the finite, the Heavenly in the Earthly, the divine in the human.' And the Kindergarten aims at this lofty ideal by following certain proved principles.

The general principles of the Kindergarten is to recognise the individuality of the child, to regard him as a living, growing organism, and as such to furnish him with ample opportunities for self-development, without in any way forcing our own ideas on him. In short, the aim of the Kindergarten is to make the child his own educator under the most favourable conditions. Just as in a garden the plants and flowers are allowed the utmost freedom for growth, the gardener confining himself to preparing the ground, watering the plants and removing the weeds, so also in the human garden (of the Kindergarten) the children are allowed the best opportunities for growth without let or hindrance. In fact, the name Kindergarten itself means the children's garden, thus bringing home to our minds the analogy existing between plants in a garden and the children at school.

This freedom of development is best secured by giving the children the greatest scope for Free Play. For, Play, rightly understood, is the Poetry of life. It does not, in any sense, correspond to the games and recreations of adult life, nor is it rest from toil, as is commonly understood, but the most serious activity in which the child is engaged, the very essence of life for it. In his play the child gives expression to his real self; and all the while he is learning lessons that will stand him in good stead throughout life. He is learning the great lesson of adapting means to ends, the principle of give and take, and the truth of the maxim 'Play up, play up and play the game.' The famous saying of Wellington that the Battle of Waterloo was won on the playing fields of Eton is an instance in point. So, the Kindergarten aims at making this natural incentive for play a powerful ally in the education of the child.

Equally great attention is to be bestowed on the somewhat neglected subject of training of the senses. For, primarily they are the means through which we get all our knowledge of the

external world. Time there was when the training of the mind alone was considered necessary without any reference to the training of the senses; but these ideas are gradually changing and now great emphasis is laid in every educational system on this very necessary work of sense-training. Their eyes must be trained to look at all the things about them in their right perspective, their ears to listen to the varying music of the voices of Nature and of Man and their whole self to respond to the manifold beauties of this wonderful world of ours.

And all this is to be achieved by keeping the child cheerful and active. Bright and airy rooms, beautified by means of good pictures and flowers, the contagious enthusiasm of the teacher himself, the bright surroundings and the happy faces around these are very helpful in creating the active, joyous life of every child in the Kindergarten.

However this might be, the application of these principles in the class-room requires a great deal of tact and intelligence. For instance, there are the time-honoured subjects—Reading, Writing and Arithmetic. One would wonder how these could at all be made interesting. Even here, the intelligent teacher, by making reading and writing a part of Language Training, may use them as a means of Self-expression. He may have, as his powerful ally, the valuable arts of story-telling and dramatization. There is a general impression abroad that story-telling is only a means of whiling away time; but this is not so. The story—if it is of the right kind—arouses the interest of the child to an extraordinary degree and inspires him with lofty ideals. The child desires to emulate the heroes of whom he is told. And this is nothing new. Even in centuries now long past, it was the tales that were the inspiration of some of the most thrilling chapters in the annals of man. Alexander the Great declared that the lays of the wandering bard (Homer) made him thirst for conquest; and the Crusades

which re-created Europe by the introduction of Eastern culture and the breaking down of old traditions might never have been undertaken but for tales of defilement of holy places from the lips of Peter the Hermit. And here in India the tales of Sri Ram and Krishna have done more to inspire the heroic strain than anything else. Thus every story rightly told contributes something definite towards the mental, moral and spiritual growth of the child. Besides developing the emotional nature and giving moral and religious instruction, it will intensify the interest in History, Geography and Nature-study; awaken an appreciation of Literature, Art and Music; enrich the child's power of discrimination and teach him to differentiate between the ephemeral and the eternal. It will help to eliminate much of what he considers the drudgery of school-life and give him information that will fit him for broad, sympathetic and useful living.

What the child hears about, he likes to read about and to write about. And thus the transition can be gradually made to the more formal lessons in Reading and Writing. To add further to the interests of the children we may make use of the Dramatic Method. By "Dramatization" or the employment of the Dramatic Method we do not mean to train up our children as professional actors. We only wish to make use of that perfectly natural instinct in children to act, to dramatise, or to reproduce anything that they have seen or heard around them—so that their imagination may be developed and the ideas which they have only dimly comprehended in the oral lesson may be realised. The advantage of this method is that the child is able to project himself into the character of another, than which perhaps there is hardly a more important instrument of teaching. If a child is told of some noble action of a hero he is impressed; if he can be shown the hero in action, his impression is deepened, but if he be allowed to project himself into the character of that hero, to use the hero's words

and to do similar action that impression is enormously multiplied. Thus then, by means of story-telling and dramatization, language training can be made a perennial delight to the children.

The same may be said of Arithmetic although our own memories of "Our Arithmetic" are not of the happiest. In the first place Arithmetic in the Kindergarten is taught in the simpler guise of Number and Space work. The children are allowed to gain their ideas of number as the race gained them, that is, by contact with real things. They are allowed to handle, sort and arrange in groups something convenient, such as beads, sticks, etc. They are allowed to play various kinds of games, keep score and in other ways to get a real and delightful idea of 'Number.' They are allowed to measure their tables and chairs in the class-room, to draw plans on a rough scale of their school and play-ground, to cut out various shapes of various kinds and thus by diverse interesting ways to get a working knowledge of the abstract notions of length, measurement, etc.

Reading, Writing and Arithmetic, although they form an important part of the work in the Kindergarten is not all that is attempted. Self-expression and self-activity find even a greater scope in Handwork and Drawing. Drawing is as natural to a child as speaking or writing and ought to be as carefully treated. A knowledge of Drawing or of the power of perceiving and expressing the meaning of appearances leads to a fuller understanding of the varied forms and colours which surround us. Drawing is really the Reading and Writing of Form and Colour, as it includes the correct seeing and truthful expression of their varied appearances. Only the Drawing Class should be so conducted that the child should feel that he is recording his own impressions of something real, not those of any one else however accomplished; although his representation may be crude and its accuracy only approximate it shall be at least an

honest attempt of his own to represent what he has really seen and felt.

If there is any one important characteristic of Modern Education, it is that it is made more and more practical, no longer a divorce from but an identification with Life. Hence a proportionate amount of attention is paid to Handwork in our Kindergarten. The theory of Psychologists that 'there is no impression without expression' and that every expression intensifies the impression has helped us a great deal in popularising Handwork among children. It is no longer considered that Handwork is merely another form of industrial training but a valuable field where the child might learn lessons in accuracy, patience and forbearance. The first handwork of the child is playing with toys. Kingsley's *Waterbabies* and some of Stevenson's *Child's Garden of Verses* show us something of the stimulus offered by play with toys. These toys though should not be of elaborate workmanship; it is evident that the increasing wealth and perfection of toys in our age serve to produce dulness or destructiveness as the only form of activity left to them. Toys should be simple and suggestive to the active imagination of the child. In the Kindergarten the ball which adapts itself so readily to the restless energy of the child and the box of bricks over which the child will spend hours representing to the outward eye what the mind has vaguely conceived, and the simple piece of paper and the ever fascinating sand and clay by means of which curious scenes unfold themselves to the child, these are the toys of our children.

Handwork in the Kindergarten takes the form not only of making things with the hand but of a keen observation of Nature. Children delight in living things around them and the wise teacher who wishes to supply the children as far as possible with the things appropriate to their particular stage of development, takes care to surround them with as much of the world

nature as he can. As Stevenson says there should be no child of six who cannot remember laying his head on the grass staring intently at the blue vault of heaven above and seeing it grow populous with fairy armies. The child must be encouraged to notice the Sun, the Moon, the Stars, the Sky, the clouds, the rain, the sunset and the shadows, and thus his childish wonder at the powers of Nature may be the means of leading him to deeper insight into, and an enjoyment of the great, beautiful, wonderful world around us, and to a feeling of reverence for the Creator. Such a great educationist as Rousseau therefore advocated the first hand acquaintance with Nature, her secrets and laws for every child before the age of twelve. And the same idea has been reiterated by Longfellow in the following lines:—

"Then the little Hiawatha,
Learned of every bird its language,
Learned their names and all their secrets,
How they built their nests in summer
Where they hid themselves in winter
Talked with them whenever he met them,
Called them 'Hiawatha's chickens.'"

"Of all beasts he learned the language
Learned their names and all their secrets,
How the beavers built their lodges
Where the squirrels hid their acorns,
How the reindeer ran so swiftly,
Why the rabbit was so timid,
Talked with them whenever he met them
Called them 'Hiawatha's brothers.'"

In our Nature-study therefore we give our children a garden where they have plenty of opportunities for study and observation. We allow them to take care of pet animals leading them to an intimate acquaintance with their habits and customs. The care of animals is a humanising influence and a valuable training in love and reverence. We take them out on frequent walks and excursions where they can see

objects in their natural setting and thus obtain a much wider idea of their beauty and function.

This leads us gradually to the training of the emotions and the æsthetic faculties. No education would at all be complete if it were to leave out of account this most important function of moral training. We had the famous saying that "intellectual giants are often moral pigmies"—if this is so, it is a regrettable fact, and we should so change the early training of the children that such a thing is avoided at least in the future. Hence it is that in the Kindergarten special stress is laid on the formation of a good and firm moral character and that by the most indirect and unconscious means. The cultivation of the æsthetic feelings is a powerful ally in this respect; for the child has a natural love of the beautiful and what he looks and admires he imitates. This imitation influences his life and character.

Paintings and portraits help the child in his effort to understand the world around him and his place in it. The artist who paints familiar scenes shows us the Poetry of every-day life and young children can catch much of this poetic spirit. Pictures of every-day scenes—like Raphael's *Sistine Madonna* and Millais's *Reapers*—help us to start the artistic train of feeling which is in the child's own mind and to see some of the beauties of nature that otherwise our duller senses would miss.

As Wordsworth says:—
"We are made so that we love
First when we see them painted, things
we have passed,
Perhaps a hundred times nor cared to see;
And so they are better painted—better to us
Which is the same thing.
Art was given for that."

Likewise the influence of Music is fully recognised in the Kindergarten. Its elevating effect is appreciated by all; by raising us to the pure æthereal it makes us forget our daily cares

and anxieties and acts as a welcome relief from the humdrum of routine work; it also inspires us with lofty ideals and purposes; it makes us respond sympathetically to the rhythm of nature, to the sighing of the wind, the rustling of the leaves, the rattle of hail, the dripping patter of rain, the roll of distant thunder, the roar of the water-fall, the dashing of the waves, the buzzing of bees, and above all the songs of birds. Besides it is the only way in which our pent up emotions can find their fullest expression. Where words end, music begins.

We thus make the best in music, poetry and painting contribute to our work in building up the mind and heart of the child. By coming into touch with the thoughts and feelings, the joys and aspirations of some of the great men who have looked at the world and lived in it, we gradually learn to look with their clearer eyes and to see the beauty which delighted their most appreciative souls; and our own world becomes longer and lovelier, through that experience.

All this has to be achieved not by the mere introduction of foreign material but by the intelligent adaptation of the rich stores of legend and story, song and game, amusements and occupations of India. Instead, for instance, of talking about Alfred the Great and Robin Hood the famous Outlaw, who must remain as mere shadowy figures, we may as well talk about the heroes of the Ramayana and the Mahabharata, about the thrilling deeds of courage and self-sacrifice enshrined in the Upanishads and the Puranas, about Akbar and Asoka and all the glorious figures adorning the varied stories of India's fortunes. We may speak with more realism, for instance, of the life of an Indian Peasant than that of Italy or the United States in so far as the one is next door to ourselves, whereas the other is remote in time and space and as such fails to arouse enthusiasm. In other words what we want is a certain Indianisation of the subjects taught, although by the term

Indianisation nothing narrow or sectarian is meant. It is a recognised principle in Psychology that we should always proceed from the known to the unknown; from the near to the remote, from the familiar to the unfamiliar and from the concrete to the abstract. And to what extent a violation of this principle can go may be illustrated by the following story:—

A small boy was attending an Anglo-Vernacular school at Allahabad. The Inspector visited this school and chanced on this boy to ask the definition of a river. The small boy gave a fine and elaborate definition but when asked whether he had seen a river, he said, 'No.' This boy who lived at the junction of two great rivers, the Ganges and the Jumna—he could not at all bring himself to believe that the river with which he was so familiar and on the shores of which he used to play throughout the day and which he mentioned a hundred times every day could answer to such an elaborate definition. Possibly this boy was enlightened afterwards. But for a moment let us suppose that this boy grew up in ignorance to mature youth and then some one from a foreign country told him that his country was also a great country and had great mountains like the Himalayas and great rivers like the Ganges and the Jumna, the mental shock would then be so serious that he would lose the balance of his mind and go about the whole world shouting at the top of his voice, "I have found a river, a river, a river near my home; and there is no river anywhere else." Such has been the attitude of the Indian mind when after a long period of ignoring Indian culture, western scholars began to come and tell them that India also had a culture of high standard.

And the purpose of the new educational system must be to develop this Indian culture and in this all the four main lines of Indian culture—the Vedic, the Puranic, the Jain and the Buddhist—must be preserved, as well as the

latter Mahomedan, Zoroastrian, and Western cultures, as far as possible.

So Indian education has to be suited to India and Indian conditions. Indian education must be for the imparting and developing of the culture which is peculiarly Indian with scope of course for the assimilation of good from elsewhere also.

The best, easiest and most proper education cannot be imparted through a foreign language. It has not succeeded in any country. It means much unnecessary labour and waste of energy. The vernacular must therefore be the medium of instruction everywhere and specially so in the case of the Kindergarten. And we are trying our best to combat the belief prevalent in certain quarters that even the lisping infant must be taught its elements of knowledge in the foreign medium.

One of the most important factors—perhaps the most important factor—in the Kindergarten is the personality of the teacher. But unfortunately in the present educational system the personal element is very much neglected. Education has to be a personal communication of the teacher's mind and personality to the young and developing mind of the pupil. Our present teachers are only connecting links between books of reference and the pupils' "Note-Books." And very thick and high indeed is the note-book wall of separation thus raised between the teachers and the pupils.

All this we are to revolutionise and restore the teacher to his own high pedestal. He ought to consider himself as growing with the growth of the children entrusted to his care and rising to higher levels for their sake. The teacher must therefore keep the spirit strong, the mind fresh, the vision keen, the heart young. It is this unceasing action between the teacher and the child that renders the calling holy and dear to him. It is this that gives the teacher an abiding interest in each child and leads him to love it

with an intensity second only to the mother's love, with an unselfishness equal to hers and with a clearness of insight not unfrequently superior to hers.

Such teachers in the Kindergarten will teach the child of toil that work is the necessary first step to all true joy and without it there is no joy. They will teach the child of leisure, the value and dignity of service and its indispensability to true happiness in each and every life leading him to see that through service, through work alone, he can escape the barren fields of self-indulgence and reach the sunny, fruitful pastures of self-sacrifice and the serene joy that comes of it.

Thus it will be seen that the aim of the Kindergarten is to make children good workers, good players, keen enthusiasts, and unselfish co-operators; and with this end in view we strive to carry out in practice the motto "Come, let us live for our Children."

It may seem to some of you here that all this would tend to a revolution in education, but it is only a revolution in the system of education that will destroy all the other revolutions of the world; it would bring solace and joy instead of terror and dismay; and would triumph in the real freedom and liberty of mankind.

"The Hope of Humanity lies in the Child."

CLOUD MESSENGER.

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TRANSLATION.

TRANSLATION of English into Vernacular is a task full of difficulties. Pupils should thoroughly understand the subject-matter of the given passage and make themselves familiar with the significance of each word, phrase and idiom occurring in it. Ignorance of the English language leads to important omissions and guessing. Pupils should also be familiar with the spirit of the passage and must be able to distinguish relevant facts from irrelevant matter. It is a pity that many of the pupils' exercises in translation are marked by carelessness. The given passage is hurriedly read through and as a result the translation is loose. Translation should be free and not literal. Freedom in translation does not empower a pupil to introduce ideas not found in the original. Nor does it warrant omissions. Pupils should be made to understand that a free translation is only a rendering of the original into vernacular with due deference to the meaning as well as the construction and sequence of thought of the former on the one hand and idiom of the latter on the other. The less the rendering looks like a translation and the more it faithfully resembles the original, the better will it be. There should be no unnecessary splitting up of sentences nor should there be a change in the sequence of ideas.

Due attention should be paid to the translation of English idioms into vernacular. In the rendering, the exact vernacular idioms should find a place and if no corresponding idioms are available in the vernacular, the significance of each English idiom and phrase should be brought out by choice expressions in vernacular. A word-for-word translation of an English phrase into vernacular will

sound ridiculous. See how the translation of 'in his own life' and 'long voyage' into 'అతని స్వంత ప్రాణమునందు' and 'నిడుపాటి ప్రయాణము' jars on our ears!

A good translation is an art and as such it can only be acquired by systematic practice. Grinding alone can lead to grounding.

Translation should be taught as a means to the comparative study of the grammar and idiom of the two languages and to this end the teacher in charge of translation lessons should have a good command of both English and vernacular. To entrust the translation work to a Pandit who studied up to the II Form while young and had forgotten the little English he had learnt will not conduce to the efficient teaching of that subject. Nor can the English teacher whose only command of the vernacular consists in his ability to converse in broken Telugu successfully undertake that work.

As a choice is made in the selection of experts in teaching the different subjects, the same procedure should be observed in choosing the right men for teaching translation.

Plenty of oral exercises should be practised before written exercises are set. The teacher should draw up a series of exercises for the whole year and these should be arranged in the order of difficulty. At present, so far as I know, there is no syllabus for translation in very many of the schools. No text-books are previously selected from which exercises are proposed to be given. There is perhaps nothing like home-preparation by the teacher. The teacher goes to the class, takes up the non-detailed text-book from one of his pupils or any story-book that a pupil has and points out to pupils some para. for translation into vernacular. This state of things

should no longer be continued. After a suitable passage is selected and after it is previously thought over by the teacher the pupils may be asked to read the passage for themselves and questioned with a view to see if they thoroughly comprehend the subject-matter in it. Words difficult of comprehension by pupils may be explained as well as those idioms with which the pupils had not come across. Pupils should be given time to think out the exact vernacular idioms corresponding to the English idioms. The teacher's command of the vernacular should be a source of help to the pupils and guide them. Much resourcefulness is necessary in translating the passage. English construction should not be slavishly followed. The passive form may with advantage be changed into the active. A noun in English may have to be substituted by a verb in the vernacular or *vice versa*. Pupils should be made to remember that ideas are more important than words. An intelligent reference to a good English-Vernacular Dictionary may be of some help. Lengthy sentences may sometimes be broken up into simpler ones. An adjectival clause in English should be transformed into an independent sentence in Telugu. When written exercises are given, the greatest good can be had when efficient and systematic corrections are made by a competent teacher. As in the correction of English composition, so in translation from English into Vernacular, the various kinds of mistakes that pupils make may be analysed and a code of symbols prepared beforehand to distinguish one kind of mistake from another. Idea omitted, idea wrong, wrong idiom, translation literal, translation too free, etc., etc., all such defects should be indicated by their respective symbols. The symbol should help the pupil

in making the correction and it is this kind of training that our pupils sorely need. If systematic drilling is given in translation, both oral and written, and if systematic correction is made by teachers, who have command of English and vernacular, there is no doubt that the teaching of translation will be placed on a better footing and that better results will accrue.

It may be added that the translation into vernacular should be in simple, modern and idiomatic prose. Pedantry should be avoided and particular care should be taken by teachers to see that the use of high-flowing expressions by pupils is condemned. Pupils should be asked to write in Visandhi (విసంధి). The following quotations from some Telugu S. S. L. C. answer-books of previous years will show the ridiculousness of our pupils' attempts to imitate their Pandits.

శ్రీ విక్రమార్కమహారాజగారి కాలమున ప్రతిష్ఠానగరం బున యొకానొక బ్రాహ్మణశ్రేష్ఠుడుండెను. ఆతని కొక సత్పుత్ర రత్నంబు చిరకాలంబును యుద్భవించెను. గాని యీ బుడుకడు పెద్దవాడగుచుండునప్పటికి సత్పిత్రము లయిన విషంబుల బుద్ధిచాలినక చెడుకర్మలయందు ప్రసరింప జేయుచుండెడివాడు. ఈ ప్రవర్తనంబునతయ తండ్రి యోర్వజాలక నొకానొకనాడు చేరబిలిచి నీ ప్రకారము వర్ణించెను "నాయనా! లేకలేక నేను నిను గంటిని. నీవే రత్నంబని నెన్నుచుంటి. నీవు సంతోషపెట్టుదనని నెంతో పకూపాలముతో నుండ నీకిది తగునే?" యని నెన్నివిధ ముల బుద్ధిగరపెను.

రాజును, సంబ్రమవిలోలుండై, తల్పముండిగి, ఎకరం జని, ప్రేమతిశయములుప్పలిగి, యాతని కరతాలింగన మొ నర్పి, నాననంబునానీనుండేసి, గుళలప్రశ్నంబులడిగి, నిట్లని యె "ఓ ద్విజశ్రేష్ఠా! యేయే దేశంబుల గృహ్మరిరి. యేయే తిత్తంబుల నేవరిరి, యేయే మాద్యుకవింతల సూచి వచ్చిరి, నెలవిందు మాతృ."

M. SUBRAHMANYAM.

ECONOMIC LIBRARIES AND THE MADRAS UNIVERSITY

BY MR. G. SATYANARAYANA MURTI, M.A.,
*Professor of History and Economics,
Findlay College, Mannargudi.*

WITH reference to my contributions on the various aspects of the Organisation of Economic Studies in our University (*vide the Educational Review*, March, May, June, October and November 1920), I propose to place before the readers of this journal some important extracts from the valuable replies of my obliging correspondents to Question II of my recent Economics Questionnaire (*vide pp. 204-205, Vol. XXVI, No. 3, Educational Review*). Since my inquiry for the betterment of Economic Studies in our University is almost nearing completion, may I request my correspondents and the readers of this journal interested in my field of inquiry to give me the benefit of their replies to my queries or comments on the already published and the enclosed replies or the following reflections of mine on Q. II. so that I might include the same in my forthcoming suggestive notes for the improvement of Economic Studies in the Madras University?

Question II. Do you think that the Madras University should have a more effective power (than existing at present) of compelling the affiliated institutions to equip their libraries (a) with copies of a number of the best economic journals of interest (foreign and Indian) as may be definitely prescribed by the University; (b) with select Government reports of economic and statistical importance; and (c) with an approved list of books necessary for the professors and students of the Intermediate and B. A. (Pass and Honours) classes?

Some important considerations arise from the enclosed replies to my above question. There is, of course, no denying that one of the functions of the University is to see to the proper equip-

ment of the libraries of affiliated institutions. [See the University Regulations, Ch. XIV, 4 (d)]. The real problem of interest, in view of the conspicuous absence of adequate literature on Economics in most college libraries is this: If the University cannot in the interests of efficiency any longer be content with its present system of a few stray and general suggestions regarding library equipment either in the periodical reports of the University commissions or the occasional despatches of the Syndicate, what steps should be taken especially in the case of poorly endowed or indifferent private colleges that, for some reason or other practically starve the Economics section of their libraries? Some managers of private institutions make very poor grants to libraries and really sacrifice efficiency for retrenchment of expenditure. They bring in the convenient though often real plea of want of funds for an ideal Economics section of the library or sometimes come even with the authoritative suggestion that the books and journals recommended by the professors in charge of Economics are not needed for the students' examination purposes and in some cases, the concerned lecturers, as being in the opinion of the management the only people to have any great benefit of a decent literature on Economics in the college library, are asked to spend their own money and subscribe for the up-to-date standard books, costly Economic Reviews, Government Reports, etc. Considerations of efficiency weigh little with managers, always busy with an adjustment of their financial deficits; the wisdom of their ingenious suggestions and plausible excuses whenever approached for adequate library grants is too plain to merit any elaborate comment. Such being the situation in some colleges, it is proposed that the University should exercise an effective control in the matter of library equipment and even draft a list of the indispensable books, economic journals, Govt. reports, etc., which, every affiliated college should, according to its status,

be insisted upon acquiring for the library. This would avoid all "unseemly haggling between college authorities and college lecturers."

There is no doubt much force in the contention of one of my learned correspondents that any University dictation in such matters would infringe academic freedom but then such noble considerations might properly apply to a few rich institutions like the Presidency College, Madras, St. Joseph's College, Trichinopoly and H. H. the Maharaja's College, Trivandram, which without even any suggestions from the University would equip their college libraries with a splendid set of books and high class reviews and reports.

Any possible differences that might arise between the University and the professorial staff of the affiliated colleges in the matter of a judicious selection of the necessary books, reports, etc., might be obviated if the business is entrusted to the University Economics Board of Studies which should find room for representative professors of Economics from all affiliated institutions. The Syndicate or the said Board might call upon each college to submit an annual return of the details of fresh additions to the Economics section of the college library. Some useful recommendations might be made in this connection by the University Journal as suggested by Mr. Loganathan or by a Presidency Economics Association of all the concerned college lecturers or by "a salaried head" of the University as suggested by Dr. Slater. Some such minimum of important journals, etc., referred to by Mr. Venkatarangiah might, definitely be laid down by the University for the guidance of the affiliated colleges. With regard to rare books, reports, documents, etc., of economic import which cannot be easily purchased by the mofussil colleges, the University Library in Madras should at all costs acquire them and be giving access to them for a particular period of time to all bona-fide lecturers and students of the affiliated colleges. A sort of circulating library of specially rare books and reports should, in view of the wide territorial jurisdiction of our University, forthwith be established. As for the organisation of the Economics Section of

the Affiliated College Library, the University should insist upon the maintenance of at least three sub-sections: the General, the Professorial and the Students' Library class sections with duplicate copies of important books, reports, etc., of economic interest.

The financial aspect of the above suggestions may next engage our attention. Our Minister of Education and the University member in the Madras Legislative Council should be pleased to see that the Government supplies free of cost, all the required Government reports, abstracts, memoranda, etc., of economic and statistical interest to all the colleges affiliated to our University. This suggestion would, if accepted, relieve the managers of private colleges of a lot of financial burden which would otherwise fall on them. As for funds for an ideal equipment of the college libraries with costly volumes and journals of Economics, the aided colleges must apply to the Govt. for enhanced grants, must so popularise themselves as to deserve special library endowments from the generous public or must seek to effect some economies by some two or three colleges combining together and making wholesale purchases of books from standard firms. Any surplus funds of the Economic Societies or Clubs attached to the Colleges might to some extent be diverted for improving the Economics section of the college libraries.

Replies to Q. II.

From M.R. Ry. Rao Bahadur K. V. Rangaswami Iyengar Aul., M.A., F.M.U., Chief Professor of History and Economics, H. H. The Maharaja's College, Trivandrum: (31-1-1920).

"If Commissions of Inspection were wisely constituted and contained members of acknowledged scholarship in Economics and of real devotion to the subject, the colleges will be compelled to provide themselves with really adequate staff and equipment."

From Dr. Gilbert Slater, M.A., D.Sc.; F.M.U., University Professor of Indian Economics, Madras: (27-2-1920).

"The University should assist colleges in these respects. The University itself needs a salaried head."

From M.R.B. S. K. Peggannarayana Iyer Ayl., M.A., Principal of Salem College, Salem: (1-3-1920)

"The University may recommend the formation of such special libraries in colleges and recommend also special grants from the Government to aided institutions."

From Mr. K. V. Krishna Iyer Ayl., History Lecturer, Zamorin's College, Calicut: (11-3-1920).

"Yes. As the colleges under private management do not stand on their own legs there will be a temptation to starve the libraries and to sacrifice efficiency for retrenchment. A certain degree of compulsion may therefore be usefully exercised by the University."

(a) The number of journals must vary with the colleges. In the case of 2nd grade colleges, two or three standard journals on the subject may be insisted upon.

(b) The Government may be requested to supply their publications free of cost.

(c) Yes; but the publication of syllabus is not desirable.

From Mr. R. Rama Iyer Ayl., History Lecturer, Government College, Coimbatore: (30-3-1920).

Yes. The University may send round a commission of experts periodically and publish their remarks on the Economics Section of the College Libraries. The remarks should be constructive and suggest ways of improvement.

From Mr. J. V. Thomas, M.A., L.T., Professor of History and Politics, Findlay College, Mannargudi: (10-4-1920).

Yes. Why not at public cost as part of the educational machinery of the State to prevent uncertainty of supply and unseemly haggling between college authorities and the college lecturers.

From Mr. M. Venkata Rangiah Pantulu Garu, M.A., Prof. of History and Economics, Maharaja's College, Vizianagaram: (12-4-1920).

"Yes. The University must insist on every

affiliated college subscribing for important journals like The Economic Journal, The Quarterly Journal of Economics, The Economic Review, The Political Science Quarterly, The Indian Journal of Economics and the Journal of the Royal Statistical Society. This must be the minimum prescribed, other journals being obtained by the colleges according as their funds permit. Colleges must also be made to obtain Government reports of economic and statistical importance especially the annual reviews on trade, currency, wages and prices, agriculture, etc. I do not however see the necessity for the University drawing up an approved list of books. The University may call upon every college to allot a certain sum of money each year for the purchase of books on Economics, the actual selection of books being left in the hands of the professors in the colleges. The University Inspection Committee appointed to inquire into the working of the colleges may specially look to the proper and adequate equipment of libraries."

From Mr. S. Subbarama Iyer, M.A., Lecturer in Economics, Christian College, Madras: (27-4-1920).

"A decent literature on Economics is conspicuous by its absence not only in most college libraries but even in such public libraries as the Connemara and the University Libraries in Madras. This should be remedied. The ideal is that each college should equip itself with a good library. But as regards certain private colleges at least, the complaint is that they have not sufficient funds. So far as the city of Madras is concerned I think there is scope for some sort of federated effort among the several colleges with the University as the centre and the guide. But as to compulsion, I am not in favour of it at present; but there is no harm in the University making a recommendation to the colleges to equip themselves with the best journals, etc., which it may prescribe from time to time. There is no doubt that the colleges will try their best, as far as their finances permit, to comply with the recommendation."

From Mr. E. V. Raja Ram, B.A., Sub-Registrar, Musiri: (27-5-1920).

"I agree with all your suggestions since some poorly endowed private colleges practically starve their libraries and reading rooms. I gather that even now the University can exercise the power of disaffiliation in the case of colleges with ill-equipped libraries; but it is very often a rusty weapon in the scabbard. Why should not the University issue from time to time a list of standard books and journals, etc., prescribed by her Board of Studies for the benefit of the various private colleges? Some rich private colleges, the economics departments of which are presided over by able professors like the Rev. Father Carty, S.J., of Trichinopoly, and Rao Babadur K. V. Rangaswami Iyengar of Trivandrum may feel my humble suggestions would, when accepted, infringe academic freedom but the interests of the many private colleges can never be served unless and until our University exercises a detailed control and supervision over the composition and utilisation of the Economics section of the Library and the Reading room. I think the Government will very gladly supply the aided colleges with useful Government reports, statistical abstracts, etc., free of any cost if only the concerned Heads of Colleges apply for the same. I beg to add that special grants for the proper upkeep of libraries, etc., should be freely given by both the University and the Government."

From Mr. P. S. Loganathan, M.A. (Hon.), University Reader of Indian Economics, Madras: (18-8-1920).

"In my opinion a recommendation by the University that colleges should equip themselves with all the economic journals, Government reports and books that are recommended by a Select Committee of the Board of Studies and of the staff of the Economics department is sufficient. Further, the Economics Department of the University of Madras should publish a monthly

magazine wherein along with the publication of the results of the researches carried on by the professor and his staff (there should be offered from time to time) some useful hints regarding the selection and equipment of necessary books and journals."

Lower Secondary Arithmetic

BY S. RADHAKRISHNA AIYAR, B.A.,

Late Principal, Maharajah's College, Pudukotah

AND

K. VAIDYANATHASWAMI AIYAR, B.A.,

Retired Headmaster, Board High School, Tiruvalur,

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SRINIVASA VARADACHARI & CO., MADRAS.

BIFURCATION OF MATHEMATICS IN THE FIFTH AND THE SIXTH FORMS.

IN the Provincial Educational Conference held at Salem, there came a suggestion that, in view of certain changes brought before the S. S. L. C. Board, the Conference would do well to pronounce an opinion on the question of confining the S. S. L. C. Public Examination to the portions of the several subjects taught in the sixth form only. It seems that the Historians were all agreed on this point, with a view to lightening the burden on the youngsters. A Committee of representatives for History, Mathematics, and Science was appointed accordingly, and when the report was placed before the Conference the next day, it was found that the conclusions of the Committee were after all the work of what may be termed "faddists." Teachers, who are never tired of accusing others of want of a wider outlook and a sympathetic insight into things educational, do at times exhibit the same weakness, when they are called upon to discharge the onerous duty. The Mathematicians and the Scientists on the Committee differed from the Historians and pronounced that no lightening of the course in their subjects was possible, and that Historians would do well to try the experiment. They contended that every blessed chapter in their subjects was "important" and "impossible of forgetting," and that therefore the Public examination must invariably be extended to portions done in the two years' course! This report of the Committee was rightly condemned as short-sighted, when placed before the Conference. After some discussion, the report was shelved without the Conference pronouncing an opinion, thus defeating the very object with which the Committee was called into existence!

Now let us ask ourselves if it is next to

impossible, as the Committee thought, to bifurcate Mathematics and Science in the two highest forms. Believing as we do in the possibility of what is called "the concentric system" of teaching the several subjects in our high schools, we have no hesitation in asserting that it is always possible to make teaching more and more intensive, as we go higher and higher. Again, we would go the length of asking our readers if as teachers or students they did not come across the practice of limiting portions in the several subjects for the periodical examinations in their several schools. If it is possible to confine a class examination to the portions done in a quarter or a term of the year, does it not logically follow that it must be still more so for the portions done in a whole year? The very fact, that subjects like Mathematics can be taught, at every stage, as "unit truths", definite and finished in themselves, makes it possible to have recourse to tests at definite periods to see if the subject has been well assimilated. How then is it impossible to limit portions for the forms, five and six? If the portions admit of a bifurcation as suggested, there may be the complaint that the individuality of the teacher is seriously infringed upon, by not having a free play in shaping the gradation of the portions so circumscribed. We would only answer that this limitation of the teacher's individuality is no less evident to-day; and, on the other hand, we would venture to say that it will have a little more freedom in that the limitation is confined to only one form, as against two under the existing system. In other words, the teacher will be at liberty to have his own gradation of the subject in all the classes except the last.

Leaving for the present other subjects out of account, let us see if Mathematics does not allow of a bifurcation, so far as the fifth and the sixth forms are concerned. The elemen-

THE TEACHER'S ASPIRATIONS AND IDEALS.

[Translated from the Bengali of Prof. Lalita Kumar Bannerjee by Mr. L. V. Ramaswami, B.A., B.L.]

tary properties of triangles and circles, with simple deductions based upon them, may be conveniently put down for the fifth form; while the more detailed properties like the similarity of triangles, the inscribed and circumscribed polygons, the points of concurrence in a triangle, the properties of quadrilaterals may be taken up in the sixth form.

In algebra, simple, and simultaneous equations of two unknowns in the first degree, the fundamental operations, the standard simplifications, and the applications of the minor formulæ may be confined to the fifth form; while the equations of the second degree, with their graphical illustrations, theory of indices, the remainder theorem and its application to factorisation, etc., may be dealt with in the sixth form.

Though it is true that without a knowledge of the lower truths taught in the fifth form, the higher truths of the sixth form cannot be grasped, it does not follow that the pupils should also be tested in the process of the former. If they satisfy the examiner as to their knowledge of the higher truths, it follows that they have a solid knowledge of the lower truths. Why not then confine the test to what the pupils were taught in the sixth form only? If, as the Committee at the Conference opined, the students of History alone are to be tested in what they have learnt in the sixth form only, the result of the change will be to scare away students from Science and Mathematics, on the mere fact that in those subjects they will have to be tested in two years' portions, while in History they will have the apparent advantage of being tested in one year's portions only, let alone the comparative difficulties of the subjects.

We leave the question here for the calm judgment of our readers.

K. KRISHNAMACHARYA.

IN my previous essay "The Teacher's Hopes and Fears" I have attempted to show how a fresh feeling of stimulating strength has begun to influence the members of the teaching profession in our land. Now let us examine the conditions in England. During the last fifty years, (whatever might have been the state of affairs before then), the composition of original learned works in subjects like science, philosophy, mathematics, history, politics and economics, the composition of class-books, of books of criticism, and of commentaries, the editing of poetical works, dictionaries and reference books, the composition of the lives of poets and the work of translating ancient classical authors,—all this work has, in a way, turned out to be the exclusive monopoly of the members of the teaching profession in England. It is unnecessary to mention instances; the fact will be clear on examining the authorship of any book belonging to the above-said classes. Very probably the same state of affairs exists in other countries like France, Germany and the United States of America.

In this matter in comparison with the accomplishment of English teachers, the work of our teachers is insignificant. A few reasons for this disparity of achievement have to be borne in mind. In the first place, in the west, the acquisition and the propagation of knowledge are both effected through the medium of the mother-tongue whereas in our land both these have to be done through a foreign tongue; hence the work is not easy of accomplishment in our land. In spite of this difficulty, it is extremely gratifying to note that men like Profs. J. C. Bose, P. C. Ray, Brajendranath

Seal, Hiralal Halder, Jadunath Sarkar, Radhakumud Mukherjee and Benoy Kumar Sarkar have published the result of their original research work through a foreign tongue. Besides this, a few text-books in subjects like Mathematics, Science, Philosophy, Logic and Economics, and some books of criticism also, have been composed in English by the teachers of our land. Let us hope that the number of such books will increase in the years to come. But the question whether these text-books and books of criticism would successfully stand comparison with those of the same kind in the west or whether they are only models of plagiaristic achievement, is a question which should be left to specialists to decide. Then again, as in our Universities, instruction is given and examinations are held in a foreign tongue, our mother-tongue is not in any way helped or benefited by the composition of school or educational books. If our Universities prescribe the vernacular as the medium of instruction and examination, we are sure that our teachers will feel, to a greater extent, the injunctions of this duty of undertaking the composition of such books. The vernacular has been optionally prescribed as the medium of instruction and examination, in one subject alone, for the lowest examination of our University. A few teachers have taken advantage of this, by composing some text-books. This shows that if only favourable opportunities present themselves to our teachers, they can do infinite good to our national language and literature. In the field of elementary instruction also, there is scope for the publication of books on a variety of subjects. Many teachers have also achieved prominence by publishing such books.

The members of the teaching profession in England have however, not shown any great talent or cleverness in the composition of books in subjects like poetry, short poems, big romances, short stories, and comical, humor-

ous or satirical literature. Johnson and Goldsmith have, for eking out their maintenance, for sometime, done teaching work also but this is not particularly important or noteworthy inasmuch as they had adopted literature as their profession when they composed their famous works. Milton's teaching work is also not important or worthy of mention. Amidst the many hearsay fictions and stories current about Shakespeare's life, the story that he was for sometime a school-master is also heard, but this is neither reliable nor acceptable. The poet Gray was a University professor in name only. Though Carlyle was for sometime a tutor and a schoolmaster, he could not be strictly classed as a teacher. John Ruskin and John Wilson (known under the pseudonym of Christopher North) became University professors towards the end of their lives but they had, long before this, shown dexterity and cleverness in literary work. The one illustrious and monumental example of a teacher who was also an accomplished literateur, was the great poet and critic, Matthew Arnold. Many members of the teaching profession have, like Arnold, achieved distinction in criticism but Arnold's poetic powers have been a rarity indeed in the teaching world.

It is clear from the above that in the matter of pure literary work such as the composition of poetry, drama and other imaginative works, English teachers too have failed to play a very prominent or significant part; and so if the same state of affairs is prevalent in India, there is no reason for surprise or regret. We can only say that this is probably the result of some secret principle guiding the development of the mind-world.

I have shown in my previous essay that it is natural for people to expect that teachers who are ever immersed in the task of acquiring and imparting knowledge, would not merely content themselves with giving educa-

tion to students but would also propagate their knowledge amongst the masses by the publication of good books. It is also not improbable that the teacher would feel an incentive or impetus in this direction.

For yet another reason, teachers might be impelled to propagate their knowledge amongst the masses. The desire for fame is a natural incentive in man but there are different varieties of fame. In certain occupations, famous people leave behind them permanent records of their greatness. The permanent and visible records of the greatness of the architect, the painter, the sculptor attest to their fame for centuries and generations. Famous philosophers, historians, scientists and poets also leave behind them permanent records of their greatness, for, books too like stately palaces and beautiful statues and pictures, remain permanent for thousands of years. On the contrary, the songster, the actor, the speaker, the storyteller, the lawyer, the orator, the judge and the school-master establish a different kind of reputation. These acquire only contemporary fame and praise but after their death, there remains scarcely any permanent record of their work or talent. It may be that in the pages of biographies or histories, their names might be mentioned and praised; but yet it must be admitted that the clear remembrance of their work and talent fades away easily and in a short time and becomes vague like a mere rumour or hearsay report,—to such an extent that even in the life-time of the person himself the fame of early days, in many cases, gradually becomes shorn of its initial splendour.

Teachers belong to this second category mentioned above. The names of Doctors Arnold or Jowett in England, of Captain

Richardson, Derozio, Rajnarayan Bose and Ramtanu Lahiri in India are still well-known to many but a hundred or thousand years hence, their names will be mere names only and the clearness and force of their reputation will be lost.

For the reasons detailed above, a strong and powerful desire is born in the teacher's mind to leave behind him a permanent record of his knowledge. But even here, by this means he might only leave a record of his erudition and knowledge but not of his skill in teaching.

The fact that in spite of this very strong desire to establish permanent fame, many teachers have not cared to publish books and popularise themselves amongst the masses but are merely content with fulfilling their ordinary functions and duties, can certainly not lead any one to say that their lives have failed of their purpose and have been only a waste. The fact is that many teachers think that distinction in the composition of literature can be gained only at the sacrifice of their proper functions and duties. They remember that literary work and the composition of books do not form their true and normal function and they think it expedient and even praiseworthy to remain as "silent poets" and "mute, inglorious Miltons."

We cannot regard this impression as logical or proper. Even as members of other professions have both the privilege and the responsibility of imparting their knowledge to the world at large, after fulfilling their own normal functions, even so the right and the responsibility exist in the case of teachers also. If members of other professions can accomplish this work without prejudice to their own duties, why should not the teacher also do it? Rather it is to be expected that

the teacher could impart to the world at large the knowledge he has acquired and perfected so laboriously, to a greater extent and in a much easier manner, than members of other professions. Teachers have a moral and legal obligation to perform this duty.

Not merely in the interests of the world at large, but in his own interests, it is expedient that the teacher should be zealous in this matter. Of course it is an excellent ideal for the teacher to be solely and exclusively concerned with the work of teaching; but for the proper preservation of his mental health and for the all-round development of his mental faculties, it is essential that he should have variety in his sphere of work. If he spends his life exclusively amidst the narrow circumscribed sphere of the student-world, in spite of his great erudition, the chances of his becoming a 'frog in the well' or a 'Kupamanduk' are great indeed.

Of course it cannot be denied that his direct and primary duty is towards his students and that his duty to the world is only indirect and secondary. So he should not be blamed if he is content with fulfilling his chief duty. If he is able to do more, that is very creditable but if he is not able or if he does not wish to do more, then society must be satisfied with what he has done.

I would now end this article by considering the essential qualities of an ideal teacher in relation to his chief and primary duty of imparting instruction to students.

The ideal teacher must necessarily have two qualities, viz., skill and ability in teaching, and joy and enthusiasm in his work. He should be able to do his work so skilfully and cleverly that, however difficult or uninteresting the subject may be, the student understands the subject in an easy and natural

manner and, besides, feels joy in the acquisition of knowledge. Distaste, indifference, idleness and torpor should never mar the teacher's work. He should instil into the minds of students what joy there is in the acquisition of knowledge, not merely through personal advice, but through the example of his own flaming enthusiasm and zeal. "Gladly would he learn and gladly would he teach" should be the basic motto of his life.

The teacher should not think that he has fulfilled his duty by infusing some book-lore or book-knowledge into the brains of his students. The work of teaching is not like pouring out water from a full vessel into an empty vessel. The true method of teaching consists in evoking the latent thinking power of the student and enlivening it. Without this there can hardly be any permanent blessing. The teacher should so regulate the methods of his teaching that his students are trained up to understand and appreciate methods of independent thinking and original research in subjects like literature, philosophy and science, that they are enabled to understand their own aptitudes and chalk out their own path among these subjects, and that they are rendered competent to pursue original research and become efficient in, and enthusiastic about, this work. I have heard that many teachers in the West train up students on these lines and that in our land Profs. J. C. Bose and P. C. Ray also adopt this method. To enliven the student's powers of thinking and appreciation, to open out his powers of assimilation, to instil into his mind the love for the acquisition of knowledge and to infuse into him a deep enthusiasm for the same,—these form the true function of the ideal teacher and furnish the true criterion of his skill and capacity. Even as seeds

develop into trees and trees into flowers and fruits, even so the instruction given by the teacher also results in the formation of the student's character.

At one time in our land no distinction was recognised between religious and ethical instruction and secular instruction. Instruction in those days was given in the teacher's house. The teacher was not simply a profoundly learned man but was a man of great respectability and of a noble stock. Even now many people desire that teachers should not merely be learned men but should be of a noble and faultless character. People desire that teachers should be guileless, selfless, without avarice, possessed of self-control, simple by nature, truthful, kind, philanthropic, high-souled and in every way faultless.

Doctor Arnold of Rugby is an illustrious English example of how the lives of students could be nobly cast and moulded by the influence of the teacher's character and by the power of his teaching. A similar beneficent influence was exerted, we are told by the late Ramtani Lahiri and Rajnarain Bose. On the other hand, by the power of Derozio's example, teachings and association, his students had developed into loose and licentious characters. The late Gourisankar De, Hariprasanna Mukherjee, Mohitchandra Sen, Benoyendranath Sen and, amongst the living, Profs. P. C. Ray, Brajendranath Seal, Jogeschandra Ray may be cited as instances of ideal teachers possessed of an ideal character, in our land.

If the teacher is endowed with all virtues, then certainly it will make for the good of society; but it cannot be hoped that all teachers would be models of virtues. All

men are made up of good and evil and we cannot forget this fact when we talk of teachers. If besides skill and enthusiasm in teaching, the teacher, is also endowed with an ideal character, then it is a perfect combination; but even in the absence of an ideal character, the other two qualities,—skill and enthusiasm in teaching,—are indispensable. I have heard that there was some great blot or stain in Captain D. L. Richardson's character but his students idolised him for his wonderful teaching powers and for his love towards this work.

However noble-minded and good the teacher may be it is useless to expect all his students to be developed into models of goodness like himself. Even as the teacher, however eminent a genius he may be, cannot be expected to train up all his students into geniuses, for the success of his skill and efforts depends a great deal upon the students' ability to understand and assimilate,—even so, the teacher however noble-minded a man he may be, cannot be expected to train up all his students into examples of nobility. By a few hours' teaching, association and advice every day, the teacher cannot be expected to entirely eradicate the influence that has been exerted upon the student's life by such factors as heredity, environment and household training. Evil-minded Alcibiades and the criminal Critias were the pupils of such a good man as Socrates, the war-like Alexander was a *chela* of Aristotle and the infamous Nero a pupil of Seneca.

HISTORY AND CIVICS TO CHILDREN.

(Continued from p. 345).

II. HOW CLASS LESSONS MAY BE MADE IMPRESSIVE.

1. *Black-board summary.* We know full well that every lesson in history is only an oral one and to guide us in that, we have the following statement before us.—The clearer is the teacher's expression with emphasis on the main ideas, the greater is the impression produced in children. But in order to aid them in the remembering of the main heads under which we develop a subject, we can give the children at the end of each lesson a summary on the black-board. Reference may be made to some of the headings under which the lives of Sivaji and Ranjit Singh have been dealt with in the course of this article. Pupils may also take down the summary in their short note-books as this is only meant to be more a note-taking than a note-dictation.

2. *Collection of pictures, etc.* It has been already referred to in detail how the instinct of collection may be stimulated in children. This also forms one of the aids to the teaching of history lessons in the beginners' classes. A drawing or a cutting of the fort of Purandhar would recall to the children's memory an account of the adventures of Sivaji. If more specimens could be had they could easily set up a small museum in the school. The best note-book, the best models, the best charts, etc., may be preserved in the school.

3. *Excursion to places of historical interest near the locality* would be a delightful programme of work in the school.

4. *Short composition in vernacular during*

vernacular periods on subjects done during history periods may be set to children. Here the children could have the black-board summary before them and develop it.

5. *Century chart.*—The teacher and children can maintain a record of the following kind. The teacher's copy is a big size paper which enables him to keep the same hung in the class-room.

4000 years ago	16th century	17th century
1. Elephants Chariots Bow and arrow 2000 Years Ago 2. A pillar of Asoka	1. Akbar	1. Taj Mahal 2. Fort of Purandhar 3. Fort St. George
18th century	19th century	20th century
1. Lord Clive 2. Rock Fort, Trichy	1. "England Expects Every man to do his Duty." 2. A steamer on fire 3. A stamp current during the time of Queen Victoria.	1. Soldiers' marching 2. Submarine 3. Aeroplane

Explanation of the above chart :—

A chart is divided into many parts as shown above, each part representing a century. The above is only a type of one such chart which may, however, be adapted to the convenience of the teachers, with due regard to the events or occurrences narrated in the class. Pupils of the fourth and fifth classes may be introduced to understand what a century is and how centuries are counted. Then the teacher proceeds with the entry in the chart.

In the above chart it is shown under '4000 years ago' that the ancients fought with bows and arrows and men were mounted on elephants and chariots.

A drawing of the three mentioned above must be shown in the chart. Then under the 16th century a picture of Akbar can be mount-

ed. Under the 17th century, children can draw or procure cuttings of the Taj, the Fort of Purandhar and the Fort St. George and thus one could see from the above the events of the 17th century as told to children in particular. Thus the whole chart in general, explains the method of maintaining such a chart and its value to children. Perhaps it would appear that everything involves drawing and every effort we make is to make things ready and easy for children. But, yet it is a way of making children throw their hearts into the work if we could assign them such occupations. Even the chart may be filled up inviting the suggestion from the children as to the nature of drawings they would like to have, in order to remember any event or the life of a person told to them. One or two short sentences that summarise the lesson may also be written therein.

Dates.—Our introducing the idea of centuries to children may tempt us to teach them dates. But in the case of children this is absolutely unnecessary and in exceptional circumstances they may be regarded as of secondary importance and of temporary interest to them. Such of the dates as are connected with a holiday or a festive day falling on the particular day of each year may if possible be noted in the century chart.

King Emperor's Birthday Durbar. } Fall on the same day in each year—Both holidays and days of rejoicing to school children.

4th August 1914—Declaration of war.

11th November 1918—Termination of war (Remind children about the day on which they observed two minutes' silence at 11 a.m.)

30th November 1920—Elections—also a holiday.

10th January 1921—Visit of H. R. H. the Duke of Connaught, our Emperor's uncle.

Queen Victoria reigned for such a long period as 64 years from 1837 to 1901.

Short references as to why we consider these dates important, are to be made by us as occasion arises.

In order to aid the children in that respect, namely of remembering dates, we have to make a beginning in class V by adopting the following plan. If children could be informed of interesting and noteworthy current events they would immensely be pleased to hear them and circulate them to their co-mates and parents. A teacher who is an ardent newspaper reader would find many an interesting event which he could communicate to children. The following may be taken as some examples of current events both here and abroad in 1920-1921, that could be told to children.

1. H. R. H. the Prince of Wales' proposed visit to India.
2. His visit postponed.
3. How the Prince behaved in Australia when the train he was travelling in was derailed.
4. The visit of the Duke of Connaught as a substitute for No 2.
5. The death of Tilak the patriot.
6. The death of C. Cunnann Chettiar the philanthropist.
7. The home-coming of Lord Sinha, the first Indian Governor.
8. An account of the motor-car accidents in Madras.
9. Two serious railway disasters [1. Arkonam ; 2. Bommiidi]
10. Elections day.
11. The Duke of Connaught's arrival in Madras.

12. The opening of the Reformed Councils.
13. Announcement of Lord Reading as our future Viceroy.
14. Floods in the Southern Districts of our Presidency.
15. Mahamaham (once in 12 years.)
16. Census operations (once in 10 years.)

Apart from this, other important events as arrivals, departures, festivals in temples in or near the locality, and anything which is of local interest to children may very well be included under this head.

TEXT-BOOK.

In spite of the many points levelled against prescribing a text-book, a text-book in many cases may be found to be of some value, both to teachers and pupils, provided it is not given undue importance. The oral teaching in the class should precede the reading of the text-book, inasmuch as the former is intended to supplement the text-book. The advantages that the children derive from a text-book are, firstly, it gives children ample scope to review the class lessons at home; secondly, it gives a connected account of the events, and lastly forms another source of vernacular reading. The evil of cramming that this may seem to lead to, may certainly be overcome by resorting to the different kinds of expression work we have enumerated already, namely, Collection work, maintenance of a chart and any other creative work by children as clay-modelling and card-board modelling. Other lessons not found in the text-book may be remembered by children by having the black-board summary in front of them. References to places and towns or provinces in a map of India would also have to be occasionally made in the course of oral teaching in Classes 4 and 5.

DRAMATISATION IN THE EARLY STAGES AND ITS CONNECTION WITH HISTORY OR CIVICS.

In the first year course of the school, drama or, in the strict sense of the school method, dramatisation forms one of the useful and effective ways of expression in story-telling. This dramatisation appeals to children more than verbal description and explanation. This cultivates in children a taste for imitating good manners and good behaviour by observing the part played by the leading characters in the story, and provides them ample facilities for clear and easy expression in their mother-tongue, in case we keep to the spirit of the story and not overdo the acting. All text-books in vernacular and English for children, deal with lessons in prose-form. But these prose lessons must be converted into dialogues with an addition of more characters if found necessary. Thus it gives the teacher some more exercise in thinking about and arriving at a correct understanding in enacting short pieces in the school. Such dialogues or dramas should be enacted with due consideration being paid to the suitability of the language and the idea contained therein with respect to the age and development of the children for whom they are intended. Thus the dramatic instinct is roused in them. How often do children desire to act like the one King of whom they have heard much during a story lesson, or speak like a Minister as he addressed an assembly, or walk like an old Sanyasin as he met the king in his morning ride. The enthusiasm of such a nature for imitative action exhibited by almost all children from the lowest to the highest class in a Kindergarten school it is needless to mention. There will, of course, be certain children who feel shy and hesitate to take

part in dramatisation. But, before the close of a year, these shy youngsters would become forward boys stimulated by the example of the others in the class including the class-teacher.

Harriett Finlay Johnson in her work, "Dramatic Method of Teaching" fully upholds the use of this method and its importance to classes which do not strictly belong to the Kindergarten. Many of the educational theories 'Teach from the realien; Seeing and doing,' etc., can be said to have a bearing on this method. She introduces her children to the dramas, first of all, beginning with history lessons. The reason is this. To put that in her own words, 'I desired that the children should act real characters and not, at first mythical creations.' Moreover as she points out clearly in her book, her school had a supply of good library books containing many scenes from historical stories. Our difficulty in the way of beginning dramatisation from the lower classes, with history as the basis is the want of suitable books, on historical dramas, with tales selected from Indian History. But in many cases we do adapt to our children, the great stories of the Ramayana, Harischandra, Buddha, Nandanar, Siruthondar and the like, and stage only some of the select scenes from the above stories. This is the only course open to us. H. F. Johnson points to us that not only can stories be dramatised as is generally done now, but also the other subjects in the school curriculum can be successfully taught through dramas. But, before such a method is tried in our schools in teaching the other subjects and found to be satisfactory or not, we cannot pass any judgment upon the extension of the method as suggested by her. But in the case of History and Civics we can make a trial, as

such lessons should be presented in story form, and hence we can stage such of the historical stories as would be possible for us to dramatise.

Flora Annie Steele in her book 'The Dramatic History of India' (K & J. Cooper, Publishers, Bombay) shows us how stories from Indian history can be produced in the form of short dramas. The book contains twenty-nine plays and many of the interesting stories there may be adapted in the several vernaculars and tried first of all in the classroom. If this procedure meets with success, we could act them outside the school in connection with a school-day or a prize-giving day or any other school function, to great advantage. Thereby children gain the pleasure from acting and also obtain a sound understanding of the subject more thoroughly by this method of dramatisation, than by any amount of pictures or black-board summary.

In this connection we may touch upon the other method of creating interest in children by acting what is known as the pageant. Pageant, as it is understood, is only a dumb-show. This may be an exhibition of articles, dolls or things, followed by a description which is one similar to that which would be told by the article itself if it were endowed with life and were able to speak about itself, its own time and career. The following topics concerning History and Civics may be suggested under this head as suitable subjects to be played by children both in and out of school.

1. The latest improvements in travelling can very well be enacted by little children with models showing the respective conveyances. This may be in the form of a dialogue as taking place between a father and a son

under the presumption that the father unknown to the life in the metropolis has come out to the city to see his son reading in a college and to witness the Park Fair during the Christmas.

2. Boys think themselves to be the living statues of famous persons and narrate the part played by them in the history of their country during their time.

3. The teacher may also with an old coin or a picture of a temple, or building or a button belonging to either a soldier or a policeman, describe the time when the coin was current, or describe the time or more especially of the life of kings under whose reign the buildings were built, or narrate the adventures of a policeman or a soldier as the case may be.

4. The journey of a post card may also be enacted by children with great interest and satisfaction.

Many other short scenes of the above type chosen by the teacher or selected from dramatic books may be staged after being adapted to the children taking part in the enactment.

CIVICS.

Under the teaching of Nature-study we included the following topics in order to give the children an inspiration and spirit for a regular, careful and systematic observation of the surroundings.

Examples:—Railway station and its working, oil-mill, sugar-mill, excursion to a village or a town near by for the observation of canals, sluices, means of irrigation of fields and watering of gardens in the former and many of the public offices and buildings, their working, etc., in the latter. Now then, the teaching of this subject of civics will only be

an extended study of the above together with the learning of some more details. Children can watch a policeman standing in the bazaar road to preserve order and peace, a postman delivering letters or a sanitary maistry ordering a peon to clean the streets, etc. Even children in the villages would have had similar opportunities to note the following things casually, in their morning or evening walks: Postman and policeman taking signatures from one of the gentlemen there, possibly from the village Karman or Monegar, the Village Munsif presiding and deciding cases in his court, the Revenue Inspector on his usual tour, the vaccinator vaccinating children and his very presence in some cases causing fear in children and their parents, the children's own Supervisor of Schools, popularly known as the 'little Inspector', coming on his frequent visits, the public works maistry or the overseer inspecting a road under repair or a canal bridge under construction, the Salt Sub-Inspector on his occasional visits inspecting a toddy-shop, a Sub-Assistant Surgeon or any health officer coming to the village either at the request of anybody to attend upon a patient or with a view to study the public health there during any epidemic season and other officers visiting the village in some connection or other.

Utilising such instances as narrated above we can easily give our children a knowledge of the working of the various departments taking the village as the unit of government. After imparting to them instruction of such a general kind, we can go into some detail and give them interesting lessons on the working of, and the several officers connected with, the various departments of Government. This will furnish them with an idea of the way in which

the whole machinery of Government is moving. In the case of the youngsters, it is not at all essential for us to enumerate the several officers in any department from the lowest rank to the highest and ask them to remember the same. In the two higher classes we can give them the names of the heads of departments in the Taluq and District respectively. This would lead us to let them learn what the duties of a Tahsildar or a Collector are. Lastly they can (only the children of the highest class) remember the following names also: The Governor or the head of a Province, the Viceroy or the Governor-General of India, the Secretary of State and his Council and lastly the Parliament and the King, all details, however being thoroughly deleted. We can also tell them that the 17th December 1920 marked an important era in the administration of this province by giving effect to the Reform Act and how the present administration is carried on by a Reformed Council and Indian Ministers to administer the transferred subjects.

Interest in this subject can best be created if children could see some of the officers in the school itself as it is their nature to be fully pleased at the sight of many visitors to the school. The village schoolmaster can easily arrange for their visits; when these stay there for a day or two. Such an acquaintance with the other officers will make the teacher realise the duties of the other officers, and the working of their respective departments, and also bring him into contact with other activities, which are, 'so to say, outside his own limited sphere of work. Such officers would suggest to the teachers the ways and means of improving the material condition of the school.

Children of the higher grades could have

short lessons on the various sources of revenue and how it is expended. Under this they learn how education is extended and aided, how the health of the people is looked into, how order is kept up, how agriculturists are aided by the opening of sluices, canals, and waterways, how travelling is made easy and safe by the laying of good roads and the running of railways and lastly how commerce is increased. A chart in which are indicated some diagrams of the following would show the developments that have taken place in the several modes of communication from the olden days up to the present time.

A.—Land.

Bullock cart—Riding on horseback—a coach—a Jutka—a Riksha—a cycle—a Railway train—a motor cycle and a motor car.

B.—Sea.

Catamaran—Boat—Ship—Steamer—Submarine.

C.—Air.

Aeroplanes.

[The children could make some models of these in clay, paper, card-board or wood as they choose.] Will not these reveal to children the various inventions and discoveries of the present day? Better they can realise these advancements and truly appreciate the services of the above, if once they are led to think how in olden times it would have taken for their grand-fathers or great-grand-fathers, full three months and more to accomplish a journey to and from Madras perhaps in respect to a suit pending in the Madras High Court, and how such a journey now-a-days could be performed in a day or a day and a half at the most.

These lessons are to be graded in order of difficulty and each class may have lessons on

what is going on abroad regarding the administration and working of the various departments of Government. Here we can suitably apply and follow the concentric method of teaching. Nothing by way of statistics need be given to children of the Elementary School. All these lessons taken as a whole and perhaps, a summary of these lessons will give the children some knowledge of the several benefits received under the British Raj. By carefully looking into the duties of the officers enumerated, a study of this subject in the children's school would serve as a proper foundation for the children in seeing into and performing their own duties unto themselves, to their family, to their school, to the State and to God. Perhaps then, they can realise by these and similar concrete examples, that 'The path of duty is the way to glory'.

HAND-WORK—HOW THE ABOVE LESSONS ARE CORRELATED TO IT.

Now and then, suitable references have been clearly made in the course of this article as to how best hand-work may be correlated with History and Civics, and how it plays an important part in the Elementary-school-course, as it is intended to develop the creative faculty in children. Yet it is not to be understood that each lesson does follow a lesson on Hand-work. This is, of course, carrying it too far.

A SUGGESTED COURSE IN HISTORY AND CIVICS.

The following scheme of work is only suggestive of a regular scheme of lessons under History and Civics. Some of the stories may also be taught under Story or Moral Instruction lessons, as it was pointed out that there could only be some differences among the objects of teaching them, in so far they are intended for children. To this scheme some

short stories from English History are also added. Any change may however be made, according to the bent of the teacher and it is left to him either to include or exclude stories from English History. These stories under the present scheme relate only to classes 4 and 5 and not to the lower classes. Just in order to give ready references to the teacher as regards these stories a list of books, both in Tamil and English, is mentioned against some of the items in the scheme, wherein they could find interesting accounts on the topics.

The school course is divided into two terms. One, the long term from the middle of June to the middle of December, with a short break in September—October for Dasara holidays, and the second the Short term, from the middle of January to the middle of May. Series A relates to the first session in the long term up to the Dasara holidays. Series B relate to the latter part of the same. Beginnings in the introduction of these lessons are made in class II and are extended up to and including class V of an elementary school. Wherever the same story appears in two or more classes it is expected that the concentric system of teaching will be adopted.

A COURSE OF LESSONS IN HISTORY AND CIVICS.

CLASS II.

LONG TERM (Series A).

[Only elementary lessons are given in this class].

1. Rama crying for the moon.
2. Rama's marriage.
3. Sita and the golden Deer.
4. Krishna—his boyhood. (Boyhood of Krishna in Tamil—Longmans Green & Co.)
5. Pandavas—Their boyhood. (The boyhood of the Pandavas—Sri Subramaniam & Co., Royapettah.)

6. Ekalaiva.
7. Buddha carrying a lamb. ('Buddha'—a Tamil drama by P. Sambandam.)
8. The Hawk and the Dove or the Story of Sibi.

Series B.

1. Our Headmaster—Our Governor—Our King. Pictures of Their Imperial Majesties.
2. The Policeman—The Soldier.
3. The Postman.
4. A Railway Station.
5. Pictures of buildings, ships, steamers, battles, King's Coronation, soldiers' march, etc. Talk about these pictures.
6. The village officers.

SHORT TERM.

1. Nandanar (Nandan in Tamil Prose—Srinivasa Varadachari & Co.)
2. Siruthondar (a drama in Tamil by P. Sambandam).
3. Sakuntala and the lost ring.
4. The Story of Druva.
5. Select short stories from Vikramarka Charitram. (Parts I and II. G. A. Vaidyanathan & Co.)
6. Continue 5 under Series B.

CLASS III.

LONG TERM (Series A.)

1. The Boyhood of the Pandavas—The winning of Draupadi.
2. Dhurvasa & Dhuryodhana (C. Coomarasamy Naidu & Sons.)
3. The Story of the Ramayana; Rama and his brothers; Rama's marriage; His exile; Bharata's devotion to his brother; Ravana carrying away Sita; Rama's quest; Hanuman's crossing the ocean; The battle of Lanka; Return to Ayodhya. (Ramayana-saram in Tamil—Vivekabodhini Office, Mylapore).

4. Harischandra the Just. (A drama in Tamil by P. Sambandam.)
5. Prahlada.

Series B.

1. Pictures as in 5. (II Class, Series B, item 5.)
2. The Durbar Day: The flag of the British Empire. (Draw a flag.)
3. The day of Feasts: Deepavali and Karthigai.
4. The day of Fast: Sivarathri day. (Stories connected with items 3 & 4 are told to children.)
5. Simple Lessons on Civics: Schools—Hospitals—Police-Station. The Post Office—The journey of a Post-card may be dramatised.
6. Our King, his father and grand-mother (Queen Victoria in Tamil—Srinivasa Varadachari & Co.)

SHORT TERM.

1. Alexander and Porus: Alexander and the robber.
2. Stories of Sultan Mahomed.
3. Rupamat's devotion to her husband.
4. Prithivi Raj (a drama in Tamil—C. Coomarasamy Naidu and Sons.)
5. Padmini (in Tamil—Lalitha Vilas Book Depot, Triplicane).
6. Chand Bibi.
7. The Taj Mahal and the 'Builder of Palaces.'
8. Sivaji and his adventures.
9. Ramdas and Sivaji.

CLASS IV.

LONG TERM (Series A).

N.B.—1. Biographies of eminent persons of our country as for example, Sir Salar Jung, Sir T. Muthusami Iyer, Pachaiyappa Mudaliar, Gokhale, etc., may be given to children as

occasion arises: Their pictures may suitably be hung in the class-room.

2. More tales including those studied in the previous classes may be told to the children of the Classes IV and V in more detail.

[Either in History, Story or Moral Instruction periods].

1. Savithri and Sathyavan.
2. Sakuntala and Dushyanta.
3. Damayanthi and Nala.
4. Sultana Rezia.
5. (a) Tanjore—The old palace and the tower.

(b) Mahabalipuram—its ruins.

(c) Madura — The Thirumalnayakan palace.

(d) Vijayanagar — Ruins — Krishna-deva Raja.

[Pictures of the above may be had for the school.]

6. The names of some of the religious reformers:—Sankaracharya — Ramanuja — Madhwacharya, Mahomet the Prophet—Guru Nanak and his life.

Series B.

1. The first European explorers. Their towns.
2. The trading companies that settled in the East. Their towns.
3. How the English got Madras, Bombay and Calcutta.
4. Madras and the Fort St. George — Lord Clive.
5. Pondichery and the French—Dupleix.
6. Trichy and the Rock-fort: The Siege of Arcot.
7. Educational, Sanitary, Public Works and Postal departments.
8. How to send a Money Order (Do this in class with a printed form).

SHORT TERM.

(Stories from English History).

1. Tales of the Great War. [See Tales of Our Times. Macmillan & Co.]—Show pictures of new inventions in warfare (Draw these in a chart kept for the purpose.)

2. Nelson and Hardy.
3. Casabianca.
4. Sir Philip Sydney.
5. Charge of the Light Brigade.
6. Bruce and the spider.
7. King Alfred.
8. Queen Boadecia.
9. Agil the hunter.

N.B.—All these lessons are followed by a black-board summary which the children can take down.

CLASS V.

LONG TERM (Series A.)

1. Our ancestors (The Ramayana and the Mahabaratha—Short and continued stories of the two.

2. Buddha the Wise and Asoka the Great.
3. Aladdin the Muhammadan King—Padmini the Beautiful.
4. Akbar the Greatest of Moghuls.
5. Aurangzeb and Sivaji.
6. The coming of the English and founding of a British Empire in India.
7. Haidar Ali and Tippu Sultan.

[Prepare a century chart and mark the events according to the centuries in which they took place—Events studied in this class will do for this purpose.]

Series B.

1. A map of India, showing British possessions (Presidencies and Provinces) and Native States. (A picture of Native Princes at the Durbar or any other picture showing the Indian Princes may be procured for the class.)

THE STUDY OF HISTORY.

HISTORY may be defined as the biography of great men or the biography of a nation. A real study of history includes Sociology, Science, Literature, Art, as well as Parliament, Government and Wars. Obviously the study of it is vast and comprehensive. Yet, its study cannot be grooved into merely a chronological statement of the prominent historical incidents with the various reigns of a nation. Such a study is far from its aim. Apart from the special interest shown to the events of the different dynasties that have ruled a nation, we must also consider the gradual development of the different aptitudes, tasks, literary influences, social changes, and chiefly the morale of the nation, as they come to prominence from time to time, in the course of her annals. The students especially need not trouble themselves much about the *a priori* facts of history, so much as the *a posteriori* knowledge of the historical events. The obvious reason is, that the students will naturally lack the very little interest they have, if they begin to question about the intricacies and the non-conflicting results, the researchers are able to furnish us, every now and then.

Seeing superficially the connotation and the scope of the question, it is next to consider how history differs from other sciences and how the other sciences help its study. Both of them vary as regards subject-matter but they are inter-twined and inter-dependent as regards their bearings on this world. The introduction of Railways is as much a pride with the scientists as it is with the historians but the nature of observation is quite different between the two. If the former are keenly intent on the actual working of the locomotive engines, the other are no less keen in noting,

2. The greatest of Governors-General: Lord Bentinck—Lord Ripon—Lord Minto—Lord Hardinge — The present Governor-General.

3. Ranjit Singh.

4. The Postal-system: Savings Bank (a book); Money-orders (an M. O. form), Receipts (a receipt); Telegraphs (a form to send a message.)

[Those noted in brackets may be procured for the school, to make the lessons impressive.]

5. The Revenue Department: Important officers in the District: The various sources of revenue. How the revenue is expended: The importance of the Military, the Naval, the Police, the Judicial and the Public Works departments.

6. Our Government:

The Reforms and the new Indian Governor.

The Great Indian National Assembly or The Indian National Congress—founded in 1885.

SHORT TERM.

N.B.—(i) The following lessons are to be followed by a black-board summary.

(ii) This class could maintain a record of current events for the year, heard by or told to them.

1. The Great War and Lord Kitchener.
2. Ancient and modern methods of warfare.
3. Do. do. do. communication: (Make suitable diagrams.)
4. Nelson the Greatest Naval Soldier.
5. Wellington and Napoleon.
6. Captain Cook.
7. Florence Nightingale.
8. Sir Richard Whittington.
9. King Canute by the Sea-shore.

The teacher could read to children short publications on these topics—(in Tamil by Coomarasamy Naidu and Sons).

S. JAGANNADHAN.

the influences on the general trend and temperament of the nation ever since the introduction of the railways up to the present day, on the general increase in the volume of trade, attendant upon quick and frequent communication from one part of the country to the other, and lastly noting how far the new system of easy communication has succeeded in removing the sedentary, stay-at-home, superstitious old social scruples, yielding place to higher thought and wider outlook. Again the many ingenious and subtle scientific volcanic achievements of either J. C. Bose, or P. C. Ray, matter to the historians only in so far as they have affected at least one particular section of the Indian community and in so far as they have raised the status and greatness of India in the scale of other nations. So, we cannot think exclusively either of science or of history. Each department of knowledge contributes to the greatness of the other. Any line of demarcation or ratio is quite impossible between the two. If only we peruse a particular subject with an unprejudiced eye, our estimation of it will be such that will allow of no ground for either speaking low or hate any subject, though one has the innate disposition to love one particular department of knowledge more than the others, inasmuch as that peculiar individual desire enables him to go very deep into the study and make him unravel the unknown and the mystic.

Clearing the basis and the relation of History and Science, it is next to consider how far the obstructive criticism of some scientists holds good. They hold that history is not only a dead subject but also a communication of corruption to the living or a sort of mortification. Those who express this must also maintain if they are consistent and logical,

that the human memory is of no service or is so positively pernicious, for, history according to them is only a memory of the community. Milton says in defence of history, thus :—

“If it be a high point of wisdom in every private man, much more is it in a nation to know itself, rather than puffed up with vulgar flatteries and encomiums for want of self-knowledge—to enterprise rashly and come off miserably in great undertakings.”

The study of history is important in that it gives practice in argument from uncertain data; in the weighing of evidence; in the balancing of probabilities; in the suspension of judgment; in the calculation of motive from a study of action; and in the tracing of the connection between cause and effect among human affairs. The study of it trains also in the criticism of sources; in scepticism concerning mere assertions; in methods of research; in collection of materials, and in classification of results in literary presentation. Not only does it train the mind and broaden the character, it further begins to perform those services of information and interpretation which are necessary if the immature youth like us, is ever, to become the citizen equipped for his duty or the man fitted to face his destiny. A knowledge of history is very essential to a citizen who wishes intelligently and worthily to exert his influence for the welfare of his community. He must be acquainted with the path along which the people have moved to their present position, if he desires either to aid them towards further progress or to desist them from further disintegrations. “Only he who understands can know what should be and will be” says Carlyle. Carlyle, also observes “that history is the letter of instruction which the old generations write and posthumously

transmit to the new.” So, history is the interpreter of life. History is man's self-realisation in time. It attempts to explain the past in order that it may interpret the present and afford guidance to the future. The study of history enables us to note the different forms of community into which men have organized themselves; observe their growing knowledge of and control over nature inanimate and animate; trace the relations of human societies to one another in peace and war; and finally make ourselves acquainted with outlines of development of philosophical and religious thoughts. The historians find after hard study and consideration that the mystery of this unintelligible world has, to some extent become clear, that the problems, intellectual and political, which have to be solved, have assumed a more manageable shape and that the pathway of human progress has revealed itself.

Let us go from the importance of its study to its draw-backs and dangers attendant on it. The historians must own that there are few really interesting histories and the histories of all countries are dry. The authenticity of most of the facts are not vouchsafed. The historians are seldom impartial in their treatment. They are either too political or run into antiquarianism. So, they do not pay equal attention to all the aspects of the problem. Moreover, history is commonly too dry for a continuous study but the saying “History never repeats itself” makes some to think its constant study to be interesting. It is true that history never repeats itself in regard to some details as there can only be one Charles I or Akbar the Great. Nevertheless, if we read the history of a particular nation thoroughly we can say at least positively though not precisely, the general forces that must have

been at work in the growth of some other nation. The same Charles I or Akbar the Great cannot come, but one like each of them, a country is bound to possess, in the history of her evolution.

The utility of this study of history can be divided into three heads :—Professional, Intellectual and Moral. A successful statesman and diplomatist must very well know to discern and deal with the traditions and prejudices of his particular nation and such information he can gather only from the pages of his own country's history. So also the generals and admirals train themselves in the arts of strategy and such various military and naval exploits in which their predecessors and forefathers were admirably skilful. Again for those who do research work in Archaeology, Philology and kindred sciences, the study of history is indispensable. The intellectual advantages for a student of history are many. It supplies him ample food for thought; he has definite and profuse facts to be cited. His outlook of things is not narrow but broad. He is calm and deliberate in his actions. His verdict on matters of importance is given due consideration and not ignored as useless. Lastly he cultivates the breadth of vision in him to be in a position to adjudge clearly on how matters will stand in future. The moral aspects are also great. The history teaches the due relation between authority and obedience. The pain experience of our predecessors gives great wisdom both to the ruler and the ruled. As a consequence both know their respective legitimate duties towards each other. Then the light the study of history throws on the human race is significant. We see how gradually we have evolved from the state of savageness and barbarity to the present civil-

ised condition with good social manners, with good powers of organisation that are pre-eminently essential for a country, which enjoys peace and order. Lastly such a study of history throws light upon human possibilities. It shows us how the people at first wanted a king, lived under a king, then with the king and lastly without a king; how the rules of the king, the rich and the poor commons are beneficial and detrimental in their own spheres; how a people can get rid of their slavish lot under an iron hand to their best advantage if they only have a conscientious yearning for freedom, so that they may

live happy and peaceful and, above all, how the past pain experience of the various nations help us, to model a country that strives for liberty and freedom in the new and enlightened light. An ardent student of history is also able to divine the future of his country from the present state of affairs. The words of Bacon in defence of the study of history are worth remembering in this connection: "Those who never look back to antiquity will not look forward to posterity" and again "History makes men wise."

R. PARAMESWARAM.

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INDIAN STUDENTS IN ENGLAND*

It is urgently desirable in the interest of world-culture that Indian students of promise (men and women) should be given all possible encouragement to obtain liberal education at a University and be accorded abundant facilities for medical, legal, pedagogic and technological training. India is rich in intellectual ability which does not as yet enjoy adequate opportunities of training and self-development. Alike by the methods of vernacular, and of Western Education, the mental power of Indian youth should be husbanded, and be applied effectively to the tasks of citizenship, professional duty, learning, scientific research and self-government. A system of education combining the excellence of the Eastern tradition of philosophical synthesis and of Western methods of critical investigation, would in all probability be fruitful in new manifestations of thought and culture. The development of education from the primary school to the highest stage of University study seems to me to have very strong, if not the strongest, claims upon the public resources of India, and upon the generosity of private benefactors.

Such a system of education should be consonant with the gradually changing conditions of Indian life. It should be aided liberally from public funds but be released as far as possible from Governmental control. It should be diversified and elastic, so far as this is compatible with the maintenance in the several Provinces of a substantial equality of

* Precise evidence given by Sir Michael Sadler, K.C.S.I., before Lord Lytton's Committee to enquire into the position of Indian students in England, at Leeds on July 23rd, 1921.

standards throughout the successive stages of education.

Further, in my judgment such a system of national education in India is likely to gain in vigor and in the power of self-criticism if it grows up in an atmosphere of freedom, in which Indians would feel direct and capital responsibility for the fortunes of their State—a State which I hope, will remain within the framework of the British Commonwealth of Nations.

Every living and healthily growing system of education has behind it a social ideal—implicit or explicit. It is the ideal which gives it power. In order to have a spirit of responsible freedom in its education, a people must be responsible and free. I believe that the malaise of suspicion prevalent among many Indian students is due to the fact that young India resents its subordinate status and wishes the Indian peoples, united by the bond of a common destiny, to be captains of their own fate. I am not sanguine that the suspicions now felt by many Indian students will abate until India is responsible for her own policy, for her defence and for her fiscal arrangements. I am deeply sensible of the great work which Britain has done in India for India, and profoundly appreciative of the spirit in which the vast majority of British administrators living in India have, while discharging their duties to their own Government, served India and the masses of her people. I cannot judge how soon the recent constitutional reforms will require amendment and extension. But my belief is that the irresistible trend of things is towards the political independence of India. I hope that this independence will be found compatible with close voluntary alliance with

Britain. I conceive that the right policy for Britain as regards India is to aim avowedly at alliance, not at military or administrative control: at co-operation, not at subjection. The acceptance or rejection of the view cannot but influence, directly or indirectly, the temper and outlook of Western education in India and the sentiments of Indian students studying in Britain, France and America.

For more than three centuries the main currents of ideas in Western education have run in the direction of individual responsibility and of national independence. These ideas are consonant with the spirit of freedom and autonomy, though they involve, as an inner corrective to exaggeration, the sentiments of social solidarity and of international obligation. Western educational ideas have fostered in Indian minds the desire for freedom and autonomy. Where the facts of social experience in India clash with the aspiration towards autonomy and national self-dependence, education is at variance with life. In such circumstances, the influence of an education, impregnated with the pre-suppositions of freedom, becomes irritant and perplexing. This infection of freedom, strong in Western education in India, is far stronger in its effect upon the mind and outlook of the Indian who is studying in England, not least when he watches the operation of our arrangements for corporate life in Universities and Colleges.

By slow, though accelerating degrees, Western education has made untenable the principle of the military control of India by Britain. It has also made the practice of the civil control of India by British administrators increasingly unpalatable. But the introduction and diffusion of Western education in India was inevitable. If it had been denied by

Britain, it would have been sought by Indians elsewhere and through other agents.

I believe, therefore, that the solution of the greatest psychological difficulties in the case of Indians studying in Britain will be found in the political reconstruction of the bonds which now unite Britain and India. Palliatives may be found in some administrative rearrangements, but no true remedy. Western education, through much of its literature and history and even in some of its economics, postulates national independence as the basis of national life and as one of the fundamental conditions of self-respect. Britain, even if it wished to do so, cannot suppress the system of Western education in India nor isolate individual Indians from the influence with which Western education is imbued. It is suggested that, with special reference to educational policy, the bold road towards the recognition of Indian independence is the safest one which the British Nation can follow in its relation with India. Under present conditions it seems more likely that this road will lead to voluntary and close alliance than to disruption. A frank acceptance of this aim would remove the antinomy which now prevails between the pre-suppositions of Western education and the political conditions to which Indians are now required to adjust themselves.

I do not pretend to judge how far India is herself ready for independence or in what degree internal differences of racial temperament and outlook may delay organic unity in Indian nationality. Nor do I wish to imply that political democracy in its present Western form will necessarily be found congenial to India or compatible with her internal peace and with the development of her social welfare. But I would urge that, in

education and therefore in what our educational ideas presuppose, we should be prepared to give India, if she deliberately asks for it, what we consider best for ourselves; and that, as we in England are by no means convinced that we have yet found a form of political organisation or of government which meets adequately the many-sided needs of our national life, so we may reasonably allow India to make her own experiments with freedom and leave it to India to work out the adaptations of the idea of freedom which may best meet her temperamental and social needs.

The reasons which at present induce Indian students to leave India for education or technical training are:—

- (a) In a few cases, preparation for the I.C.S. Examination, old arrangements.
- (b) Professional advantages of being called to the Bar in Britain.
- (c) Superior advantages in the West (Britain, France, Germany, U.S.A.) in respect of University and technological training.
- (d) Prestige in India of Western education qualifications.
- (e) Desire to see the West as it really is and to breathe the atmosphere of Western society.
- (f) An instinct that the West has something to teach which India now requires: which will ultimately enable India to win her freedom; and which should be blended in Indian minds with Indian thought in order to produce a new culture congenial to Indian needs and the Indian temperament.

(a) The Indian Universities, though they have rendered good service to India and are a wonderful achievement, are still inadequately equipped with opportunities for ad-

vanced study, with scientific laboratories, with libraries and with tutorial guidance. There is no Oxford in India: (b) Similarly, the modern English Universities, though vigorous and improving, are still inadequately equipped with opportunities for advanced study with laboratories, with libraries, with halls of residence and with tutorial guidance.

How far it would be just to say that the Government is responsible for the defects in India and England respectively depends on one's view of the part which Government should take in the organisation and provision of University and technological education. This issue has been bound up with many other considerations, e.g., the anxiety of the Government of India not to add to the burden of taxation beyond what was necessary.

The sending of Indian students to Britain for education has resulted in many cases in great intellectual and moral benefit; in others, in comparative failure: and, generally speaking, in the exacerbation of feelings of discontent with the present political status of India and with the ordinary social status of the Indian intelligentsia in European society in India. This effect has been inevitable, though unpleasant. In the end, the results may be salutary.

As a general rule, Indian students should defer their entrance to a British University until they have passed the Intermediate examination in Arts or Science in an Indian University. This status should excuse them from examination for Matriculation in a British University.

When the modern English Universities are more effectively and generously equipped with facilities for advanced study, and when the Indian Universities find themselves in a position to provide better training for Honours students in the last two years of

their Undergraduate course, it is hoped that the vast majority of Indians (like the vast majority of their contemporaries in other countries) will complete their University course in their own land but that a large self-selected minority will proceed (where necessary with the help of liberal fellowships and travelling scholarships) to foreign Universities for post-graduate study. Reciprocally, it is to be hoped that an increasing number of British graduates will proceed to Indian Universities for graduate study, especially in subjects which can best be pursued in Indian surroundings. The great

Universities of India and of the West should all be, in the mediæval sense of the term, *Studia generalia*, i.e., places of study and investigation to which scholars flock from near and far.

Other suggestions which I desire to submit for the consideration of the Committee are made in the Report of the Calcutta University Commission, especially in (as regards Indian students in Britain)

Volume III, Chapter XXIX, pgs. 41 to 59.

Volume V, Chapter I, pgs. 61 to 66.—

By the courtesy of the Editor "*Indian Social Reformer*," Bombay.

B. A. DEGREE EXAMINATION, 1923.

SPENSER :

THE PROTHALAMION

EDITED WITH

INTRODUCTION AND NOTES

BY

E. H. ELLIOT, B.A.

late of the Presidency College, Madras,

Price—As. 10.

BY THE SAME AUTHOR

INTERMEDIATE EXAMINATION, 1922.

SELECT ESSAYS

FROM

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MEDIUM OF INSTRUCTION IN SECONDARY SCHOOLS.

Bombay Government, Educational Dept.

Press Note.

The following letter No. 64-M., dated the 3rd May 1921, addressed by Government to the Joint Examination Board, is published for general information :—

"I am directed by the Government of Bombay (Transferred Departments) to request you to consider at an early date the question of the medium of instruction in schools and of examination at the School Leaving Examination. This question has been discussed frequently, and the report of the Calcutta University Commission makes some far-reaching recommendations. While this report is very voluminous and touches the present system of secondary and higher education at all points, Government are of opinion that it will do no harm to take up this question independently of the others raised by the Commission. In waiting for the simultaneous consideration of all these questions it may be necessary to postpone action indefinitely on account of the vast financial questions involved; I am therefore to bring to your notice the following considerations :—

"2. When English was adopted as the medium of instruction in schools over seventy years ago the vernaculars were generally not sufficiently developed; there were hardly any books on modern subjects in any of the vernaculars and the teachers were mostly Englishmen who could not be expected to teach through the vernaculars. Further the parties to the dispute at that time were the English language on the one hand and the ancient classical languages on the other; the vernaculars were not much considered. This state of things has now greatly altered. These languages have shown a great deal of development; the number of books on modern subjects, though not sufficient, is considerable, and if there is an effective demand, they will soon be forthcoming in great numbers; the work of education in schools is almost entirely in Indian hands.

"3. From an educational point of view it is clear that instruction can best be given through the medium of the language which the pupils know best. Boys up to the Matriculation stage have not enough command over English and it is maintained, with a considerable amount of truth, that lessons in History, Geography, Science, Sanskrit or Geometry often degenerate into lessons in English and many children are observed cramming answers in the very words of the text-book because they are not able to answer in their own words. The system of teaching Sanskrit to a child whose mother-tongue is Marathi or Gujarati through English is almost too absurd for description. All the natural advantage of learning a classical language intimately related to his own is thereby lost, and students are found learning by heart hard rules in English which are as clear as daylight if explained through the mother-tongue with the help of appropriate examples. The knowledge of pupils in various subjects is thus often found to be very superficial and of no great practical value.

"4. Government are inclined to think that the time has now arrived for a reconsideration of this position. They feel that free choice might be given to managers of schools to make use of the vernaculars in their teaching. Such freedom will not, however, be very much utilised unless the option is given to candidates at the School Leaving Examination to answer their papers in subjects other than English through the vernaculars. The Educational Department has already allowed schools to make use of the vernaculars in teaching especially in the fourth and fifth standards, but so long as papers at the School Leaving Examination have to be answered in English this concession is not much used, as both schoolmasters and guardians fear that boys taught through the vernaculars will fare badly in an examination in which answers in English are required.

"5. Government are at the same time

conscious that the medium should not be changed compulsorily. In schools which have pupils with different vernaculars, especially in the City of Bombay, English may be found more convenient. Some communities may prefer English deliberately and Government do not wish to fetter their freedom in this educational matter.

"6. It is contended that if the teaching of English in schools is confined to the periods definitely set apart in the time-table for the purpose the pupils' knowledge of English will deteriorate. Government are not inclined to accept this contention without practical proof. They consider that experiments should be made in order to show whether the above and other *a priori* objections that have been raised are justified in practice. If a few years' experience shows definitely that the option offered has proved a failure there will be no great difficulty in reverting to the former system, and public opinion will then be with Government who are at present blamed for adopting a wrong educational system.

"7. The present system has been tried for many years and it has not proved a complete success even so far as the knowledge of English itself is concerned. The reports of examiners at University Examinations always complain of the indifferent English that candidates write and employers are always making the same complaint. Many educationists think that an adequate command over language is conditioned by a wide range of ideas, and if the ideas are wanting the language is simultaneously weak.

"8. Government are alive to the difficulties of making a change—

(i) There is the question of the vocabulary of technical terms. On this point Government do not wish to dogmatise. They are inclined to think that when a well-known word exists in the vernacular to denote a particular idea—and in many subjects there are several such, *e.g.*, in Mathematics, History, Geography—it should be adopted, but when a new word has to be coined, it may perhaps be convenient to adopt the English word bodily and not trouble to manufacture a new word, often cumbrous in form from

Sanskrit or Arabic roots. Even when well-known vernacular words exist for any idea, it would be better during the teaching to familiarise the student with the corresponding English word so that when, on entering the University, the student has to change the medium, he will find his way smooth. Many of our vernaculars have bodily adopted several Persian or Arabic words in the olden days and these are now current in these languages as perfectly naturalised terms, and many English words, *e.g.*, railway station, post-office, stamp, coffee, thermometer, scale, lens, etc., are also current in the vernaculars. We need not from a sense of linguistic purism object to the same process in our educational system.

(ii) At first, it will be difficult or impossible to find suitable text-books in many subjects in the vernaculars, but in view of the large number of educated Indians who are now engaged in educational work, it is believed that a steady supply will grow up to meet the effective demand. Government will be prepared to assist the writers of suitable text-books, and to consider whether it is necessary to undertake the preparation of books on particular subjects.

(iii) There is some administrative inconvenience in conducting the School Leaving Examination through the medium of so many vernaculars; Government, however, have full confidence in the capacity of the Joint Board to overcome this difficulty, which in any case is not insuperable.

"9. Finally Government are inclined to the opinion that this step is at least necessary in the present circumstances. There has been a great demand from the public for this change and in the opinion of Government it is to a great extent justified. It may be emphasised that what is proposed is a mere *optional* use of the vernaculars as media for instruction and examination in all subjects except English, and not the compulsory use of the vernacular in supersession of English. For the time being the medium in colleges may continue to be English. In this case the need for option is not so urgent, for by the time the student passes the School Leaving Examination

he should possess a fair command over English and Colleges can, in the two years required for the Intermediate, which is the next public examination, manage to make the transition without much difficulty.

"10. Government therefore trust that the Joint Board will give due consideration to the arguments which are now put before them and will make such proposals as they may think proper for the consideration of the Senate. If the Senate accepts any move in the proposed direction, Government will be prepared to give their most sympathetic consideration to it."

Reviews and Notices.

"WONDER TALES FROM MANY LANDS" BY KATHARINE PYLE. (PUBLISHED BY HARRAP—INDIAN AGENCY: P. T. I. BOOK DEPOT, BANGALORE).

This is a delightful Story-book which should find a place in the library of every Elementary

School teacher. In these days when the story plays such an important part in the Elementary School programme, the teacher often finds himself at a loss for stories of other lands which are written in a simple and straightforward style suitable for little children. Miss Pyle has removed this difficulty and hence the Elementary School owes her a debt of gratitude.

"FIRST STORY PRINCE," BY S. E. GODSEY. (PUBLISHED BY HARRAP—INDIAN AGENCY: P. T. I. BOOK DEPOT, BANGALORE).

This is an excellent reader which will find a sure place in all the classes where English has just been started. The stories are simple and familiar; the words used short and to the point; the printing large enough for the young child; the illustrations humorous and such as children will enjoy; and the whole book one which should be welcomed by teachers.

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The Educational Review.

The University of Calcutta is going forward in spite of the systematic campaign of vilification carried on

The Calcutta University.

in some quarters against the institution. Sir Asutosh Mukherjee has been able to make arrangements for the opening of a number of additional chairs with the help of new bequests made to the University and the gratitude of all lovers of higher education in India will go to him for his splendid service in these new directions. From an endowment of about two and a half lakhs of rupees made by the late Sir Rashbehari Ghose three travelling fellowships tenable for one year have been established, the holders being required to investigate educational methods abroad. The University has also been able to found five new chairs with another endowment of Rs. 4,60,000 made by the late Kumar Guri Prosad Singh of Kaira, the chairs being for Fine Arts, Phonetics, Physics, Chemistry and Agriculture. We are particularly pleased with the creation of a chair for Fine Arts as we have always thought that the Universities in India are guilty of a serious blunder in ignoring the claims of æsthetic education and Calcutta will have the honour of being the first University in India to have a chair for the Fine Arts, the University of the Punjab having on a former occasion only arranged a course of lectures on the subject. We hope the University of Calcutta will be able to prevail upon Mr. Abanindra-

nath Tagore, C.I.E., or Mr. O. C. Ganguli to accept the Professorship of Fine Arts. The former, by the distinction he has achieved as a painter and the latter by his very fine powers of criticism would constitute eminently suitable occupants of the office. The establishment of a chair for Phonetics is another step in the right direction, though it is possible to make a fad of it by treating it as the end of all linguistic education. We hope that in addition to the establishment of a chair in Agriculture, the University will also be able to open an Agricultural Farm and provide such facilities as will make the chair a success.

Some important questions relating to European and Anglo-Indian education were discussed at the recent Conference of Anglo-Indian Education held at Simla. The Hon. Mr. Sharp gave very valuable advice to the community when he suggested that they should cultivate more good-will towards the Indians and try to work with them in a spirit of harmony and co-operation. He said that his somewhat wide experience of public life had confirmed him in his belief that if the European and Anglo-Indian community "gave up their attitude of isolation and in some cases their outlook of superiority and henceforth cultivated a spirit of harmony, mutual good-will and co-operation with their Indian fellow-countrymen, the future of their community which represented a very small minority was bright. Dealing with the three resolu-

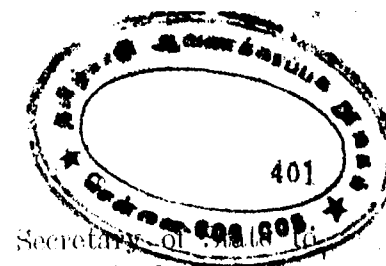
tions submitted by the Conference, Mr. Shafi conceded with regard to the first that it was only natural they should be anxious to maintain separate schools and colleges for their own community. One of the resolutions of the Conference viewed with grave concern the attitude of the new Provincial Councils towards European and Anglo-Indian education, but Mr. Shafi assured the deputation which waited on him on behalf of the Conference, that the alarm was needless and it was significant that some resolutions adverse to European education which were moved in certain Councils were ultimately withdrawn. With the increase of co-operation with the Indian community, he had no doubt that the present tendency to cut the grants for European education would disappear. Mr. Shafi also advised the Conference to raise the percentage of Non-European students who could be admitted into European Schools. As for the proposal of the Conference that the department of European education may be a reserved one with the Government of India, Mr. Sharp rightly deprecated it and could not hold out any hopes relating to it, as it was a matter entirely in the hands of Parliament and it was not possible to give effect to it without mending the recent Government of India Act in connection with the Reforms.

We are afraid that sufficient attention has not been drawn in India to the proceedings of the Indian Students in England. Committee a p-

pointed by the Secretary of the Department of Education to go into the question of the position of Indian students in England. Some very valuable evidence was placed before the Committee confirming the reports about the unpopularity of the Department for Indian Students in England and suggesting remedies of various kinds. One of the most valuable pieces of evidence was that furnished by Sir Michael Sadler who dealt with the question in a broad spirit, in relation to the wider problems of national life. The following is an extract from his interesting memorandum* on the subject:

"It is urgently desirable in the interest of world-culture that Indian students of promise (men and women) should be given all possible encouragement to obtain liberal education at a University and be accorded abundant facilities for medical, legal, pedagogic and technological training. India is rich in intellectual ability which does not as yet enjoy adequate opportunities of training and self-development. Alike by the methods of vernacular, and of Western Education, the mental power of Indian youth should be husbanded, and be applied effectively to the tasks of citizenship, professional duty, learning, scientific research and self-government. A system of education combining the excellence of the Eastern tradition of philosophical synthesis and of Western methods of critical investigation, would in all probability be fruitful in new manifestations of thought and culture. The development of education from the primary school to the highest stage of University study seems to me to have very strong, if not the strongest, claims upon the public resources of India,

* Published elsewhere in full.



and upon the generosity of private benefactors.

"Such a system of education should be consonant with the gradually changing conditions of Indian life. It should be aided liberally from public funds but be released as far as possible from Governmental control. It should be diversified and elastic, so far as this is compatible with the maintenance in the several Provinces of a substantial equality of standards throughout the successive stages of education.

"Further, in my judgment such a system of national education in India is likely to gain in vigor and in the power of self-criticism if it grows up in an atmosphere of freedom, in which Indians would feel direct and capital responsibility for the fortunes of their State—a State which I hope, will remain within the framework of the British Commonwealth of Nations.

"Every living and healthily growing system of education has behind it a social ideal—implicit or explicit. It is the ideal which gives it power. In order to have a spirit of responsible freedom in its education, a people must be responsible and free. I believe that the malaise of suspicion prevalent among many Indian students is due to the fact that young India resents its subordinate status and wishes the Indian peoples, united by the bond of a common destiny, to be captains of their own fate. I am not sanguine that the suspicions now felt by many Indian students will abate until India is responsible for her own policy, for her defence and for her fiscal arrangements. I am deeply sensible of the great work which Britain has done in India for India, and profoundly appreciative of the spirit in which the vast majority of British administrators living in India have, while

discharging their duties to their own Government, served India and the masses of her people. I cannot judge how soon the recent constitutional reforms will require amendment and extension. But my belief is that the irresistible trend of things is towards the political independence of India. I hope that this independence will be found compatible with close voluntary alliance with Britain. I conceive that the right policy for Britain as regards India is to aim avowedly at alliance, not at military or administrative control: at co-operation, not at subjection. The acceptance or rejection of the view cannot but influence, directly or indirectly, the temper and outlook of Western education in India and the sentiments of Indian students studying in Britain, France and America."

The many friends of Mr. Mayhew in Southern India
Mr. A. I. Mayhew. will be glad to hear of his elevation to the Commissionership of Education with the Government of India, in the acting vacancy caused by the impending departure of Mr. Y. A. Richey to Europe on leave. We congratulate the Government of India on the excellent choice they have made. Mr. Mayhew combines great ability in pedagogic matters with considerable Indian experience and has had the advantage of serving for many years in a province like Madras where conditions relating to education are very much ahead of other parts of India. We are glad that Mr. Mayhew's ripe knowledge of Indian educational matters will now be available for the whole of India by his being attached to the Government of India.

At a recent Session of the Legislative Council of the Central Provinces, a resolution calling attention to the immediate need of pushing forward the University Scheme for the Provinces was accepted by a very large majority, the few dissentients being those who imagined wrongly that the interests of Primary Education would suffer by the establishment of a separate University for the Provinces. It is time that the people of the Provinces set up an active agitation over it for the scheme was adumbrated first about a decade back and later schemes for the establishment of Universities have come to fruition in various parts of India. The people of the Central Provinces have now to look forward to the University of Allahabad, an arrangement fraught with the most serious inconvenience to everybody concerned and not likely to ensure any educational efficiency. The Minister of Education, in spite of all this phenomenal delay and postponement declared that the Government was not responsible for any delay in the matter, but apparently the statement convinced nobody present at the meeting of the Council.

The Legislative Council of the United Provinces of Agra and Oudh has just passed the Bill for the establishment of a Board of Intermediate Education which will thus be the first Board appointed for the

purpose in India in accordance with the recommendations of the Calcutta University Commission. A few amendments were made to the original draft of the Bill which was referred to in these columns. An attempt was made to enlarge the scope of the Board's work by bringing even the lower classes within its purview, but it failed though only after an assurance from Government that the Board will lay down the courses for the lower departments. The work of the Board of Intermediate Education will be followed with keen interest all over India.

Since writing the earlier paragraph in these notes on the subject of European and Anglo-Indian education, we have received the full text of the resolutions which we reproduce below, as revealing the mentality of the European community in India which is now complaining of ill-treatment at the hands of the Indian members of the new Legislative Councils:

"In the opinion of this Conference it is necessary that European schools should be continued as distinct and separate educational units.

"The Conference views with grave concern recent attempts in various Provincial Councils to reduce the grants to European educational institutions.

"The Conference considers desirable the unification of the systems of European education throughout India and recommends therefore that the control of European education be centralised.

"For these reasons the Conference recommends

that European education be made an Imperial subject.

"The Conference will welcome the establishment by Government of a standard examination of such grade that it will be recognised on the one hand by Indian Universities as equivalent to their Intermediate examination, and on the other hand by the same bodies as now recognise the Cambridge Senior examination.

"The Conference recommends the establishment of free and compulsory primary education for the domiciled community throughout India. The Conference is in favour of freer admission of qualified non-Europeans into European schools. The code of regulations for these schools should be amended so as to permit this and the attendance of such non-Europeans should count in the calculation of the school grant.

"This Conference is of the opinion that boys who join the Auxiliary Force as members of a school cadet company, should be entitled to discharge from the Auxiliary Force should they so desire upon leaving school.

"This Conference recommends that the number and value of scholarships designed to enable European and Anglo-Indian boys and girls to pursue their University studies be increased."

In connection with a review of the new book on *Adult Education* issued by the Cambridge University Press, we had occasion

to draw attention to the need for studying the problem of Adult Education in India. We are glad to note that Mr. K. T. Paul, Secretary of the National Christian Association in India, has done it in the new pamphlet on *Adult Education: An urgent need of Modern India*

issued by the Association Press, Calcutta. The problem of illiteracy is a particularly serious one in India, because it is nothing short of the education of more than three hundred million of human beings or nearly a fifth of the race of mankind. It cannot be solved by the education of the young, as it means the putting off the remedy by a whole generation, even taking it for granted that it is possible to bring all the young under its operation. We heartily endorse Mr. Paul's remark that India to-day is more in need of adult education than almost any other country in the world. The article is also enriched by several practical details relating to the special kind of education which has to be imparted to the masses in India. Special emphasis is laid on the teaching of citizenship and patriotism.

"There is no nation with a pretence to civilization which is not inculcating patriotism as a part of its educational curriculum. It is the perfunctory development of the Indian educational system, even more than the fact of its direction by foreigners, that is responsible for this glaring omission in our country. If we are to protect our future from the two possible evils, of servile imitation of the materialistic organizations of the West and of an over-conservative unwillingness to out those old Indian things which retard our progress, the one remedy is to spread very wide and very adequate, as also very accurate, knowledge of our worth-while heritage. True India must be placed before the Indian mind, and unchallengeable principles also presented to enable accurate discrimination and courageous adaptation."

It will be remembered that the Sadler Committee's Report in regard to the reforming of the Calcutta University was referred to a large Committee of the Senate of the Madras University some time back. The Committee divided itself into a number of Sub-Committees and made various recommendations which were all considered by the Committee as a whole, which in its turn adopted certain recommendations. These were again discussed by the Senate in Committee at its March meeting which in its turn adopted certain resolutions in connection therewith. And these are under consideration for adoption and practical working so far as the circumstances of University education in the Presidency would admit of it. It may be worth while considering these recommendations in the light of their applicability to the conditions obtaining in the Madras Presidency.

The public mind had hitherto been occupied too much with matters political to give educational matters, supremely vital though they be, any calm and deliberate consideration. And the Legislative Councillors themselves in their new-born zeal for the exercise of their newly-won majority-power were engaged in discussions relative to communal interests even to the detriment of the broader problems involved in matters educational. Times, therefore, seem unpropitious for University reform receiving that dispassionate consideration

which is essential to the progress of real education so vital to the progress of any community as a whole. Education, it will readily be admitted, ought to be beyond all sectional interests and it is the interest of the community to see not only that education is broad based and reaches at the bottom as wide a circle of the inhabitants of the country as possible; but it should also subserve the interests of the highest development possible to the individuals of the community however narrow the pinnacle of achievement might grow to be in its utmost height. Educational advancement, like many another item of social advancement, cannot be made in branches. A system of education in a country must be a well-regulated whole, each part of it thoroughly co-ordinated to the rest of it for any real progress. It is the recognition of this that led the Sadler Committee composed of eminent educationists and presided over by an educationist of the vastest experience and knowledge of matters educational, to base the whole of the reformed system of higher University education on a well-organised and thoroughly complete system of general education preceding it. Hence their first recommendation which is taken for granted in all their further recommendations for the reformation of the Calcutta University. This recommendation is the creation of a Board for the control of Secondary and Intermediate education and the transference of all control over the entrance and the intermediate stages of education

which are now vested in the University.

The Board of Secondary and Intermediate Education was recommended to be constituted to take charge of all educational matters relating to High School education as it is called in this country, and the first two years of what is at present University education, so called. The confusion largely prevails in the country even among people in whom such confusion would not ordinarily be expected that the so-called technical and vocational education is the kind of education that Universities ought to provide, and the expression "preparing candidates for life" has been beaten into service to discredit the so-called academic education producing 'slave mentality', and recommending the reconstitution of the University with a view thereto. It is urged that modern Universities elsewhere have provided in a large measure, in the new Universities, in particular, for practical and scientific education and this is assumed to provide 'the preparation for life' that education reformers here are so anxious to bring about. It must, at the outset, be made clear that education means the drawing out of the faculties that lie dormant in the mind of the children and the leading of them gradually to the achievement of the utmost that the human brain can achieve. It would mean, taken generally, the training of human intelligence and its preparation for adapting itself to any problem that may present itself in life. This general training of the intelligence is something very different from voca-

tional and technical training and that distinction is not always borne in mind in discussion relating to matters educational. A system of education which caters to the educational needs of a large community must be such as to subserve two ends. It ought in the first instance to provide a scheme of education which gives this general training of intelligence of the student up to a certain degree so that it might proceed further in the development of its own intelligence to a higher degree, or change into another line which would provide the kind of technical training, intellectual and material, for the adoption of any particular profession. The distinction between the two would be exactly just the distinction that is maintained between what is called wood sloyd and carpentry. Wood sloyd is a scheme of work in wood which has for its principal object the training of the eye and the hand, of course involving the head behind the eye, not with a view to turn out a finished carpenter, but solely with a view to training both the hand and the eye to follow readily and precisely the directions of the mind. This training would enable a student to readily adapt himself to the work of a carpenter if he took to it, whereas the study of carpentry has from the very beginning the object of turning out a finished carpenter and cannot therefore content itself merely with the general training of the eye and the hand, but ought to go further in teaching the technical details with the necessary general information for making a car-

July 1921.]

penter out of a student. Up to a certain degree, it is clear, the two can go together and beyond that they have to branch off. Something similar is the distinction between what is called general and vocational education. You have to take students up to a certain degree in training their intelligence to make the crude brain-power acquire the capacity to adapt itself to the varying circumstances of life. It is then that specific training should be given to the individual student to prepare him for a particular profession. Even the existing University regulations recognise that the University Intermediate course is the stage at which this general training should stop and such technical training as students may take to should then begin. The age of the student and the stage of development of his brain-power are factors of prime influence in settling this question. Any scheme of education, therefore, in the earlier stages should be so framed as to serve this double purpose, and this could hardly be done without unity of control over the whole of it. Such defects as have been pointed out time and again in the present system of University education could all be traced to the want of correlation among the various departments of the educational system. It would therefore be clear that the first essential of reform is bringing about this thorough co-ordination where it does not exist and the perfecting of it where it may exist in an imperfect condition. It would thus be seen that any general scheme of education in the

circumstances of Indian education should go up to the stage of intermediate to be adequate. The educational system up to the intermediate must be brought under one controlling body with a view to the necessary co-ordination.

This is what is intended to be obtained by the creation of the Board of Intermediate and Secondary Education which the Sadler Committee made the basis of their recommendations as a whole. The advantages of such unity of control are obvious and could have been brought about very easily even in the Madras Presidency. It will be readily admitted, a well-constituted Board of Education is a much more satisfactory body to manage the whole system from the primary stage of education to the intermediate than a department. Such Boards exist elsewhere and work satisfactorily with a recognised degree of devolution of power to the educational bodies constituted under the Local Boards and Municipalities. The organisation with the Board at the top of it would be an education in itself to the people at large. Education is a matter of vital interest to everybody and if people could be expected to take interest in anything, it must be in this. With a ministry of education at the Government, an influential and responsible Board would be much better able to deal with the complicated problems arising from their respective positions than a mere Government department dominated by a Director. Notwithstanding these apparent advantages, the Madras Univer-

sity Senate in their wisdom threw out the proposition altogether and have adopted a resolution that the control of the Intermediate education should be vested in the University but have agreed that the Intermediate education should be so remodelled as to serve the purpose of completion of the general school education, leading on the one hand to technical or vocational education and on the other to higher University education. The recognition of this distinction is certainly to be commended, but it is open to doubt whether the control of Intermediate education of two years being retained by the University would serve the purpose that was intended to be served by the newly-created Board of Education. Other provinces have accepted the recommendation and the experiment may be watched with interest.

Having thus knocked the bottom out of the whole scheme of the Committee's recommendations our Senate adopted various of the Sadler Committee's recommendations some of which seem to us incongruous.

The second set of recommendations which the Committee considered in regard to their application to the Madras University relates to the constitution of the University. The Senate did not accept the visiting functions of the Viceroy as it is not likely to subserve any use so far as this distant University is concerned. In respect of other details they have adopted *in toto* the constitution recommended by the Committee,

viz., the Chancellor, the Vice-Chancellor, a large representative Court, a smaller Executive Council for administrative and financial purposes and a comparatively larger academic Council in addition to the Faculties, Boards of Studies and other Statutory bodies. This complication of a constitution intended primarily for a University like the Calcutta University, which could make a very close approach to a residential University if the reforms recommended were adopted is hardly suitable to a University like the Madras University. Whatever may be the reforms that are adopted to bring the Madras University in line with modern notions of a University the geographical conditions of the Presidency are against its becoming a residential University, unless for University purposes the whole area gets cut up into something like half a dozen separate University centres. Until that is done such teaching functions as the University could adopt would only be of a secondary character subserving the purposes of students at the University centre, namely Madras, and could have reference only to post-graduate work essentially. All that is possible in this line could be achieved without any substantial alteration of the constitution of the University as it exists. As an affiliating University controlled from one centre the comparatively simple system of a Syndicate and a Senate has worked well in the past and there is absolutely no reason why it should not work as well or even better if only a little more attention should be paid to the actual per-

sonnel of the Syndicate. The complication of the mechanism administering University affairs is to be deprecated unless such a complication is called for by the actual needs of working. That there are such imperative needs for the adoption of the complicated system has, we fear, not been made out and the adoption of a needlessly complicated organism for the purpose of mere conformity with other Universities is likely to prove ultimately detrimental to the best interests of the University. Unfortunately even in matters academical, like those relating to the University, the attempt for adequate representation of Mussalman interests is conceded. Whenever communal representation may prove beneficial—it is of exceedingly doubtful benefit anywhere as everybody would readily admit—there is no shadow of a reason for communal representation even for the Muhammadans in a body like the University. Once the principle is admitted in behalf of Mussalman interests, other interests will spring up or will be called into existence, and we shall have the whole paraphernalia of the representation of these interests, which, if it should work as it works elsewhere, cannot but be detrimental to the working of the University and be completely destructive of the academical atmosphere which the Committee is at so much pains to insist upon.

The rest of the recommendations actually adopted refer to details of which one set refers to the relation between the University and the affiliated colleges

with a view chiefly to bring the affiliated colleges into closer touch with the University and subject them to closer control by the authorities of the University. One salient point in respect of colleges for women is the adoption of a recommendation which insists upon the whole staff being composed of women. There are other recommendations relative to Moslem education the object of which is to bring Islamic studies into line with Oriental studies generally and with a view thereto to re-organise the Muhammadan College at Madras and raise it to a higher standard. There is a general resolution which enjoins upon the University administration to so regulate its action as to lead ultimately to the establishment of various Universities in salient centres of the Presidency. Another one has reference to the re-organizing of the Teachers' College to meet the demand for a University Chair of Education adequately. One set of recommendations attempts to bring about a closer co-operation between the University and the affiliated Colleges of Madras by a system of University recognised inter-collegiate lectures for the Honours students.

Another set of recommendations was adopted with a view to bring about what was long ago contemplated, the establishment of a School of Oriental Studies chiefly with a view to the promotion of Dravidian studies. It will be remembered that two University Chairs were created along with a certain number of Dravidian Readerships out of the annual recurring grant of Rs. 65,000 made by the Government of India with

a view ultimately to create a Dravidian School of Study here, which should include as unifying factor the chair of ancient Indian history and culture. The recommendations adopted include the creation of an Oriental College or two, one for Sanskrit and one for Dravidian, the institution of University lectureships for modern methods of study and research and the provision of suitable grants to institutions that may provide for this and the institution of a degree in Oriental Learning and the widening of the scope of the certificates of proficiency by bringing within its purview South Indian languages and literatures in their bearing on Ancient Indian History and Culture, Hindu Law and Jurisprudence, and Muhammadan Law and Jurisprudence. There is also a recommendation to institute fellowships for advanced research in Oriental subjects. This series of recommendations is certainly desirable and in spite of the outcry against the literary character of our education and all the defects that arise therefrom, fancied and real, it is now admitted on all hands that no country can make anything of an advance in progress unless it happens to be well-provided for a study of its own history and for the proper understanding of its own particular culture. This is very often forgotten in mere enthusiasm for what might be called the scientific aspects of education in the false belief that this latter is directly productive of those material resources which go to fill hungry stomachs and it may even be the gaping pockets of those that might devote themselves to this. It must be borne clearly in mind that no scientific education can ever do this directly and it is the un-

looked for result of scientific education that really makes for material advance. University education as such makes for the promotion of scientific as of other knowledge and research work in science, unless research is to be limited to the comparatively minor details of it that contribute to improve the efficiency of industrial operations, means the search for further knowledge in matters scientific which may subserve industrial ends proximately or remotely or not at all. In regard to the creation of this school of research work on Oriental Studies generally the following remarks of Prof. Pollard seem worthy of attention. Speaking of the need for the school of English historical research projected for London he says: "That there was a need for a historical laboratory in which historians should test their materials and investigate for themselves as chemists, physicists and biologists are expected to do, was a conception that did not occur to men's minds; and history was regarded as a form of truth which had to be learnt instead of being discovered. The assumption was that everything worth knowing had already been revealed and that all that the student could do was to study the revelation in classical works of history. Few realised that the unknown facts of history are at least as vast as those of any other science, and that what passed as history was for the most part crude generalisation from the merest fragments of the accessible material."

We shall deal with the general question of Research work at the University on another occasion.

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PRIMARY EDUCATION: SOME OF ITS PROBLEMS.

THE Sadler Commission has truly declared that "the way to what is wise and far-seeing in the planning of primary education in India is the most inspiring and the most perilous of tasks." From time to time efforts have been made by Government for the education of the masses and plans for its dissemination and improvement put forward. "The excellent intentions of those who initiated these movements were defeated by the vastness of the task, the paucity of available funds and the growing demands for concentration of effort upon institutions of higher learning." The recent investigation of the Missionary Commission into the condition of village education and chances of its improvement declares that the most common causes of our backwardness are debt, laziness, exploitation, ignorance and lack of skill, drink, extravagance and conditions resulting from famine, epidemics and sickness. The indebtedness of our peasantry is put forward as the most

destructive factor. Again some people are genuinely afraid that compulsory primary education may bring in its train evils of great magnitude. As Mr. E. E. Biss says in his Report on the expansion and improvement of primary education in Bengal, there is good ground for "fear—

(1) that until our teachers are really properly trained in happy school methods, the school will continue to cast 'shades of the prison-house' about the child's life ;

(2) that there are certain risks to health at schools, which cannot be lessened in the present welter of small, almost uncontrolled, *pathasalas* and *maktabs* ;

(3) that, until literacy is universal, the unusual literate plough-boy or artisan will imagine himself too good for manual labour ;

(4) that, until there is scope for educated intelligence in the rural areas, the best boys may turn towards the town ;

(5) that literate menial servants may prove somewhat intractable till they are properly treated ;

(6) that, unless production and commerce increase so as to supply the probable demand that will arise for a higher standard of comfort in life, discontent will be sure to develop;

(7) that, if we regard neutrality in, as synonymous with indifference to, and even neglect of, religious instruction in our schools, we shall leave undeveloped one of the most powerful safeguards of good conduct in our children;

(8) that, unless the intelligence of the community as a whole rises and supplies renewed rationality to existing or revised sanctions for conduct, there will be serious stresses set up within its body corporate through the progress of some individuals and the superstitious conservatism of others;

(9) that, unless our education confers the power of clear thinking and skilful action, and is followed up by a supply of good reading matter, the irresponsible agitator will find the field prepared for his sowing;

(10) that, while the peasant sees only the kind of schools that are now before his eyes, he will decline to sacrifice his children to them; and if he does use them he will continue to pay only what the schools are worth;

and (11) that if the present resources of Government and local authorities are not sufficient, new methods of raising money will have to be devised.*

All these are dangers of course, and some of them very real ones; but that should not deter us in any manner from striving to reach our goal in as short a period as possible. On the other hand "knowing in what the danger lies, it must be our endeavour to construct a system which will supply the expected defi-

ciency and avoid the lurking peril." We are told that illiteracy and ignorance are our greatest banes and are the immediate causes of the poverty and misery of the mass of the population. If these evils should be removed, the hitherto undeveloped intelligence of the masses would be stirred and made to shine and their unorganised strength organised and brought into full working order. Another imminent reason why we should rapidly push forward the spread of education is that the Reform scheme has embarked the country on a course of political development which seems likely to be intensified with the passing of years. The very villages have now substantial powers of voting and self-government; and the first elections to our Reformed Councils have shown that "the representatives of the masses are likely to find places in them." As Mr. Biss says, "the sooner we educate our masters the better we can hope to be governed by them." Again, "the popular vote must be made an intelligent vote, or trouble and misery must result from any further extension of popular government."

The terms 'primary,' 'elementary' and 'secondary' are generally very loosely used and are taken to mean different things in different places. Our middle schools are hardly as high in standard as the elementary schools of the West. Mr. Biss's suggestion is that all education up to the top of the middle school should be described as 'elementary' and all school education above it (including that given in Intermediate Colleges) as 'secondary' and that 'elementary' education in this sense might be divided into 'primary' and 'middle,' while 'lower primary' on the one hand might be regarded as leading to an 'upper primary' finishing class or

classes and on the other to the middle classes.

The definite aim of the lower primary classes should be to make a child literate, to enable it to read, write and reckon which forms the basis of the attainment of all further progress in education. This elementary literacy, if we may use such an expression, should be "the duty and right of all the people." But it has been argued by some that the mere attainment of elementary literacy is dangerous and of doubtful value in itself. The upper primary classes must have semi-vocational subjects which by their usefulness and direct bearing on the boy's future occupations should prove attractive to the parents. There is a fear expressed in certain quarters that in the present conditions boys will not come forward indiscriminately for technical instruction. Some enthusiasts blindly urge the setting up of technical classes in almost every village primary school "which is utterly impossible from a financial point of view and the teachers simply do not exist." In each district one or more centres for technical instruction of a useful and elementary kind may be started, as well as small agricultural schools and demonstration farms. "Associated with agriculture are certain essential trades, such as smithy, rough carpentry and building, and wheel-wrighting on the apparatus side; and oils, sugar-refining and dyes on the produce side, as well as many cottage industries such as rope and string-making, netting, spinning, weaving, dyeing, basket-making and sowing which can be followed by the agriculturist and his family in their spare time." Instruction in these might well be added, as they would be very useful in themselves and would be "a means of combating the disastrous content-

ment of Indian workers which tends to induce idleness as soon as a little prosperity comes, and the employment of hired labour in the place of their own." A few social welfare centres may be started in each district where a training in these crafts will be given, so that these crafts may be followed not only for profit but also as a means of recreation and as a good use of leisure-time. Here may be taught temperance, vaccination by school-teachers, dispensary work, the care of children and home-nursing, insurance, the structure of Government and its meaning for the people, co-operative purchase of raw materials and machinery, co-operative sale, etc. The training in these centres of social work should be somewhat on the principles advocated by Captain Petavel; and in these places "labour organisations should be started, connected with organised industries in the towns, offering information of a reliable kind to landless or very poor men in the villages and bringing employers into touch with the sources of labour supply."

Another serious problem of education in our country arises from the fact that a good proportion of the children educated relapse into illiteracy soon after they leave school. It is officially stated that 30 per cent. of the children educated relapse into illiteracy within 5 years after their leaving school. To make education really effective an adult education movement on the lines of the idea worked out by the Missionary Commission on Village Education, should be developed in the country; and there are certain established social facilities and organisations like the co-operative movement, the weekly village-market, the rural theatre, etc., which would lend themselves effectively to such work. Market lectures have been greatly developed in

* Supplement to the Calcutta Gazette, July 13, 1921, pp. 1884-85.

America; and in our own country they have equally great potentialities.

According to the Report of the Missionary Commission, more than half a million of villages in British India are unsupplied by a primary school. In each village the average number of children of school-going age is under 60; the one-teacher schools, so largely prevalent are at best ineffective and the type of teacher required for the Indian villages is very difficult to define and provide. Even if very little beyond a living wage should be paid to the teachers, the cost would be enormous. The economic level of most of our villages is so low that the villagers can contribute little or nothing to the support of the schools. The wealthy land-owner and the well-to-do farmer have not discovered as yet that it is to their interest to have the agricultural labourers and the depressed classes educated. "Among the common folk there is very little public opinion in favour of education. Moreover social and religious differences divide the village community, with the result that some groups of children will not attend school along with others living in the same place."

The leading idea in the recommendations of this Commission is that the village school should be organised as a centre for the activities which promote the spiritual, physical and economic welfare of the community. Its teaching should be permeated by the spirit of social service; and its course of study should bear upon the practical and social responsibilities of life. Its methods of teaching should encourage initiative, resourcefulness and co-operation. Its teachers should respond to the need for social leadership and community service and be so trained and remunerated as to have the ability and

the position to bear a responsible and influential part in village life. The school, again, should not be for little children only. "A large part of the education needed in the impoverished villages of India is adult education." And a chief purpose of this adult education should be to encourage hesitant personalities to throw themselves in some positive way into the social regeneration of their little world.

If efficiency is to be attained in the system of primary education at all, a scheme will have to be devised which will fit in with the varying needs of particular communities and localities. Among us religious requirements occupy the foremost place; and in the case of some sections of the people, religious training is the only desideratum of education at all. The Muhammadans are very particular that their boys should be trained in daily religious exercises; certain Hindu communities are very anxious to develop religious teaching suitable to school conditions; while many desire that their boys should become familiar with the great Hindu classics. "There are certain elements of undoubted danger and difficulty in this proposal (of universal religious instruction) but in view of the great advantages that would accrue from its success it appears to be well worth a trial. Rules will have to be made to prevent the exhibition of religious symbols or the use of sounds that might offend the feelings of others, or interfere with the orderly conduct of the school. Some one will have to be definitely responsible to judge of such matters whose authority will be final in any dispute and to whom any innovation will have to be previously referred. The authority of the headmaster over the religious teacher, while

in the school, will have to be vigorously maintained."

The question of the mixing of children of different classes and creeds on the same benches is a very vexed one leading to great trouble occasionally and in some localities. Objection to the mingling of the boys of the depressed classes with caste boys has been frequently raised, especially in the Madras Presidency. "Where the feeling is strong, it should be met either by the founding by objectors of private schools wholly paid for by themselves, or possibly by arranging different sections of the school classes to meet the demand."

The provision and conduct of primary education, in special localities with peculiar conditions, like factory-centres, railway and other workshop centres, tea-gardens and plantations, constitute separate problems and should be separately dealt with.

The element of compulsion has given rise to a good deal of controversy since 1911 when the late Mr. G. K. Gokhale pleaded in the Imperial Council for a modified system of compulsory primary education. In recent years some Provincial Legislative Councils have passed laws whereby Municipalities are empowered to impose a system of compulsory primary education within their areas. In the Bombay Presidency a few Municipalities, including that of Bombay City have already made use of the provisions of the Act with liberal financial and other assistance from Government. The Bengal Primary Education Act of 1919 refers in the first instance to Municipalities but is capable of being extended with necessary modifications to rural areas also. The period of compulsion under the Act is for boys from six to ten years of age.

But difficulties in the way of ascertaining the ages of the boys, of preventing evasion of parents and of avoiding large numbers of exemptions seem to be very great. The Madras Elementary Education Act of 1920 is more definite than that of other Provinces in respect of compulsion, which can be applied to all children of school-going age or to boys or girls only where and when the demand is made, subject to the sanction of Government and a declaration of readiness to levy the education tax provided for in the measure. When compulsion is enforced in any area, fees are to be abolished in elementary schools; but the local authorities shall pay compensation for any loss of income which may be caused by such remission of fees to elementary schools under private management. In single-school areas, where ten guardians of children apply for exemption the manager of the school shall exempt from religious instruction all children whose guardians make a written request to that effect.

The administration and control of primary education offer several serious and difficult problems for solution. The buildings, where the schools should be located, will vary according to the locality. "In large towns it seems to be necessary, to build with brick owing to danger from fire and the necessity of using storeyed buildings so as to save land. Outside the large towns the type of building that has been generally approved is one with a *pucca* floor, which reduces the amount of dust in the school and which obviates the necessity for the purchase of furniture in the lower classes, mats being used instead." Wooden posts support a roof of tiles; the walls may be of bamboo-matting and the doors and windows of wood. The iron roof is unbearably hot and has got to be

supplemented by a ceiling of some cooling material. The thatched roof is cool and is generally rain-proof, but is in constant need of repair and renewal. As Mr. Biss says, "the use of *pucca* buildings is said to make the children less able to resist the sun when they go back to work in the fields. The aim should be to show them a neat, tidy, clean and if possible, beautiful building, as an example of what their own houses should be, and not one altogether beyond their powers of imitation." Mats can be provided for the lower classes, and desks and benches of suitable size for the higher standards. A few tables, chairs, blackboards and easels, a few maps, some books, chalk and dusters, a clock and a gong are other minimum essentials of furniture.

As regards school areas, expert opinion has it that circles of half a mile radius should be taken as the standard and that the extreme case should be that of a child of six years who is half a mile in a direct line from the school. In thickly-populated areas much smaller circles can be taken. The tradition of the country seems to be with regard to primary schools that they should be quite small and close to everyone's door. Quoting Mr. Biss again, we can say, "the mother likes to watch her little son from behind her *purdah* and to see him practically arrive at the school.....A patron who founds a primary school and possibly lends a shed or verandah for it, likes to feel that it is his school and enjoys his power over the teacher who often acts as private tutor to his children or renders some other small services in consideration of receiving free board. Further special religious ideas have been embodied in a particular school and it is felt that these would be swamped, in a larger and more mixed institution."

As against all these considerations urging the starting of small schools with small numbers, we have the advantages which the large school with its two or three hundred pupils possesses over the small one with its thirty or forty pupils. There is the possibility of securing better teachers in the large school; the cost per boy educated is less; the burden of inspection is less heavy in the case of large schools than in that of a number of smaller schools; it is easier in a large school to arrange for special requirements, like religious teaching, and the introduction of compulsion. Of course all these arguments for the concentration of effort in the starting of large schools have much greater weight in municipal than in rural areas.

The Inspecting agency of these schools should be made more effective and conscientious in its discharge of duties. One of the principal causes of the lack of expansion and improvement in the primary schools appears to have been the fact that circumstances have made it impossible for them to have received the concentration or direct attention of any one in high authority. This counts for much in any country: but it is especially important in India. The number of primary schools is so enormous that an Inspector cannot hope to inspect them all, and has to leave them to subordinates, the reports on individual schools each by itself seeming to be of small importance. Primary education has therefore come to be more a matter of statistics than of children. District Board and Municipal authorities feel that their control is not much more than nominal, for they have to be guided regarding grants and other matters by departmental officers who are not responsible to them."

The remuneration of teachers is miserable,

"lower in many cases than that of the utterly illiterate day-labourer." The average salary of a teacher in a privately-managed school in Bengal comes to only 7·8 Rs. and in an institution under public management the average ranges from Rs. 9 to Rs. 18·5. A definite degradation in the economic position of the teachers seems to have set in with the present era of high prices. Their present training is equally deplorable. In the first place their own education should be improved; and they should be trained in regularity, punctuality, physical exercises and games. The next point is their training in professional technique; and they should learn how "to organise a school, to draw up a timetable, to lay down courses of lessons, to classify children, to use a blackboard easily and well, to utilise maps, reading-sheets and other items of school apparatus and to understand the different current methods of teaching the various subjects." "Lastly they must practise their art under effective criticism and suggestion. The first of these three parts can be taught anywhere. The second to be fully effective, needs the presence of a great school for purposes of demonstration, but not necessarily practice. The third constitutes the greatest difficulty."

It goes without saying that normal schools for primary teachers should be largely increased in number, more rationally distributed and made more efficient in every way.

For a very long time the starting of primary schools was left to private enterprise stimulated by grants from Government. As early as 1835, had Government recognised through Mr. Adam's survey of education in Bengal that the indigenous primary schools were to be improved by a system of payment of grant by results, by assigning small grants

of land to trained teachers and by the distribution of suitable vernacular text-books. The great Despatches of 1854 and 1859 aimed at "a wide diffusion of elementary education which was to be carried out by Government agency through the levy of a compulsory rate." But owing to some reason or other the encouragement of Government did not bear ample fruit. Provincial Governments and local bodies have always protested that they are being hard pressed for funds to devote to primary education. At the present time only a comparatively small number of primary schools are managed directly by Government: a large proportion are administered by Municipalities and Local Boards and the rest by private persons or bodies. "Many of these private institutions are indigenous schools which have been brought to conform to the requirements of the Education Department; others are schools of a more modern type started by Indian proprietors; others again belong to various Missionary societies. In Bengal and Burma where educational progress has proceeded on the lines of developing indigenous schools, the very large majority are under private management; in Bombay where primary education owes its advancement to the local rates, Municipal and District Board schools greatly outnumber the private establishments. Madras, the United Provinces and the Punjab stand in between, the former tending towards the Bengal and the two latter towards the Bombay system."* Bengal has the largest number of primary schools and Madras has the largest number of scholars. In Bengal the average strength of a primary school is less than that of the other Provinces and comes to but 33·4; in

* The Imperial Gazetteer, Vol. IV, pp. 417-18.

the Central Provinces the average goes up as high as 67.

The cost of educating a pupil in either a boys' or a girls' primary school is smallest in Bengal and comes to but Rs. 3.5 and Rs. 3 respectively. In Madras it is as high as Rs. 5.3 for a boy and Rs. 9.2 for a girl; and in Bombay it goes up to Rs. 12.9 and Rs. 13.3 respectively. The rates of fees charged in primary schools in Bengal are higher than those in the other provinces. "Thus the people of Bengal voluntarily contribute more to the cost of primary education than the people of other provinces."

In Madras the expenditure on primary schools from different sources is as follows:

51.5 % from Provincial Revenues

17.0 % from District Funds

5.0 % from Municipal Funds

making up a total of 73.5 % from public sources.

Bombay has the following figures:—

66.0 % from the Provincial Revenues

5.5 % from the District Board Funds

14.9 % from Municipal Revenues

making a total of 86.4 % from public sources.

In Bengal public expenditure is the lowest, the Provincial Revenues contributing 32.8 %, District Funds 14.8 % and the Municipal Funds 1.8 % or a total of 49.4 % only from public sources.

It is very desirable that public expenditure on primary schools should be considerably raised, especially in Bengal, whose Government should contribute more generously to this.

In Bengal the percentage of publicly-managed schools is only 6.9, in Madras it is 26.9 and in Bombay it is as high as 80.7. Local authorities have not taken up in full their responsibilities in bearing the main burden

of primary education in both Bengal and Madras. The Bengal local authorities' conscience seems to have been the worst.

It is the Local and Municipal Boards that will in the main be expected and obliged to start new schools and take up the management of as many existing ones as possible. Mr. Biss is of the opinion that public control over the new schools should be exercised as directly as possible but that it does not appear desirable to have a committee for each individual school either in Municipalities or in Local Board areas. He says: "It seems best therefore to have a small executive educational committee composed of a number of members of the Municipality or the Union Board, together with an equal number of elected representatives of the teachers in the area controlled, with the Chairman or the President of the local body presiding. It is important that teachers in the new national schools should from the outset be given a position of good social standing and independence which will attract men who will be influential in the work of social development."

One of the chief features of the Madras Elementary Education Act of 1920 is the formation of District Educational Councils. These are to be *ad hoc* bodies, one for each educational district (not necessarily, though ordinarily, the same as an administrative district) consisting of representatives of the District Board, Taluk Boards and Municipal Councils within its area and of other educational interests in the district. The Collector is to be an *ex-officio* member of the Council, as well as the Educational Inspector. Its chief functions are "to grant recognition to schools, disburse all grants-in-aid to private elementary schools from the provincial funds

placed at its disposal for the purpose, to prepare schemes for the extension of elementary education with a view to its becoming ultimately universal, to elicit and direct the co-operation of all agencies, whether public or private, engaged in providing elementary education on the lines best adapted to secure this object; and to advise the Department of Education on all matters connected with elementary education, including the provision of trained elementary school-masters."

The Education Commission of 1882 recommended that salary grants should be given on the results-grant system. This system is still in force; but the various Provinces follow other systems in conjunction with this. The results-grant system is not now regarded with approval. Government grants in larger amounts are urgently called for in every Province. Some go so far as to urge that Government should pay the whole bill for primary education and its extension. Others again urge it as a matter of policy. "There are however difficulties in the way. The whole bill is an enormous one and cannot be undertaken all at once. It is therefore necessary to have some means of selecting the areas which are to be put right first. Those that are keenest will offer to do most, having regard to their resources and will be the first to derive the benefit. They will be more likely to check waste if they realise that it is their own hard-earned money that is being wrongly used. Moreover if the people know that Government is to provide everything, their ideals will overcome all notions of economy." That Government should do everything by indirect taxation is far less preferable to the imposition of an education cess or a mere increase in rates in the Municipalities. It would be better if Local Boards and Municipalities should give up some of their less essential functions and thus economise and spend the money in connection

with education. The proportion paid by Government may be at least half the total cost and in some cases it may rise to even more; but in all cases of Municipalities and Local Board areas it ought to be fixed at some definite ratio. It might be as well to classify local and municipal bodies according to their resources as needing 80, 70, 60 or 50 per cent. of the expenses as the share of Government to be paid to them.

The large extension of primary education contemplated will involve additional expenditure owing to the increase in the inspecting staff and in the number of normal schools which have to be started which will have to be met by the Provincial Governments. But care ought to be taken to see that the proportion of inspection charges to the total amount of funds spent on the primary schools themselves does not become unduly high.

Schemes have been worked out in Bengal in the case of a number of Municipalities as to the rates necessary which have to be raised by the Municipalities in the case of a fair half and half division between them and Government of the capital and recurring charges of the primary schools to be started in their areas. According to the scheme the poor will have nothing to pay either in fees or taxes; and for them the schools will be wholly free. The municipal portion of the cost of the scheme has been put as a flat rate per rate-payer; and the latter averages but 2s. 3ps. per month. Such a scheme may very well be worked out in the other Provinces also both in municipal and local areas. This will help in the quick initiation of the policy of as wide an extension of primary education as possible.

The above problems sketched but imperfectly seem to the writer to be the most urgent ones demanding earnest and immediate attention.

C. S. SRINIVASACHARI.

FIELDING'S "JOURNAL OF A VOYAGE TO LISBON."

I. OBSERVATIONS ON MANNERS ON THE SEA.

THE deliberate ideal of a travel-book set up by Fielding cannot help his Journal to any indefinite charms. It means to combine instruction with pleasure and what it actually accomplishes may be divided into four distinct interests. His observations on human manners, his personal and domestic concerns and his general reflections and suggestions towards the reformation of laws and the improvement of English commerce together with some occasional gleams of the appreciation of nature exhaust the chief interests of the journal. Of seamen's manners Fielding has frequent complaint. Even as he is entering the ship his emaciated appearance arouses cruel jests from sailors and watermen. When obliged to linger in the docks he has a trying experience amidst the babel of seamen's voices which he describes with pointed irony. The tyranny of the ship's captain calls for complaint and Fielding mentions with bitterness the absolute subjection to the captain in which passengers are, on board a ship. When a doctor was fetched for the tooth-ache of Mrs. Fielding, the ship's pilot ignored the cries of Fielding's servant on the shore and steered the ship on, to the sad disappointment of Fielding who mentions that the "sour-faced pilot was the worst-tempered." Sitting at dinner one day, the window on one side of Mr. Fielding's cabin was beaten into the room violently, causing much alarm. The appearance of the bowsprit of a "cod-smack" in the middle of the cabin accounted for the accident. Fielding was shocked to see that the master of the little ship, far from expressing remorse for such carelessness, was only violent in his

oaths. He expresses his wonder why sailors in general seem to glory in the language and behaviour of savages. Did contempt for civil order spring up in uneducated minds with contempt of danger and death, for sailors were no doubt brave fellows? Another experience of rude manners on the sea came to Fielding in the appearance of two riding surveyors of the Customs Department who entered his cabin without permission and did not even uncover their heads in Mrs. Fielding's presence. The appointment of officers on the sea who wield quite an amount of power is wholly opposed, Fielding observes, to the principle of the Saturnian institution, of setting a higher class of beings to rule over a lower class of beings. The boatmen at Deal are able to tyrannise over travellers by demanding wickedly exorbitant fares. When Fielding wrote to the captain of a man-of-war for the loan of a boat he has not courtesy enough to reply in a note but returns a verbal refusal. Once again, a small sloop ran foul of the *Queen of Portugal* and carried off her bowsprit. Fielding reflects: Contempt is a port to which the pride of man submits to fly with reluctance, but those who are within it are always in a place of the most assured security. The story of the avaricious Mrs. Humphreys, the inn-keeper in Ryde, is only allied to that of the boatmen who demanded exorbitant fares.

The way in which the sailors lost all sense of discipline and gave themselves up to gross pleasures, forgetful of their duties, when once they were permitted to go ashore elicited Fielding's sympathies towards the captains of ships who had a trying experience under such circumstances.

The behaviour of the magistrate of health

who boarded the ship as she entered the mouth of the Tajo, and of the Portuguese providore is just as bad as that of the custom-house men whom Fielding saw at an earlier stage in the voyage.

The sailors however are not without redeeming features. At prayer on Sundays they make a very good impression on Fielding. They are at other times, perfect masters of their business, always extremely alert and ready in executing it, without any regard to fatigue or hazard. They are well-disciplined, hardy and patient.

2. SUGGESTIONS FOR ECONOMIC REFORMS.

Born of aristocratic descent, Fielding was full of a conscious and dignified feeling of patriotism for the prosperity of England. Trade, he says, is that *alma mater*, at whose plentiful breast all mankind are nourished. He is proud of British naval supremacy though the palm in land forces would go to other nations. He admired large ships even for the spectacular impression they made on popular minds. The sight of yachts was attractive for the encouragement afforded to intimacy with water and Fielding pleaded with warmth for making it a pastime to cruise in small vessels. Naval supremacy was dependent on the flourishing condition of trade and the latter had to be protected by legislature, and the magistrates in their turn wanted power, ability and honesty to execute the laws.

Bitter experience of the exorbitant demands of boatmen in out-of-the-way sea-ports suggests the need for the controlling of wages by local magistrates. The low class wage-earners have a false notion of liberty. While the obligations to render public service are quite apparent for the higher classes, the lower classes remain free to be lazy and easy-

going as long as they are content with a precarious living. It remains for Justices of the Peace to put into action the Vagrant Act by which "all such persons" are compellable to work for the usual and accustomed wages allowed in the place. This power of magistrates having however become obsolete, a new law was necessary to revive the power and facilitate its execution. Without this remedy persons in distress were deprived of the assistance of fellow-subjects when they were willing amply to reward them for their labour. The lowest of the people were permitted to exact ten times the value of their work, the value increasing in proportion to the necessity of the persons availing of it. This practice demoralised them, making them lazy and avaricious. They lived on a twentieth part of the labour that ought to maintain them.

Remarking on the unreliable character of sailors who were difficult to be brought under the captain's discipline once they went ashore in the middle of a voyage, and on the impunity with which sailors broke their contract of service with one ship for better wages on another, Fielding recommends that local magistrates should be empowered to deal effectively with the delinquents, imprisoning them on land or on board a ship according to the captain's wishes with fetters on their legs.

The legislative hold on maritime misdeeds is illustrated to be defective in another way by the story of a captain of a ship who disposed of as his own the cargo entrusted to him for conveyance in various places, at various other ports and pocketed himself the proceeds entirely. One injured party wrested its dues from him but the law was not put into operation in other instances.

Eating delicious fish which was at the same

time cheap in the "Devonshire Sea," Fielding is reminded of the dearth of fish in London due chiefly or entirely to the misdeeds of fishermen who perpetually violated the laws and restrictions relating to their trade. Certain fish living in the sea have a habit of spawning in fresh-water, and the young fry return to the sea where only they grow in size. So it was suicidal to fish the little ones before they grew to the proper size. There was distinct regulation against the use of nets with narrowed meshes and magistrates had only to be vigilant to put it into effect.

3. GENERAL FEATURES.

'The Journal of a Voyage to Lisbon' cannot illustrate the creative genius of Fielding as we know at its best in his great novels. It is the personal story and the humanity it arouses which attract us in the Journal. The Journal records to us the last period of the novelist's life and it is a proof of Fielding's capacity for enjoying life that he wrote the Journal amidst the most depressing circumstances of existence. The Fielding of the Journal is somewhat different from the Fielding of the novels, even from the Captain Booth whose weaknesses are touched with a kindly pen. In the Journal, Fielding is a venerable Justice of the Peace, full of patriotic impulses, intolerant of lazy and unproductive citizens and ever anxious about the prosperity of England. One perhaps can see personal remorse in Fielding when he says passions injure men's constitutions more than any privations can. With sickness and old age, the gaieties of life have vanished and domestic affections absorb the man. Wife and children call forth a profound concern and whatever goes amiss with them affects him deeply.

Even in the restricted narrative of the Journal, humour pervades the style of writing. The foibles of the captain of the *Queen of Portugal* are touched with a kindly satire. Now and then are insinuations about antiquarian societies engaged in research over useless matters. Deeper satire is directed against Mrs. Humphreys, the inn-keeper.

The classical allusions to Horace or to Ovid or to Homer which are introduced in the Journal with easy intimacy naturally add an interest to its style of writing.

A few touches of natural description are strewn in the Journal to relieve the comment on human affairs. The prospect on the shore of Ryde is much admired. Of a splendid evening scene we have a picture: "He did indeed set with a majesty which is incapable of description with which, while the horizon was yet blazing with glory, our eyes were called off to the opposite part to survey the moon, which was then at full, and which in rising presented us with the second object that this world hath offered to our vision. Compared to these the pageantry of theatres, or splendour of courts, are sights almost below the regard of children."

P. R. KRISHNASWAMI.

CLOUD MESSENGER.

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SRINIVASA VARADACHARI & CO., MADRAS.

REFORM IN ELEMENTARY EDUCATION IN THE MADRAS PRESIDENCY.

It is a common maxim that the greatness of a nation is largely determined by the education of the masses. In this Presidency, as in other parts of India, education has not sufficiently spread among the masses and the percentage of the so-called educated people is only 7. Hence the poor estimate of the people of India in the scale of nations in the world.

How then are we to raise the status of the Indian nation? It is by a bold policy of mass education to be programmed so as to be realised within a limited period of a generation or two. Our aim should be such that the colossal ignorance that is now prevailing among the masses owing to their want of education should be dispelled within this limited period. Is it practicable to dispel the deep ignorance prevailing among the 93% of the population within so short a period? Can such a programme of reform in Elementary Education be drawn up so as to bring about this result within a limited time? The answer is in the affirmative. It is possible to realise this aim provided there is a thorough change in the angle of vision of the Educational Department which is now under the control of the Education Minister under the Montford Reforms. The policy of the Department can largely be shaped and determined by the Education Minister under the Reforms, if he is really an authority on Education, or if he takes prominent educationists into his confidence.

In order to determine the changes that have to be brought about in Elementary Education in this Presidency, it is quite essential to know its weak points and the defects

which retard the real progress of education among the masses. It is vain to hope that the District Educational Councils recently established under the Reforms Act will be able to bring about completely the needed reform in Elementary Education. But the reforms that will be suggested in the course of this thesis, will go a great way to improve the condition of Elementary Education among the masses.

In this connection it will be useful to have a survey of the existing condition of Elementary Education in India. Both the quality and the quantity of Elementary Education prevailing among the masses in India are very poor and insufficient as will be shown by the following extracts culled from "The Progress of Education in India," Seventh Quinquennial Review:—

"In British India only 2.8 per cent. of the population are undergoing Elementary Education at all, namely 4.5 in the case of boys and .95 per cent. in that of girls. Further, no less than 90 per cent. of those under instruction are in the lowest primary classes, and there is a tremendous leakage between the first and the third or fourth classes, followed inevitably by a relapse into illiteracy (probably under-estimated at 39 per cent. of those who have undergone the average course of little over three years). There must be something rotten with a system "under which, as in the Punjab, the aggregate attendance in the two lowest classes considerably exceeds half the total attendance at institutions of all kinds."

"The Director of Public Instruction in the Punjab, speaking of instruction in the lowest classes, writes: 'Is it a matter of wonder that habits of apathy and mental inertia are

engendered, and that boys whose early education has begun on such lines should show a lack of keenness and originality when they reach the stage when such qualities as self-control, initiative, perseverance and pluck are expected in their work?"

Again let us see some of the figures which show the condition of literacy in India:—

"There are at present 700,000 villages in India. The total number of primary schools for boys and girls in all India is 142,203 and a large proportion of these are in the cities. The average population of a village is 360 which would yield a population of school-going age of under 60 (calculating at 15 % of the population as the ratio of school-going children). Thus out of every five villages, there are four which are not provided with an Elementary School."

Such is the miserable condition of Elementary Education in this Presidency as in other parts of India! It has to be greatly improved in quality and increased in quantity so that we may solve the problem of universal Elementary Education. We shall now deal with some of the causes of this unsatisfactory condition of Elementary Education. The most important of them are:—(1) The low general educational qualifications of the majority of Elementary School-teachers; (2) the discontinuance of education by a large number of pupils before they reach the III and IV Standards owing to poverty, or the parents' need of the services of their children in the farms and elsewhere or owing to other reasons; (3) the great indifference of the village people about the condition of their village school and its affairs; (4) the poor remuneration of the village school-master both by the people

and by the Educational Department, the latter helping in the form of grant-in-aid.

Of these several contributing causes, the first is directly and chiefly responsible for bringing about, to a very large extent, the others. For, if the general educational qualifications of the village-school-master are fairly high, he will be popular in the village and in his school and will, therefore, be able to retain his pupils in the school up to the highest class by winning their confidence and that of their parents. Hence he will also be able to induce the village people to interest themselves in the school and its affairs; and he will, consequently, be able to earn a decent living and a better remuneration than now.

Hence the kind of Elementary Education is largely determined by the village teacher who is the pivot of the machinery of education, and who is the real person that is responsible for practically putting into operation the departmental syllabuses and courses of instruction, however perfect they may be in themselves. It is indeed hopeless to expect that interest and enthusiasm would be supplied by the Inspecting agency of the Department, if they are absolutely lacking in the village-school-master who merely makes a pretence of following the suggestions of the various Educational officers, however earnest the latter may be in their work. Hence it is necessary that the village school-master should take a real interest in his daily routine and should be able to bring a great deal of enthusiasm to his work. To bring about this result, it is suggested in the course of this thesis that a thorough overhauling of the organisation and working of the Training Schools is necessary since they are the source of supply of qualified teachers for

the Elementary Schools in this Presidency. The Training Schools in this Presidency are of three grades, Secondary, Higher Elementary and Lower Elementary. The minimum qualifications expected of those seeking admission into the Secondary Grade Training Schools are that the candidate should hold a S. S. L. C. and should have secured a fair percentage of marks; those expected of candidates seeking admission into the other two grades of Training Schools are that they should have studied up to the IV Form and the I Form respectively, an alternative being provided for candidates seeking admission into the Elementary Lower Grade Training Class; viz., that they may hold a Primary or a Sessional School Certificate. The stipends that are being paid to the selected candidates of these three grades are Rs. 12, Rs. 10-8 as., and Rs. 8-8 as., respectively, Muhammadans and those of the backward communities being paid a little more, along with mistresses who are trained in Training Schools specially intended for them. The training course is 21 months for all the three grades. In order to improve the quality of trained teachers and to increase their yearly supply, it is suggested that three vital changes should be carried out in the organisation and working of these Training Schools intended for masters.

They are (1) the abolition of the Lower Elementary Grade and the conversion of the same into the Higher Elementary Grade:

(2) Shortening the course of instruction in both the Secondary and the Elementary Grades to a period of 9 months:

(3) The increase of monthly stipends to Rs. 20 and Rs. 12 in the case of the Secondary and the Elementary grade candidates, respectively.

N.B.—No changes are suggested in the case of Training Schools intended for mistresses only.

The existence of the Lower Elementary Grade Training Schools for masters is directly responsible for sending out every year more than a thousand certificated male teachers to the various Elementary Schools in the Presidency and the qualifications, both professional and educational, of the majority of these teachers are very poor. Most of them know only the Three R's and that very imperfectly; this being so, what can the highly qualified lecturers of the Training Schools, or the costly equipment of the same, or even the elaborate courses of instruction do to dispel the deep ignorance of these pupil-teachers?

But some may think that the supply of trained teachers will be cut short if the Lower Elementary Grade Training School is abolished and they may fear a dearth of trained teachers will result as a consequence. My answer to them is that an equal number or more of better qualified teachers will be sent out from the Training Schools of the Higher Elementary Grade, taking the place of those of the Lower Elementary Grade which are to be abolished under my scheme.

Again the plea of want of funds cannot be sustained as an obstacle to the suggested reforms being brought about. For the total amount of money spent upon a trained teacher of the Secondary Grade at present is Rs. 12 × 21 or Rs. 252 by way of stipends. But if the suggested reform is carried out, the Department will have to spend only Rs. 20 × 9 or Rs. 180 as stipends on each trained teacher of the Secondary Grade. Similarly it can be shown that there is a saving to the Department in the case of the Elementary Grade too. For,

1 H. E. costs Rs. $10\frac{1}{2} \times 21$ or Rs. 220½

1 L. E. „ Rs. $8\frac{1}{2} \times 21$ or Rs. 178½.

The two together cost Rs. 399 as stipends. As proposed by the suggested modifications, two Lower Secondary trained teachers will cost Rs. $12 \times 9 \times 2$ or Rs. 216 only, for their whole course. With this saving of funds to the Department, more teachers can be trained and a larger supply of better qualified teachers can be brought about so that both the quality and quantity of Elementary Education may improve in the desired direction. There is an additional advantage in shortening the course of training and in increasing the stipends of both the grades. For, better candidates may be available for training, under these favourable conditions. Really capable men may take to the profession of teaching under such conditions. And experienced teachers of Training Schools will vouchsafe that the present period of training for 21 months is quite unnecessary, and is a waste of public money and energy. With pupil-teachers of better educational qualifications, a shortened course of training for 9 months will be quite sufficient to make them efficient teachers. After all, it is not the Training Schools that make the future teachers so much as the general qualifications of the latter and their natural aptitude for the profession. If this salutary reform in Elementary Education is brought about, it can be safely predicted that most of the evils of the present-day Elementary Education can be uprooted and real improvement brought about in the quality of Elementary Education imparted in this country.

Other Advantages:—If such a reform in the training of teachers is introduced, a host of other useful changes in the village-life and village organisation can easily be brought

about through the medium of the enlightened village-schoolmaster. For, the village-school can then be made the centre of all the activities of a modern civilized village. A common library may be started in the village-school to which all the village people may be given free access. Series of useful lectures on various topics dealing with village life may be arranged by the activities of the village-schoolmaster for the benefit of the village-people. Co-operative societies and agricultural banks may be established by the enthusiastic village-schoolmaster with the help of the officers of the various departments concerned. More conveniences of quick postal communication may be brought about by the opening of Branch Post Offices by the village-teachers for which they would be properly remunerated by the Postal Department. Even better means of communication by way of good roads, etc. may be attempted to be constructed by the most enterprising of these qualified, influential and well-paid village school-masters who would be able to enlist the sympathy and help of the village-people by virtue of the sincere work done by them in improving the condition of the village in more than one direction as described above.

It will thus be seen clearly that a change in the departmental policy regarding the working of Training Schools on the lines suggested above will bring about a great improvement in the condition of the village and will add to the prosperity and enlightenment of the village community in many respects.

It is my sincere conviction that such a change will quickly spread Elementary Education in the land and the problem of Universal Elementary Education will be solved sooner since the indifference and apathy of the

village community towards education will largely disappear in the face of tangible advantages and benefits to the village brought about by the activities of the village-teacher.

It is because of the present unsatisfactory method of working of the training of teachers that no rapid strides in the spread of Elementary Education are brought about. It is needless to point out that the District Educational Council, by itself, will not be able to bring about the suggested reform in the training of teachers since the Training Schools are under the administration and control of the Educational Department.

Already the scarcity of candidates for training is being felt in the Secondary and Higher Elementary Grades and in a few years we will have to face the problem of dearth of qualified teachers. But some may think that the abolition of the Lower Elementary Grade as suggested by me will more seriously tell upon the supply of trained teachers and hence may oppose the introduction of a thorough change in the method of recruitment of candidates for training. But the real cause of the dearth of candidates which is now being felt is, in my humble opinion, the small stipend that is offered to them and the smaller salaries and the poor prospects offered to teachers, in general, combined with an un-

necessarily long course of training. Hence an increase in the stipends of candidates for training with a shortening of the course of training as suggested by me will bring in a sufficient number of capable men to the noble profession of teaching and will also contribute to raise the salary of trained teachers so that a contented profession of well-paid teachers with fairly high general qualifications, and full of real enthusiasm and interest will speedily help the regeneration of young India and its onward march to progress, freedom and prosperity. With such an efficient teaching profession in the lower ranks, it will be possible to spread Elementary Education among the masses so as to raise the percentage of literacy from 7 to 70 in a generation or two. But with the present discontented, ill-qualified and stagnant village-schoolmasters it is next to impossible to hope for the realisation of universal Elementary Education even in a century; and even if it were achieved, the kind of education imparted in the majority of village-schools will not be worth the money, the labour, and the energy spent over it. Further the nation will not be able to demand a high place in the scale of nations in the world which is hers by virtue of her ancient greatness, civilization and culture.

G. RAMAKRISHNA AIYAR.

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THE PROBLEM OF THE PRESENT STUDENT.

THE PRIMITIVE STATE.

THE object of Education is considered in all ages and climes to be to create in man the faculty of distinguishing right from wrong, tinsel from gold, and of acting rightly, rejecting all wrong even under the most trying circumstances. Even the most cruel king Hiranyakasyapa put his son Prahlada to education on the plea that an uneducated man would be unable to distinguish right from wrong.

“క॥ చదువు వాడొందదు !

జదివినపదపద్మి నేక, చతురతకలుగు !

జనువంగనలయును జనులకు !

జదివించెన నాకుల్లాన్తం జదువును తండ్రి ॥”

The pupil was entrusted to the entire care of his Guru, and left with him for a number of years, until the Guru pronounced that the education of the boy was complete; the boy was thus in close touch with his Guru, day and night, and reaped from him knowledge, character, and manners. When the Guru was satisfied with the progress of the boy in every way, he brought him to his parents to be examined and tested. The Guru was then made rich presents, and was thanked and remembered by way of gratitude. Such was studentship in good olden times especially, in India. Enough opportunity was thus created for the teacher to exert his personal influence over his pupil, and for the pupil to reverence his master in all his life and under all circumstances. The connection between the master and the pupil was one made up for the whole life like the Hindu marriage relation, and it remained in-

tact, although the pupil grew wiser, more learned, and more powerful than his master.

THE MODERN CONDITION.

This noblest ideal and mode of education is thoroughly changed in modern times. Education instead of being an end in itself has become means to an end, and the Guru is brought out of his sanctuary, made to prostitute his learning, and be at the beck and call of each and every one who puts into his pockets some filthy lucre. The idea of buying and selling knowledge is instilled into the mind of the pupil from his infancy, and this discharges completely all further obligations between the master and the pupil in their life. Hosts of students come and leave the teacher every year, and the student also passes under a host of teachers every year. Besides, the teacher has no independence, and is marked out in the eyes of his pupils as a paid coolly employed in a factory in order to manufacture, year by year, hosts of students fit to undergo a public examination which has a market value attached to it. The element of character formation is entirely dropped out of the curriculum, and it is flooded with subjects calculated to fill in the mind of the student with top-heavy information leaving the heart dry and the limbs weak. The trade-marks of ‘degrees’ are impressed upon the successful students to indicate the commercial value of each, and they are disposed of like commodities in a market to be utilised by Government or the public for their needs. Thus Education which ought to be an end in itself is converted, in practice, into means to an end, the end being to keep body and soul together for a few years on earth.

THE WORST EFFECT.

Even this end is not attained adequately under the present conditions. Although a student is able to obtain the half-mark of a degree, it still remains a problem for him how to eke out his livelihood. The scanty school room and the uncertain bar are the only things that readily offer themselves as places for the life-long labours of these degree-holders, and the result is that discontent and disappointment weigh down the already debilitated frame of the degree-holder, and sink him into the grave, even before his hair turned half gray; of course there are some lucky people who are able to rise up to the highest rung of the ladder of fame and prosperity, but their success is due not to their degree but to their private efforts and individual opportunities. And how many, after all, can have such opportunities and can make such private efforts?

THE REMEDY SOUGHT.

The remedy proposed to better this state of things is to combine the present *theoretically* cultural scheme of education with a vocational scheme, and thereby produce a harmonious whole; but even such a combination fails to serve as a panacea for all the evils in the present educational system. The problem of the present student is indeed a hard nut to crack. It has become as difficult as that of an ideal form of government to be devised for any country. Unlike the student of a decade and a half ago, the present student is made to meet with grave difficulties all around, his attention instead of being confined to his studies is distracted in many directions. He is now like a jewel-buyer in a metropolitan market, dragged on every

side by merchants holding out promises of profit one greater than the other. The head of the institution, the 599 G. O., the anxiety of the parent, and last but not the least of all, the call of his nation to play a role in the political upheaval of the country, all these unsettle the mind of the present student, and put on him the necessity of meeting the grave problems of life at an age and in a state quite unprepared for such a task.

NON-CO-OPERATION.

The revised Non-co-operation resolution passed in the recent Congress at Nagpur has rendered the plight of the poor student many times worse than the resolution passed in the Calcutta Congress. By the Calcutta resolution, a definite demand is made upon the student to boycott his present school or college, irrespective of any consequences whatever; but the Nagpur resolution has put the conscience of the student to the severest test. There is no definite demand on the one hand as before to boycott his school, and there is also no decided approval on the other hand to continue undisturbed in the same. It is left entirely to the undeveloped conscience of the student to make a choice most momentous in its nature. The Calcutta resolution is like an enemy who comes to us openly and challenges us to fight, thus putting us on our defence; whereas the Nagpur resolution is a friend who dwells with us in our closet and persuades us to fight, warning us at the same time of the impending danger. The student is informed of the existence of a Scylla on one side and a Charybdis on the other, and is compelled to make a choice between the two. Oh! what a painful state this is. Whenever the student gets disgusted with

his studies, disappointed in his examination, or offended with his teacher, he will think of non-co-operation, consult his conscience and leave his school; but alas! he finds no cut-and-dry means there to eke out his livelihood. His conscience tells him again to think of his school and his examination, and he will long to go back to his school-room to his utter disgrace. Some students having very sensitive nerves will prefer to idle away their time and become vagabonds to joining school again and facing the odium of his fellow-students. What a fine situation the Nagpur Congress has created for our students!

THE PANACEA FOR THE SITUATION.

It is then quite clear to all thoughtful persons that this double dealing with students lays the axe at the very root of our national growth. The student of to-day will be the citizen of to-morrow and on him the nation lays its claims, to bring about political emancipation. Is not the student then to be prepared to meet the demand made on him by devoting his time and attention exclusively to the gathering up of knowledge and strength only in one particular system of education and one alone whether foreign or national. The nation, at least the majority of it, has decided that the present system of education is in no way conducive to bring about the expectations made of our students in their manhood and that the students are, therefore, to boycott their present schools and colleges; the decision may be right or wrong, but as it is the unanimous verdict of a whole nation, none has any right to question it. The national spirit has pervaded the whole population, and among students we do not find even five out of a hundred who, rightly or wrongly, approve the present system of education. If

the teacher lectures in the class about the advantages of the present system, there will be hissings and stampings of feet in the classroom, until the teacher gives up that topic. The very recent attitude of the students of an old educational institution at Madras to refuse to write a composition on the visit of the Duke of Connaught on the ground that they were going to boycott his visit is a proof positive of the spirit of the present-day student. I too recently asked my students to write a composition on the 'Evils of Non-Co-operation' and had to face a similar attitude on their part, though, for other reasons, I was able to make them do what I wanted.

The nation has called upon the students, and the students are ready to respond to that call. No amount of persuasion to the contrary would stop the spirit of the student and reconcile him to his present system of education. It is, therefore, the duty of every well-wisher of the student to let him go in keeping with the call of his nation; for, it is the interests of his nation that he is expected to serve after the completion of his education. Let Government therefore realise, without further delay, the need of the nation and respond to the demand made by it; let the educational system be so modified that it will be thoroughly nationalistic as desired by the nation.

CONCLUSION.

The subject of education is transferred into the hands of the Minister, and the Minister is appointed to take it up and work it out. Proposals are being made only with a view of patching up the existing rents in the system, and the fact is lost sight of that other rents will soon spring up unless the fabric as a whole is changed and a new one put in its stead to suit the altered size and shape of

things. The cry for national education is ringing in the air, and the will of the nation is behind the student prompting him to discard his present education and desire a national one. What student is there that can stand unbending in the face of such a mighty national current and try to drift it out of her way by planting an alien plank against it without either breaking it or getting it tossed about in the effort? Therefore, let there be only national education imparted to our boys as devised by the nation and let it be thoroughly national consistent with the spirit and needs of modern times.

But in any scheme of national education, let the mistake committed in the present system be not repeated at all; let adequate provision be made for the character-formation of the student by grounding him well in a suitable course of religious and moral instruction, and let that instruction be given by persons who do not say, "Do as I say," but not as I do." All moral instruction must have its firm basis in religion, for, "morality ungrounded in religiosity is only a monstrosity of absurdity."

DEVARAKONDA JAGANNADHA RAO.

N.B.—This article was written in the month of January, 1921, immediately after the Nagpur Congress.

EDUCATIONAL REORGANISATION: SECONDARY "PROVINCIALISATION."

HIGH time to speak and not be "willing horses." This article will be confined to a consideration of the question of Provincialisation of the places of Headmasters in Local Board Schools; as it had the honour of being discussed in the Madras Legislative Council. The question of appointing Headmasters by rotation may be shelved for the time being. First let us look at it as it appeared in the Madras Legislative Council.

Rai Bahadur T. M. Narasimhachariar has to be thanked for introducing the subject and for his appreciation of the responsibilities of Headmasters. The question, however, deserves a more thorough thrashing, a deeper insight and more of the Educational interest. In these days of democracy and its ideals and forms, far better would it have been if there could be an open and free conference between the Headmasters and the concerned powers. The remarks about the competition and the comparative incapacity of the Headmasters under Local Boards are a sign of cheap indulgence. Among other things, if the Government should be satisfied that they have the best men, why should the principle of "efficiency bar" be introduced? And again, will it be a revelation to be told that certain people avoid Government service for a variety of reasons and that, sometimes, the best is attained under private agencies, perhaps subsidised by Government? The popularity of Government service is due only to the definiteness of the terms of service; the recognition of the status of service and to the prospects in and beyond service. Hence the demand arises not only for a Standardisation of services in the Educational Department but

also for a Standardisation of services. Glad however, to find the opposite view also expressed. Careful attention is invited to the article on "Education and some of its Peculiarities" in the *Educational Review* for January 1921. The points raised in the course of the debate may first be looked into.

Man is something higher and nobler than a mere material being and hence the availability of services even with so few attractions; but not because of incapacity. The reduction proposed in the cadre of Sub-Assistant Inspectors is unwise in view of the expansion of Elementary Education. Even "Supervising School-Masters" may not be out of place. Inefficient education is not only a wastage but a source of mischief. It is another story with the Inspectors. A good deal of their work is mere routine. Faddists only make matters worse. Their educational usefulness suffers further from the absence of facilities for rewards and punishments. The huge cost is another matter. Further, with "Provincialisation" the Headmaster, the man with the responsibility for the educational efficiency, tone and tradition of the school, will be in a better position to give a satisfactory account of himself.

One word about Provincialisation. It does not mean Madras Provincial Service. It only means the creation of a special cadre, perhaps subsidised by the Government as in the matter of teaching grants; the scope for the time being restricted to those in the service of Local Boards—presumably on account of their impersonal nature and, (D. V.) as the first step to Unification. The presumption that the cadre is to be under the management of the Government speaks against the trend of events and the aspirations of the people. The demand for the creation of Special Boards

of Education is a very old one. Please *vide* the article on "Standardisation of Service" reprinted in the *Educational Review* for May 1920. The actual existence of the D. E. C. is an instance in Elementary Education. The talk about Secondary Educational Boards also is not yet extinct. This provincialised cadre will then be under the management of an Educational Board. Thus the calamity, if it is considered so, of management by Government is only imaginary. Again the feasibility of transfers seems to be admitted. Then it is provincialisation in principle though on a lesser scale and though without the pay and other advantages. There can be no transfers from Board to Board or from Municipality to Municipality or to a Board, now.

Is it a misfortune from the view-point of Local Self-Government. Can we not think of forms of L. S. G. other than those of the District Board and the Municipality? What is this huge co-operative movement? Is not an Educational Board like the D. E. C. a form of Self-Government? Are not the various Trust Boards examples of different forms of L. S. G.? Further it is the curse of education that it should be governed by such petty political considerations and that it should form a trump-card in ordinary politics. While some time back, Indian History could not be accorded an independent place under Group 'C,' the hurry now is for the introduction of vocational training. Cannot Education be saved from consideration of political expediency in its management? It is another thing to mould the courses of education to satisfy the political and other demands of the country to promote National efficiency. Again, was not the scheme of Provincialisation accepted at a conference of the representatives, mostly on the executive

side, of this L. S. G. It may be argued that the acceptance is not binding. Then the resolution should have been arrived at imprudently or too hastily. But then, loyalty to majorities and high-minded constitutionalism are the very foundations of a really democratic spirit. The discipline of self-restraint, the sinking of Self in the Corporate is not only the essence of Demos, but the sign of lofty patriotism. Otherwise chaos is the result (just look at the idle cleavage and burning of the empty hearts that have resulted from this irresponsible resolution).

If it is truly a disaster from an Educational point of view, that is reason enough for giving up the idea. But that has yet to be proved. I am however, inclined to think strongly that it is not.

It is feared in certain quarters that Provincialisation is opposed to the principles of Decentralisation. The answer is the same as it is to the theory of misfortune—to L. S. G. The very essence of Decentralisation involves the transference of power and responsibility from the Central Governments to Locals and the devolution of such, from metropolitan heights to the mofussil. If Decentralisation should be confined to District Boards and Municipalities alone, further progress in civic and corporate life is foredoomed. An Educational Board is also a Local Body and so no danger to Decentralisation.

I wonder what information the Inspectors give or what standards they set. The Inspectorate has multiplied inordinately, and are these effects seen broadcast? Do the results proclaim it or does the S. S. L. C. Board find it so? Generally they inspect only the High School forms. Their usefulness is thus handi-

capped. Sometimes they dislocate work by a defective knowledge of its organisation and methods. Better they are in touch through Educational magazines, like this *Review* and the S. S. L. C. Reports. The question of control by the Local Bodies seems to have more truth about it. Yes, Power is a sweet thing, specially enjoyable, — as in the case of "other men's wine" — when the self is impersonal, and particularly so in a field where all are doctors. But it must be remembered that the L. S. G. bodies are also Boards of Trust. And impersonality in administering Trusts is the ideal to strive after. Investment and Power should ordinarily go together, subject however to certain conditions. Here there can be no pretention to personal investment. Even then, the exercise of power should be such as to promote the objects of the investment. Even as matters stand now, are there not rules of conduct and procedure and limits to speculation? Further, Power for benevolence is not only appreciated but willingly conferred. Otherwise it borders on tyranny. To seek for power, merely as such, is not a trait of high-minded nobility. Even this exercise of power in the hands of competent persons takes only the impersonal shape of the enforcement of a well-understood regulation. I go further and submit that this provincialisation is an expansion in the wake of Decentralisation and also that it is an instance in the development of the powers of combination for a common purpose. Thus it combines in it the principles of the two huge movements making for the progress of man in conformity with his biological aspects of life.

I would only summarise a few more points.

(1) The achievement of responsibilities weighing heavily on the shoulders of Headmasters should be rendered possible of attain-

ment by an investment of adequate power on the executive side though not on the legislative side.

(2) The schism of cadres feared by the Assistant-Masters is only imaginary. Differences already exist between L. T.'s (different even according to subjects) and Inters., etc. Under the present system of single schools there is any amount of heart-burning and jealousy as between school and school, between teacher and teacher and as between the Headmaster and the Assistant-Masters. This is the result of want of definiteness in organisation. This Provincialisation is bound to lead to, at least, the standardisation of scales; and later to the unification of the service. And with this status, why not, to an equality with other services of similar preparations.

(3) The fear of irresponsibility to the L. S. G. Body is also ill-founded in the light of the existence of a management with power and responsibility well-defined and clearly understood. The Headmaster also cannot shirk the responsibility for want of power or divided counsel.

(4) Good, bad or indifferent, the average is the order of the day. This institution of a Provincialised Cadre, very humble and modest as it is, offers places worthy of one's ambition from amongst the Assistant-Masters. The hope of a reward enlivens work and promotes the self. The educational hand becomes only darker for the non-institution of even this flickering star.

(5) The Headmaster should be above personal considerations of favour or frown and certainly be placed above the meanness of a

competition with the Assistant-Masters in the same school. Imagine for example, as suggested in a P. B. leaflet, what a Magistrate would be if he should depend upon the people for his appointment.

(6) With the progress of man on the individualistic side the ideas of management by the principle of a "family life" become obsolete. Societies built upon caste and class system and joint family system are breaking down. Can schools alone be managed on the joint family system in these days of multiplicity in tastes, opportunities coupled with individualism. I do not belittle the importance of morale in human life but only wish to make out that the present day demands definiteness in the organisation and terms of service.

Thus seen from any point of view, this Provincialisation seems to be the first right step in the re-organisation, rather definite organisation, of Secondary Education on the lines of efficiency. The principle of appointing Headmasters by rotation will admit of further discussion. If the Proceedings of L. S. G. Conference should be merely of an academic nature, at the expense of the rate payer, why should Headmasters be refused T. A. for the Headmasters' Conference? The question of finance should have been considered before passing the pious resolutions.

D. V. JAGANNADHAM.



EMANCIPATE THE TEACHER.

By A. S. HARNHALL, B.A. (Hon.), Bombay.

RUSKIN says in "Unto this Last" that the value of an article has as much to do with demand and scarcity, as with the "valor" of its producer. That valor is one of the factors to settle the price of an article is a theory which promises to be instrumental to human happiness if properly understood and adopted. People seem to neglect it in a sheer philistine spirit and calculate on the utility of the work executed rather than of the person whose creative genius contributed it to the benefit of men in general.

This doctrine is specially applicable in the case of mental labourers; the work that they put out can only be valued by the energy and integrity exerted and not by the perceptible effects thereof, for in most cases the results depend on the material given and however unparalleled the ingenuity of the labourer it may still prove to be not a whit changed.

Speaking exclusively of the class of teachers one will have to admit that its exertions are not at all to be evaluated by the annual out-turn of pupils to the Departmental Standard but by the interest and earnestness evinced by it. This may appear to be as dubious an issue as the other test but undeniably has the unique characteristic of infusing greater and greater spirit and emulation into it. Those teachers that daily improve in their zeal for work bid fare, in future to identify themselves with the sacredness of their function. This is the consummation that any nation may wish to attain to: but so long as the profession is in the hands of the imperfect toil-mongers it may vainly hope to reach that millennium.

For the correct apprehension of the subject we would like to see how a teacher stands to-day in point of status in school and in public. If one exercises one's senses, at least of sight

and hearing, one would be convinced that one's position is one of extreme misery and humiliation. The horrid shibboleth of efficiency heard on all sides from various departments has created such an intolerable hierarchy of superiors that an ordinary teacher finds in his routine that he has to fear not one or two but more than three or four inexorable authorities. Where is the teacher, then, in the honoured rounds of the educational ladder! His position is so anomalous that the ordinary rights of a teacher enjoyed by all his brethren of good old days are no more his but are largely mulcted by his superiors. His subordination is complete and the frantic cry of efficiency in the department countenances his subjection. From the virtual potentate of a Director to a grandiose head-master, nay, a braggadocio first assistant, mandates shoot out from every one, every instant, which the poor submissive subordinate is compelled to bow down to. It is not our purpose to expose the various details of a school-master's subservient functions lest we should be accused of reiterating what has been too well-known.

• This tutelage wedded to the total dependence for pittance on the good remarks of the superiors has succeeded in reducing the subordinates into doubly servile servants. The pay the teachers receive has never been adequate at any time: and even with what the Government may dole out hereafter, it is destined to be on a par with their desperation. Thus they receive a jointure over which a widow may weep for its meagreness. Contentment and resignation are very fine qualities and may exalt any man to a redoubtable dignity; but when the very necessities of life are wanting and other professionalists are jubilating over their choice and surfeit how can the poor teachers realise the merits of those virtues? Where those are observed outside the teachers may very well learn to practise them. Since teachers are engaged as

servants let them not be expected to be more highly endowed with finer qualities than the covenanted servants of the Government. Their profession is honourable but their maintenance is miserable; their status in the profession is deplorable; yet their endurance commendable.

We may next notice that teachers, with all these disabilities to hamper them, have been trudging along happy to exercise what little remnant of love they hold for education in the crevices of their hearts. But in their mis-spent energy the head-masters who seem to have been permeated with the inebriation of the Department lose sight of the value of mental labour and try to control and manage the work of their subordinates. How preposterous to control mental work by physical pressure! Ixion was tied to a wheel and Sampson to a mill and Prometheus to a precipice; but alas! all of them had their body tortured but their mind remained as adamant as ever. Compulsion in teaching is futile and the more so, when the supervisor mistakenly believes that by dint of his monitorial injunctions alone he can yoke his assistants to their full duty.

There are other events too that render nugatory the sanguine efforts of head-masters to exact work from their subordinates. First, the former dread their own position and think it to be untenable if their subordinates enjoy their position as teachers. A little mirth or a little negligence of the assistants infuriates them and they fear that the management of their school would collapse at once, if such indulgence were connived at. We fail to see how the school discipline and the school management suffer for trifles and how head-masters are transported into a paroxysm of insecurity of their hold. Secondly, the exaction of work from teachers is thought to be the domain of superiors. They take the

school to be a unit in the educational institutions of the country; and pre-suppose that the greatness of a well-conducted school goes to Headmasters, all teachers being merely tools in their hands to manipulate. The system prevalent lends a good deal of support to this presumption and the authorities, therefore, endeavour to shine in their super-arrogation. Curious, indeed, that the exterior of good management should blind the love for intrinsic utility of the institution. Thirdly, the predominant idea of infallibility and prestige sits like a night-mare on their suspicious mind. The notion of high trust of their school disturbs them, in and out of season, and in their timorous zeal to advance the welfare of their school, and indirectly their own, they forget that their assistants too have an equal share in the up-keep of their school. We may not wrangle over the demarcation of the duties of head-masters and their assistants. But it must needs be said that the assistants have to discharge work of mental nature more than their superiors; and that the demented control over them is calculated to un-balance their tranquillity more than anything else.

In society a teacher forms no important element. He has neither the influence of a clerk nor the respect of a priest, the religious preceptor. His status in society has been very much lowered due to the fact that his respectable avocation has concentrated all its worth and sublimity in a phantasmic body, known as the Educational Department, and is partially identified with the Director, the Inspector or the Deputy Inspector or the Head-master. The onerous duty of instruction in the case of teachers is associated with the means of subsistence, wherein the high principles and noble achievements are sententiously classed with the legerdemain to secure further thrust in promotion. The aims and objects of teachers thus calumniated and their work

thus enriching others' greatness, their station in society can hardly be expected to be significant. Again for one reason or another teachers have been involuntarily alienated from public aspirations and movements and therefore neither the illiterate nor the intelligentsia have any idea, of the possibilities of the tutorial intellect or the proper appreciation of their silent and solicitous work. Their presence, again, becomes the least encouraging; and sometimes, God forbid, detestable.

Here we are reminded of the memorable picture of a teacher and the description of his duties as drawn by the French historian Gizot:—"There is no fortune to be made, there is little renown to be gained in the painful obligations which the teacher fulfils. Destined to see his life pass away in a monotonous occupation, sometimes even to experience the injustice or ingratitude of ignorance, he would be saddened, and perhaps would succumb, if he derived courage and strength from no other sources than the prospect of immediate or merely personal reward. He must be sustained and animated by a profound sense of the moral importance of his labours; the grave happiness of having served his fellow-creatures, and obscurely contributed to the public welfare, must be his compensation and this his conscience alone can give. It is his glory not to aspire to aught beyond his obscure and laborious condition, to exhaust himself in sacrifices scarcely noticed by those whom they benefit, to toil, in short, for man, and to expect his recompense only from God."

Teachers even after over twenty years of service in the cause of education might not have failed to observe that the septennial generations that pass under them scarcely indicate any sense of veneration, except as a curious phenomenon of their school-days.

Sometimes old incidents are euphemistically referred to, in their very presence, tickling the whole audience to risibility. This is the inevitable product not of the congenital levity in students but is the nefarious effect of the present system, where not one teacher is remembered with profound respect. While teachers are like stagnant waters, getting more and more saline by evaporation, their students freely run in freshness gaining both in width and depth. The estimation for teachers in public is, to begin with, very infinitesimal, then too, it very soon vaporises due to the squeamish exclusion both voluntarily and sometimes, most peremptorily enjoined upon. It is not a matter for jealousy that the students out-shine their teachers but it is one in which able men, earlier in the field, are seen to have been handicapped by the suicidal constraint put on them in all activities of the public. One who has not seen the day-light of public life can never be an efficient teacher to the prospective citizens of the soil.

It may be objected that a teacher is expected to be unobtrusive and un-polluted in his profession. One that has been successful in rearing up boys in a manner best suited to oneself may very soon retire from the multifarious politics. But never would that be the case so long as the basic principles of one's mind and nation have not been thoroughly attuned to their respective acceptability. None would like to be dictated in matters of conscience or in the pursuance of his favourite activity. None can doubt that teachers embrace his avocation and persevere in it with a conviction, most probable, that even in their soaring ambition or flighty imagination they could shine or repose in obscurity no better, elsewhere than here. It is pitiable that even in spite of the general quiescent nature of the school-masters, they should be stampeded from public movements on false

alarms best known to the alarmists themselves. Responsible teachers alone can evolve responsible citizens out of boys.

We have dilated at length on these trammels of teachers to show that they are non-entities both in school and outside. Unless they are individually responsible for their work and until they are allowed free scope in the promulgation of their principles, calibre and knowledge to their students the education of the country would be mercilessly crippled and totally misdirected.

To bring about any salutary change in the current system of instruction, it is our absolute opinion, that teachers should be reinstated in their old place of dignity and independence. It is then alone that the prominent drawbacks cankering the present system will be perfectly eradicated. Teachers form the most indispensable part of the social organism and if they are neglected the whole social constitution will be thrown out of healthy order. Something must, immediately, be done to remove straightway their existing disabilities. As we have already noticed the intrinsic worth of teachers is not measurable by the ordinary criterion of examinations and inspections of the department. It rests on a subtle factor which is calculated to exhilarate the minds of teachers to pursue their avocation with ever intensifying enthusiasm. It is futile to expect the development of this special sincerity among teachers, while they are pitifully over-burdened with multifarious shackles.

If teachers have any duty to attend to for the benefit of the nation and the Government, it is unquestionably the one that refers to their own deplorable condition. Their duty is supremely intellectual and unless they exert

themselves to be fully equipped with, and to steadily advance in, their psychic powers and erudition, they lose their most covetable distinction of serviceableness in society. They must ever be the load-star to all their students, past and present, in all matters connected with mental activities. And one who is thus pre-eminently adapted to such incessant self-improvement is alone respected everywhere. Allowing for all degrees of mentality a relaxation in this standard, there still remains the same, the fundamental need for adequacy for the profession.

Were sincerity and intellectual adequacy accepted, par excellence, to be the essential elements in a teacher how many considerations rush forth to evidence their suppression in him by the bigotted hand of the irresponsible system. In the van of all reforms stands the complete emancipation of teachers from the social ostracism arising from the dread of the Government for the probable political intemperance in the country. Such an unredeemable prohibition is very tantalizing and sometimes incubates clandestine satisfaction among malefactors. If the teachers whom the students think to be the paragon of virtue and wisdom and whom they approach with bated breath for an authoritative solution of the problems of the day, were to be tongue-tied or equivocating what would their students feel for them? If they can with full faith in their words inform their students their mission, do they not rise in their estimation?

Here we arrive at an important issue. Sincerity demands freedom of thought and action. If it is divested of its inseparables, we can very scarcely see it display its pristine splendour. Let it be remembered that the absence of sincerity means the explosion of the whole fabric of education and the demolition of

young minds into an interminable debris. The question is not how freedom can be allowed but how far can sincerity be brought to play. If consequences were deterrent in freedom of action and thought, none can confidently vaticinate that its absence can be a bed of roses. Some finical minds moving in the dark light of tradition may fear the lime-light of sincerity or may misjudge its effects. We beg leave, however, to remind them that we plead for freedom of thought and action for the divine profession of teaching and not for a license to plunge in the prevaricating politics.

Besides this impediment there are many others that concern the Department itself. We tread here on a more debatable course, although convinced of the truth of what we propose. In institutions where nobler duties, higher sentiments and graver erudition prevail there ought to be greater freedom, surer recognition and wider equality. It is in the very interest of the education of the country that we try to indicate that sincerity and not policy leads to true mental evolution. All reforms must be in this direction. A Minister with his train of assistants and deputies will help the cause of education as inane as Directors with their long chain of deputies and delegates. The only possible solution appears to be in the cataclysm of the existing system, for desultory innovations and tactful procrastinations have been many and futile till now. Any casual observer will not fail to notice that the present system is drawing nigh to its immolation; and that a newer and healthier one will have to be adopted, either gradually or immediately. The times are not propitious for a system where authority dominates over labour of love.

For a thorough expression of sincerity there

exists an imperious necessity, which can only be understood by a right-minded educationist. He only knows well that an impious ambition to utilise the exertions of others for self-aggrandisement damps the very energy of the colleague or the co-worker. Rather than sacrifice his precious labour to shroud others in a patched glory the co-worker may justifiably beshrew his trust or play the truant. In the fitness of things, therefore, a teacher stands in need of individual and independent recognition. The idea of aggregation of many classes in one place necessitating the creation of a superior over their teachers has totally displaced the primordial unit of the educational system. A teacher has every right to be the sole security for his students and possesses most unquestionably the prerogative of educating them according to the light he has received and of enjoying his meed of praise for his sincere work.

Such units alone can help the solidarity of the educational system. They create very naturally a new set of circumstances where love and self-sacrifice will extort far more work than the panic-ridden authority can possibly do. Teachers would be placed on a footing of equality with one another, fostering a *brotherhood* which would facilitate an intercourse of a far more edifying type. Brotherhood, then, is, in our opinion, the right substitute for the graduation of authority as witnessed in schools and elsewhere to-day. This is such a spontaneous development of sincere work that the vehement solicitude for the latter cannot deny it the former. Considered in this light a supernumerary teacher generally the head-master and others of his ilk, Inspectors and Deputy Inspectors, for example, would be redundant. There would be no duty for them since the distrust

of teachers, their efficient cause, will have no place in the ideals of the Department.

It requires no degree of acumen to inquire why we have spared Directors. No doubt their class occupies the foremost place in the category of the educational superfluities; but yet it demands special attention before anything is said against it. The Department of Instruction is now intended for inspection more than instruction. There is more of authority invested in the head of the Department than the centrifugal love and sincerity that should radiate throughout the net-work of schools, Primary and Secondary. It is more or less an insensate repository of hackneyed methods and exploded principles and exercises no part of its duty more wholesomely than masterful indifference spunging, all the same, on the poor coffers of the country. Its duty is the control of the educational system but unfortunately the control has been punitive and retrograde while it was to be esoteric and liberal. The brotherhood of teachers is too spiritual to allow any indemnity to an authority of a pugilistic type. The Departmental Director is expected to be the visible symbol of Primary and Secondary education, the fountain-head of sincerity and intellectual adequacy and the proto-type of brother teachers. His post must be elective and itinerant taking with it from place to place inspiration from within to all around. Such a Director will surely create homogeneity in the system and impart in his simple sublimity confidence, self-reliance and significance to all brotherhoods of teachers.

As remarked above intellectual adequacy is another requisite of a teacher. A teacher is expected to be a model of virtue and piety and also of knowledge, and activity. This is surely too high an expectation but any approach to it is not, at all, so desperately unthinkable. But one fact of paramount importance must never be forgotten that to

recruit such consummate servants to the cause of education the country will have to summon its best men. It will, then, far transcend the most optimistic out-look of prosperity and potentiality. But if the ablest and the noblest men are barred out by myopic indiscretion from the educational profession to encumber it with riff-raffs or petty-fogging mediocrities the whole system will be spoiled and the country be stranded in misery and desperation.

There are other considerations too that demand special attention with regard to intellectual adequacy. Hard and fast rules of management and work under the current fashion afford but little latitude to teachers for self-development. The time that the school work absorbs is excessive and added to the amount of labour and paucity of leisure hours and educative opportunities, it takes away the few chances of self-improvement that may still have remained. With suitable arrangements a teacher in his brotherhood may imbue his unit of a class with much more knowledge and good-breeding than he can now do, availing himself, all the while, of all occasions for his own edification and enlightenment. Next the consideration of sordid remuneration forces itself on the attention of any thoughtful mind. For all the sacredness of the duty of a teacher and his principles he cannot wholly rip his soul off his body. It is not the question of luxury or abundance that we shall have to solve here but it is one of absolutely necessary comforts and conveniences of a scholar's life. An impecunious teacher has hardly the benefit of a home library or the advantage of a favourable atmosphere for useful study. It requires no small concentration and application even to a careful reader to know a few facts, how much more, then, would a responsible teacher require to assimilate many truths, when, above all, he has to attend to his domestic

economy and slender credit. It is, therefore, clear that teachers must have sumptuous emoluments for their invaluable services. We may predict that better days will then be in store for the education and the country, since love, sincerity, and intellectual adequacy shall have received their legitimate recognition.

Lower Secondary Arithmetic

By S. RADHAKRISHNA AIYAR, B.A.,
Late Principal, Maharajah's College, Pudukotah

AND

K. VAIDYANATHASWAMI AIYAR, B.A.,
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ON CLASSIFICATION OF BOOKS IN OUR LIBRARIES

By SATIS C. GUPTA, Librarian, Raj Darbhanga.

THE classification of knowledge is the putting together of similar subjects. The classification of a Library is the grouping together of books written on the same or similar subjects with a view to help people in finding out books on a particular subject, or a particular branch of a subject. In a classified library books on a given subject are found together, and can be used together without much confusion.

The relation of one subject with another in logical sequence seems to have been established in different climes and in different times. And some form of classification existed, in early days on every learned society. The four very broad divisions, धर्मशास्त्र (faculty of law, human and divine), अर्थशास्त्र (faculty of science, pure and applied), कामशास्त्र (faculty of arts, domestic and fine), and मोक्षशास्त्र (faculty of theology) in this land is nearly as old as the Vedas. The Assyrian and Babylonian libraries were classified; the Egyptian and Hebrew libraries had also their classification in some form or other. The old Indian Universities like those of Nalanda, Vikramasila, Takshasila, Odantapuri and Dhanyakotaka had their libraries in various subjects; the Buddhist and Jaina monasteries and temples had special libraries.

The classification of human knowledge must not be confounded with the classification of books. The philosophical or logical order may not be always convenient in the case of book classification. The classification of books should properly be acknowledged as an art, and not science. The modern libraries will feel at the very outset the need

of what is called a 'reference section', or 'generalia', consisting of a group of books, such as dictionaries, periodicals; etc., of a general character, which do not belong to a particular subject, and still are required for consultation by people of every branch of study. Similarly, one particular branch, such as राजधर्म (including राजनीति or दण्डनीति, science of government, politics and civics), which in logical order would come under स्मृति, a branch of धर्मशास्त्र, the first of the four broad classes of 'great antiquity, in view of the importance of the subject at the present time, requires to be treated as a distinct class, 'political science', राजनीति and not as a section of स्मृति which includes व्यवहारधर्म (law), आचारधर्म (rules of conduct), and राजधर्म (government and politics).

Thus we see there was necessity of book-classification, as against knowledge-classification. Many an attempt to find out a convenient system of book-classification was made. One such early example is that of Callimachus (cir. 250 B. C.) in the case of an arrangement of the great Alexandrian library. W. T. Harris's scheme (1875 A. D.) is said to have been "the first to produce a method adapted to the needs of a modern library." It bears some resemblance to Dewey's "Decimal Classification" of a later date in its one hundred subdivisions and in the general sequence of its main divisions. The system which was much in vogue in France until recently is that of Gustav Brunet, as expounded in his *Manuel du Libraire*, giving five main classes; (1) Theology, (2) Jurisprudence, (3) Science and Arts, (4) Belles-lettres, and (5) History.

There are various schemes of classification in use at the present time in Europe and America. The more important ones are Brown's *Subject Classification* or "S C";

Cutter's *Expansive Classification* or "E C"; and Dewey's *Decimal Classification* or "D C". Another very important system is that of the Library of Congress (U.S.A.), which latter was planned mainly on the basis of the E C and D C, and it seems the Library of Congress scheme is intended for a very large American library; and certainly it was devised from a consideration of the peculiar conditions in the above library [Library of Congress], the character of its present and probable collections, and its probable use.

SUBJECT CLASSIFICATION.

A large number of British libraries use Mr. James Duff Brown's *Subject Classification* (1906) which is an extended version of his previous publication, *Adjustable Classification* (1898). The main classes with notations are as follows:

A	Generalia	} Matter and force
B-D	Physical science	
E-F	Biological science	} Life
G-H	Ethnology and Medicine	
I	Economic biology	
J-K	Philosophy and Religion	} Mind
L	Social and Political science	
M	Language and Literature	} Record
N	Literary forms	
O-W	History, Geography	
X	Biography	

The letters (notations) on the left side are followed by Arabic numerals, ordinarily three digits, which are read decimally. Then a country number is added where necessary. Countries are also represented by one letter with added digits, with or without decimal point and further digits. Mr. Brown tries to arrange every class in a systematic order of scientific progression. He does not separate a science and its practical applications.

EXPANSIVE CLASSIFICATION

Mr. Charles Ammi Cutter's *Expansive Classification* (dating from 1873) is in use in a large number of libraries in Europe and America. It gives a suitable place for many classes of books, for which other schemes have made only narrow provisions. Over-classification has been guarded against (1) by avoiding all distinctions that are purely theoretical or very difficult to apply; (2) by putting in small types those divisions that are worth making only when a large number of books calls for such sub-divisions; (3) by warning classifiers, in the notes, that certain divisions are needed only in large libraries; and (4) by printing separately seven classifications of progressive fullness, the first being only 11 classes which would be sufficient for a very small library, the second, being of 15 classes and 16 geographical divisions, suitable for the small library growing a little larger; the third being 30 classes and 29 geographical divisions; and so on till the seventh would suffice for a very large library. The letters (of the Roman alphabet) with digits that follow them are used as notations.

The main classes of the 6th expansion (E C) are as follows: A—General works; B—Philosophy; Br—Religion; C—Christianity and Judaism; D—Ecclesiastical history; E—Biography; F—History; G—Geography and travel; H—Social sciences; I—Speiology; J—Civics (including Government, Political science); K—Legislation; L—Sciences and arts; M—Natural history; N—Botany; O—Zoology; P—Vertebrates; Q—Medicine; R—Useful arts; S—Constructive arts (Engineering and Building); T—Fabricative arts (Manufactures and Handicrafts); U—Art of war; V—Athletic and recreative arts; W—

Fine arts; X—English language; Y—English and American literature; Z.—Book arts.

DECIMAL CLASSIFICATION

The most widely accepted system throughout the world to-day is however Dr. Melvil Dewey's *Decimal Classification*, commonly known as the Dewey system. Originated in America and supported by the American Library Association, the system is more widely used than any other in that continent; and it has been adopted by many European libraries and also booksellers. The system has found its way into Japan, India and other countries of Asia, in some cases with modifications. The use of figures made of digits (instead of letters of an alphabet) for notation has made the system quite suitable for universal acceptance. The International Institute of Bibliography at Brussels has adapted the Dewey system, and has profusely expanded it for universal purpose in the *Classification Bibliographique Décimale* (1899-1905).

The notation of the Dewey system of classification is made by Arabic numerals of three digits preceding a decimal point and further digits to follow the point where necessary. For a brief exposition of the system we can do no better than quote the first paragraph of the Explanation in Dr. Dewey's own words, which precedes the introduction to his work (Ed. 10: 1919, p. 6):—

"The field of knowledge is divided into nine main classes and these are numbered by the digits 1 to 9. Cyclopædias, periodicals, etc., so general in character as to belong to no one of these classes are marked nought and form a tenth class. Each class is similarly separated into 9 divisions, general works belonging to no divisions having

nought in place of the division number. Divisions are similarly divided into 9 sections, and the process is repeated as often as necessary. Thus 512 means Class 5 (Natural Science), Division 1 (Mathematics), Section 2 (Algebra), and every Algebra is numbered 512."

The books are arranged in simple numerical order, all class numbers being decimals. Since each subject has a definite number, it follows that all books on any subject must stand together. The tables show the order in which subjects follow one another. Thus 512 (Algebra) precedes 513 (Geometry) and follows 511 (Arithmetic).

The ten main classes are the following:—

- 000-099 General Works
- 100-199 Philosophy
- 200-299 Religion
- 300-399 Sociology
- 400-499 Philology
- 500-599 Natural Science
- 600-699 Useful Arts
- 700-799 Fine Arts
- 800-899 Literature
- 900-999 History

SYSTEMS IN VOGUE IN INDIA

Schemes of classification are perhaps more varied in India at the present time than in the western countries. With the exception of a number of comparatively recent cases every library in India has its peculiar system of classification. The Imperial Library of Calcutta has its own scheme, adopted nowhere else in the country; the Secretariat and Bureau of Education Libraries at Simla have their own special classifications. Until recently the libraries of India have grown individually, having no combined effort or Government support or an

all-India character behind them. In recent years however a Library Movement has been started in different parts of the country with the result that in the whole of the Native Indian State of Baroda we find a 'Baroda' classification prevalent, in the State of Mysore a 'Nagappa' scheme (based on the Dewey system), some adaptation of the Dewey system in the Andhradesa village and town libraries, and an adoption *in toto* of the same (Dewey system) in the Panjab University Library and a number of the Panjab colleges.

Space will not permit discussion in detail of the various schemes now in vogue in our country. But the following outline of the one in use throughout the jurisdiction of the Baroda Raj will give some idea. The scheme was devised in 1911 by an American Librarian, Mr. Wm. A. BORDEN, who had come to India on an invitation from His Highness the MAHARAJA GAEKWAD OF BARODA. The broad classes, which are given below, are 26 in number, and are denoted by the 26 letters of the Roman alphabet. The outline which is sufficient for a very small library, is as follows:—

A—General works; B—Philosophy; C—Religion; D—General and Physical science; E—Natural science; F—Anthropology and Ethnology; G—Psychology; H—Medicine; I—Social science; J—Useful arts, Technology; K—Military and Naval arts; L—Amusements and Recreative arts; M—Fine arts; N—Philology; O—Literature except English; P—English literature except Poetry, Drama & Fiction; Q—English Poetry; R—English Drama; S—English Fiction; T—General History; U—Oriental History including Africa; V—European History;

W—American History; X—Geography, Description and Travel; Y—Collections of Biography; Z—Individual Biography.

A DECIMAL SYSTEM IS MORE SUITED THAN ANY OTHER

There are arguments for and against any system that has been in use. But those in favour of D C are many and varied; and it must be acknowledged that the real test of any scheme is its helpfulness to workers in a library. The Decimal Classification has very well stood the test of use in America and Europe. In India also the decimal system (either an adoption of, or adaptation from, the D C) has been found satisfactory for nearly a decade. The use of figures—decimal fractional figures, when necessary—has given the system an inter-racial character. A scheme using even the Hindu alphabet (अ, आ, इ, etc.) or the Hindustani one (Urdu ا, ب, ت, etc.) is not expected to give it such an all-India character as the Arabic—or say, Indian*—numerals will; far less would it be in the case of the Roman alphabet. The wide adoption of the decimal system is of immense practical advantage. A reader belonging to any nationality and speaking any language, will find himself at home in innumerable libraries throughout the world, adopting or adapting the D C. The decimal system is simple, flexible, and its notations are brief. The use of mnemonic element to a large extent has made the D C not only useful but interesting to the student. The result has been that whoever cares to learn the decimal system does not wish to get rid of its principles even after perusing the rival systems.

* That the numerals, known as Arabic numerals, originated in India and it was the Arabs who propagated them in different countries is accepted on all hands.

A MATTER OF CONSIDERATION FOR INDIAN LIBRARIANS

It is however a matter of great consideration whether in spite of the fact that the principles of the decimal system are acceptable by all the peoples on earth, the Dewey system (D C) as it is, should or should not be quite suitable for adoption *in toto* in any country other than America, or all the more prominent countries of the West at large. We must bear in mind that the originator of the Decimal Classification, an old philanthropist still living, and from whom the present writer had the honour of receiving a letter of good wishes and congratulations on the latter's efforts to work for the Indian Librarians, is an American; and his (Dr. Dewey's) original view-point must have been to promote in the first instance the cause of the libraries of his "home"—the continent of America. It is true his next consideration was to render help to a wider public of the West in general. Thus we find in Literature (800-899), the American literature (810-819) which, for all *our* practical purposes, can very well be included in English literature, either emerged into or as a branch of the latter, English literature (820-829). German literature (830-839), French literature (840-849), Italian literature (850-859), Spanish and Portuguese literatures (860-869), Latin and Minor-Italic literatures (870-879), Greek and minor Hellenic literatures (880-889),—all these have been amply provided for. But the mighty literatures of the Orient—Sanskrit, Pali, Persian, Arabic, Tibetan, Chinese, Japanese, Javanese, and the modern languages of India—all these are to be searched at a narrow corner, under "Minor Literatures," the numbers provided for all the so-called "minor" literatures.

being only 890-899. Sanskrit literature, in the scheme of Dr. Dewey, is denoted by a fractional (decimal) notation "891.2", being under "Minor Indo-European (891)". As in the case of literatures, so also in those of other branches of knowledge, such as Religion, Philology, History. Everywhere prominence has been given to the West over the East. Is it not a paradox that, being inhabitants of the land of the Buddha, we shall have to look for "Buddhism" at 294.2 (which is subordinate to 294) in the case of our adoption *in toto* of the D.C., while the Roman Catholic Church, a sect of Christianity, will be available at a whole figure like 282, the Bible and Christianity having practically seventy whole numbers from 220-289?

In the humble opinion of the present writer the decimal system should be adopted in our country as widely as possible; but the D.C. has to be adapted and moulded to our needs; and this can only be done with the co-operation of the Indian librarians. Our hope is that a suitable "Indo-Decimal" system will be evolved as a result of such co-operation. M. R. Ry. C. NAGAPPA, B.A., LL.B. (at present Library organiser) as Librarian of the Mysore University is perhaps the first Indian who tried to make some useful adaptations from the D.C. He has a distinct sub-division as "Mysore History and Archaeology" at 95.49 under "History and Archaeology of India" (95.4), under the broader heading "History of Asia" at 95 (Mr. NAGAPPA chose to use only two digits instead of three, for the Division notation). The scheme is in use in the University of Mysore, and in a number of libraries in the State. Mr. NAGAPPA's scheme wanted to make a partial solution; and so far as the province of

Mysore is concerned the scheme has attained some amount of success. Sriji Prakash K. MEKHREJI, Librarian of the Santiniketan International University, is another enthusiastic worker who has developed some useful expansion of the D.C. in the direction of modern Indian languages.

Portions of *A Scheme of Classification for Indian Libraries*, which is under preparation by the present writer with the help of oriental scholars are given below, and attention is invited of all Indian librarians, bibliographers and scholars in general. Any suggestions to the address of the writer will be gratefully received.

The main classes or *varṇas* are four—*varṇa*, *śāstra*, *kāma* and *śloka*; and including the extra one of Generalia, (*śāstra* or *śloka*) they become five; and those again are presented in such a way as to form ten classes in all, a few of the subordinate divisions of the *varṇas* being considered separately in view of their importance as also for convenience of fitting up the whole structure into a decimal form. So ultimately the classes look like Dewey's: but various modifications are made in divisions and sections and sub-sections. Much expansion has been worked out in respect of those Oriental subjects that have hitherto received only a partial treatment at the hands of the past scheme-makers. The entire scheme for History (900-999) is given below; and a portion of the Agamic or Tantrik literature, a branch of religious literature, will be found at the end.

900-999 HISTORY

(This includes 980-989 Biography and 990-999 Geography and Travel.)

Broad Divisions:

900 HISTORY (General works)
910 India

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920 Asia except India
930 Africa
940 Europe
950 America
960 Oceanica
970 Ancient History (if placed separate)
980 Biography
990 Geography and Travel

Geographical Distinctions for Provinces of India.

[The figures on the left side are to be added to the class numbers where geographical distinction is necessary: e.g., 915.76 French Settlements; 915.761 French Settlements in Bengal, etc., etc.]

ORDER:
0 General (All-India or Imperial)
1 Bengal Presidency
2 Bombay Presidency
3 Madras Presidency
4 United Provinces
5 The Punjab
6 Burma
7 Bihar & Orissa
8 Other provinces (including foreign non-British possessions)
8.1 Assam
8.2 Central Provinces & Berar
8.3 North-West Frontier Provinces
8.4 British Beluchistan
8.5 Delhi
8.6 Coorg
8.7 Andaman & Nicobar Islands
8.8 Ajmer-Merwara
8.9 Non-British Foreign Possessions
9 Native Indian States
9.1 Hyderabad
9.2 Mysore
9.3 Baroda
9.4 Kashmir

9.5 Rajputana (For details see Administration).
9.6 Central India Agency
9.7 Beluchistan Agency
9.8 Himalayan States
9.9 Native Indian States under Local Governments.

Sections

910 INDIA
911 Ancient India
912 Vedic, Brahmanic, and Buddhist
912.1 Vedic
912.4 Brahmanic
912.7 Buddhist (including Greek invasion), cir. 500 B.C.—500 A.D.
913 Hindu Revival (cir. 500 A.D. to 636 A.D.)
914 Medieval
915.1 Muhammadan Incursions, 637-1206
915.4 Muhammadan Kingdoms, 1206-1526
915.5 Mughal Empire, cir. 1526-1803
915.7 European Settlements
915.72 Portuguese
915.74 Dutch
915.76 French
915.78 English, cir. 1469—1600
916 Native Indian Revivals (incl. Afghan wars, Burmese wars)
916.1 Marhatta
916.2 Rajput
916.3 Sikh
917 Modern (British Period)
917.2 East India Company, 1600-1857
917.3 The Mutiny, 1857-58
917.4 Under the Crown, 1858 to date
920 ASIA EXCEPT INDIA
921 China
922 Japan
923 Tibet
924 Arabia
925 Persia

- | | |
|--|--|
| 926 Turkey | 965 New Guinea |
| 927 Siberia | 966 Polynesia |
| 928 Afghanistan, Turkistan, Beluchistan | 967 Isolated Islands |
| 929 Farther India (incl. Malaya Peninsula) | 968 Arctic Regions |
| 930 AFRICA | 969 Antarctic Regions |
| 931 North Africa | 970 ANCIENT HISTORY (if placed separate) |
| 932 Egypt, Nubia | [Only foreign ancient histories such as |
| 933 Abyssinia | Egyptian, Greek, Roman, etc., are recom- |
| 934 Morocco | mended to be placed here. Ancient |
| 935 Algeria | Indian and Asian history should best |
| 936 North Central Africa | be placed at 911 and 920.] |
| 937 South Central Africa | 971 India |
| 938 South Africa | 972 Asia except India |
| 939 Madagascar; Mauritius, etc. | 973 Africa |
| 940 EUROPE | 974 Europe |
| 941 Scotland; Ireland | 975 America |
| 942 England; Wales | 980 BIOGRAPHY |
| 943 Germany; Austria | 981 Of Philosophers |
| 944 France | 982 „ Theologists |
| 945 Italy | 983 „ Sociologists |
| 946 Spain; Portugal | 983.1 „ Kings; Presidents of Republics |
| 947 Russia | 983.2 „ Political Science People; Governors; |
| 948 Norway; Sweden; Denmark | Statesmen |
| 949 Other countries | 983.3 „ Political Economy People |
| 950 AMERICA | 983.4 „ Law People |
| 951 North America | 983.43 „ Criminals |
| 952 British Dominions; Canada, etc. | 983.5 „ Administrators: Army, Navy, Civil |
| 953 United States | 983.6 „ Associations, Institutions, Philan- |
| 954 Mexico; Central America | thropists |
| 955 South America | 983.7 „ Educationists |
| 956 Brazil | 983.8 „ Commercial People |
| 957 Argentina; Patagonia | 983.9 „ Travellers, persons dealing with |
| 958 Chile; Bolivia; Peru; Columbia; Equa- | manners, customs, etc. |
| dor | 984 „ Philologists |
| 959 Venezuela; Guinea; Paraguay; Uruguay, | 985 „ Scientists |
| and other countries | 985.1 „ Mathematicians |
| 960 OCEANICA & POLAR REGIONS | 985.2 „ Astronomists |
| 961 Malaysia | 985.3 „ Physicists |
| 962 Sunda | 985.4 „ Chemists |
| 963 Australasia | 985.5 „ Geologists |
| 964 Australia | 985.6 „ Paleontologists |

- 985.7 Of Biologists
 985.8 „ Botanists
 985.9 „ Zoologists
 986 „ Useful Arts people
 987 „ Fine Arts people
 988 „ Literary people
 989 „ Historians
 990 GEOGRAPHY AND TRAVEL
 991 India
 992 Asia except India
 993 Africa
 994 Europe
 995 America
 996 Oceanica and Polar Regions
 997 Maps
 998 Antiquities
 999 Historical Geography and Travel

The following is a scheme for the Agama Literature, a branch of Religious Literature. The first three digits of the notation are omitted as the same have not been decided.

Summary :

3 AGAMA OR TANTRA LITERATURE
 (GENERAL)

- 31 Saiva-Sakta
 32 Saiva

- 33 Sakta
 34 Saura
 35 Ganapatya
 36 Vaishnava
 37 Bauddha
 38 Jaina
 39 Others

N. B : Each of these again are to be divided as under :—Tantra proper; Upatantras; Yamalas; Kalpalatas; Sambitas; Chudamanies; Arnayas; Chintamanis, and others containing Vimarshinis; Damaras, Kakshaputas, Uddisas, Kalpadrumas; Kamadhenus, etc., etc.

Expansion of “ 33 Sakta Tantras ” :—

- 33 Sakta Tantras
 331 Dasamahavidya
 3311 Kali
 3312 Tara
 3313 Shodasi (including Tripurasundari)
 3314 Bhuvanesvari
 3315 Bagala
 3316 Bhairavi (including Tripurabhairavi)
 3317 Chinnamasta; Dhumavati
 3318 Matangi
 3319 Kamala
 332 Durga; Chandi; Katyayani
 333 Yogini; Yakshani, etc., etc.

RUDIMENTS OF ALGEBRA

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This is a delightful Anthology of Verse, not for children but about children.

Childhood is the period of our lives which the majority of us find most difficult to recall, and hence it is that we do not give that attention and sympathy to the child which is best fitted for it. We either bestow so much attention on the child that we crush its natural spontaneity or we neglect it to the point of cruelty. The children's era movement and the like are trying to educate the public in the act of sympathising sensibly with childhood, and it seems to us that the compiler of this anthology of verse about children has done as good a work for the childhood of mankind as the abovementioned movements.

Poets are the world's "seers." They are less influenced by custom and convention than other men. They are more conscious of human potentiality and have a clearer vision of human destiny. In these and other ways they are nearer to childhood and are able to interpret it. Also poems on childhood are comparatively few in number and many of them little known. They are scattered in many volumes by many writers, and the light they throw on the most beautiful period of human life is thus lost to persons who are interested in children but who are not regular readers of poetry. This book supplies such readers in their need, and for that alone Mr. Wood deserves our thanks.

But one can see from a glance at the book that the compiler's aim has been to present poetry for poetry's sake. Nothing that is not worthy of the august name of poetry has been included, nothing that does not reach a certain level of genius, hence many beautiful poems but lacking something in finish have been omitted. The aim has evidently

been to bring out a book that is representative of the poetry on the subject, not of any particular poet. A chronological order has been adopted thus making the book even more interesting and satisfactory.

We recommend the book to every teacher, be he an infant teacher, a high school teacher or college lecturer, and also to parents who wish to be in full sympathy with their children.

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COMPILED BY J. C. SMITH. (CLARENDON PRESS.)
3s. 6d.

This is, as the author states, a Supplement to the Golden Treasury. Those of us who have spent many an enjoyable hour with the Golden Treasury of Lyrics have perhaps wondered if there were a collection of non-lyrical poems available in a handy form. This need of many has now been met by Mr. Smith who has brought out this book of verse in which he has kept off the ground of the 'Golden Treasury' altogether.

'By nothing is England so great as by her poetry' and assuming that the readers of this book already possess the Golden Treasury and possess it in the Oxford Edition with additional poems, and also have certain poems in separate editions, e.g. Chaucer's *Prologue*, Sundry Plays of Shakespeare, Milton's *Comus*, and a book or two of *Paradise Lost* with one of Scott's longer poems and perhaps *The Rape of the Lock*, let the reader add this collection of poems to his list and he will not be ill-grounded in English Poetry.

We recommend the book to all colleges and high schools and would advise very strongly all those people who will take or have taken an English Honours degree not to consider that they have reached "the zenith of education" but to read such books as Mr. Smith's collection.

- (1) JACK AND ME, by MAUDE S. FORSEY, (180 pages.)
- (2) THE STORY-TELLER, by FLORENCE L. YOUNG, (96 pages.)
- (3) A STORY GARDEN, by MAUD LINDSAY, (96 pages.)

These are three small story books for children recently issued by the well-known publishers, Messrs. George G. Harrap and Co. As may be expected from a firm of such great reputation, the volumes before us are beautifully bound and profusely illustrated; the coloured pictures are specially attractive and we have no doubt that they will soon become the favourites of children.

Being mainly intended for the use of English boys and girls in English schools, they contain stories of English life in its various aspects. For example, we meet with the details of household work in ordinary working families; their cares and anxieties; their great delight in rearing pets; their joyous out-door life; their expeditions in search of birds; and above all the manner of rearing up their children. Besides this, we have very minute and intimate descriptions of child-life itself from the view-point of children—which is a

real achievement indeed. Several story books are written nominally for the sake of children but which rarely give them pleasure. Credit is due to the authors of these books in so far as they avoid this blunder of talking or writing over the heads of children. The little ones take an inexpressible pleasure in what they are themselves doing; and with real insight into this point, the authors rightly concentrate their attention on the life of children in term-time as well as during holidays, in their work and in their play; (cf. *Snow-ball*; *Snow-man*, etc.) during festivals and on excursions; when staying at home or with their friends and relations.

But a word of caution must be uttered here to the Indian teacher who uses these books for his story-telling lesson in the Kindergarten. He must go through them carefully and find out how they have to be modified in order to suit Indian conditions and surroundings. The intelligent teacher can easily discover what points are to be left as they are and what points are to be altered; and if he makes these necessary adaptations, the story-telling lesson will be the liveliest of all and the children will be unconsciously gathering a great deal of knowledge in the pleasantest manner imaginable.

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The Educational Review.

The Government of Bombay have done a wise thing in drawing the attention* of the Board responsible for conducting the S. L. C. Examination to the need for making a wider use of the vernacular in High Schools. It is urged that pupils should have the option everywhere of answering papers in subjects other than English in the vernacular. Time was when it was considered impossible to use the vernaculars in any degree even in High School teaching, but with the improvement of the vernaculars, it is now practicable to employ them in a large measure and it is to this that the Government wish to draw special attention. The height of absurdity in the use of English in schools is reached in the teaching of Sanskrit through English, though it is obvious a pupil should learn the language better through his own mother-tongue than through a foreign language. Government is not absolutely confident that the new arrangement of giving option to the students will prove a great success but the present experiment of giving instruction through English not having proved particularly successful, Government is anxious to try another. With regard to technical and scientific words in the vernacular, Government is right in saying that there should be no linguistic purism in the matter and there should be no hesitation in using English words where necessary

* The Press communique of the Government in this connection appeared in our last issue.

in preference to pedantic expressions coined from Sanskrit or Arabic. As the arrangement proposed is only optional, we trust there will not be much opposition to the scheme and it will prove a success.

Efforts have already been made in the direction of educating men in the army in this country by the opening of special institutions for the purpose. As we tried to point out on a former occasion, the principle underlying the scheme is to increase the efficiency of the soldier by intellectual education and also preparation for civil life in case he has to leave the army and go back to peaceful vocations. Two schools have been established, one, at Wellington and another at Belgaum, the former for Europeans and the latter for Indians. Lt.-Col. E. H. W. Lascelles has been touring in Southern India and elsewhere in connection with the scheme and we hope he will meet with encouraging response. He expects the leaders of Indian opinion to co-operate with him especially with reference to the Indian section. In the present temper of the country, the expectation will probably be in vain and there is not likely to be much interest taken in the education of the sepoy and the soldier in India, but we believe it is undoubtedly a very deserving cause.

At the last meeting of the Senate, Mr. T. K. Duraiswami Iyer, M.A., was appointed Assistant Professor of Economics in the University on Rs. 500

The last Senate Meeting.

per mensem. We congratulate Mr. Duraiswami Iyer on his appointment and hope that he will be able to utilise the admirable opportunities furnished by the appointment to great advantage to himself and to the country. Mr. Duraiswami Iyer is a distinguished graduate of Pachaiyappa's College, having headed the list of successful candidates in the Presidency in his year. He has now considerable experience of teaching also to his credit, first at the Maharaja's College, Tirvandrum, and more recently at various Colleges in Government service. Considerable interest attached to the proposition moved by Mr. S. Srinivasa Iyengar, C.I.E., at the same meeting, that examinations should be held a second time this year also for the benefit of failed candidates. The proposition received a large measure of support and was passed in spite of attempts to reduce its usefulness by excluding certain examinations, especially the Intermediate. We are glad the proposition was passed in the following amended form:

"That it be a Transitory Regulation that notwithstanding anything to the contrary contained in the regulations the Syndicate shall arrange to hold the Intermediate, Bachelor of Arts, B.A. (Hons.) Preliminary and the L. T. Degree examinations on such dates before the 15th December 1921, as may be fixed by the Syndicate and that the subjects for each of these examinations be the same as those prescribed for the corresponding examinations held in March or April

1921, and that the Syndicate is hereby authorised to make the necessary arrangements for the same."

H. E. Lord Ronaldshay indulged in some very necessary and beneficial plain-speaking to a deputation of

The Dacca University.

Mussalmans in connection with the University of Dacca. The Muhammadans came to express their disappointment at the fact that the University was not entirely Mussalman, consisting of Mussalman Professors and Mussalman students! It was said that that was the expectation raised in them by some pronouncements of the Government on former occasions. Lord Ronaldshay promptly contradicted the assertion and pointed out that while Government intended to offer special facilities to Mussalmans, it never contemplated making it an entirely Mussalman University. In the selection of members of the staff, there was a prominent Mussalman, Sir Shamsul-Huda, associated with H. E. the Governor and some Mussalmans have actually been appointed. If more have not found places the fault is not that of the Government, as one of the most dangerous of principles in academic institutions is to make appointments at any sacrifice of efficiency. The remedy is entirely in the hands of the community itself which must endeavour to produce men of the requisite qualifications without waiting in deputation making such helpless requests to persons in authority. The Governor was hardly the person to be

approached with a complaint about the paucity of Mussalman students, as he could not obviously bring them into existence by his authority and a number of facilities had already been offered. The bulk of the money provided for scholarships was ear-marked for the Mussalmans and an addition had just been made to the amount available by another special grant. In Mr. Hartog, the community has got a very able and sympathetic friend and we hope the community will take advantage of his Vice-Chancellorship and produce young men in large numbers equipped with the best modern University training to compete successfully with the other progressive communities in India.

In these days of an unreasoning campaign against Western culture in India, it is interesting to see such a pronounced nationalist as Dr. Rabindranath Tagore expressing himself in favour of co-operation between the East and the West in matters educational. That was the text of his address delivered the other day in Calcutta, immediately after his return from Europe and America. Special significance must be attached to his observations on the present occasion as the address was meant to be a message to his countrymen on his return after a considerable period of absence and the remarks were made on the subject of *National Education*. We reproduce a brief summary of the address:

Before a large and distinguished gathering Dr. Rabindranath Tagore delivered a lecture on national education at Calcutta University Institute, in the course of which he said that it was due to no external cause that the West now occupied a principal place in the modern world. She had achieved that eminence because she had realised some great truth in her mind and carried it out in action. The East would not attain her own eminence by any physical and mental rejection of the West. Men had never accepted the facts relating to phenomena as final. They had always felt that there was something behind them, and it had ever been the aim of man to get behind the barrier of facts. His first attempt was that of magic and these experiments in the art of magic had led on step by step to science. Men had discovered by experiment, induction and analysis that there were immutable laws of nature. The West had been fortunate enough to find out those great immutable truths of nature first but the East had not shaken off her belief in magical powers. She still retained her sense of the accidental nature of phenomena. She still believed in the special exercise of the will of divinities upon the happenings of daily life and those surroundings which were really subject to those immutable laws. The East was still pursued by a deep distrust in the conclusions of her own intellect, and that had caused a want of self-reliance, a lack of inner certainty, a divided mind and a leaning upon authorities which were outside the will and understanding. That was a mental condition which was antagonistic to the attainment of freedom in social and political spheres.

Dr. Tagore continued: God Himself has given us our Swaraj in this world when He has hidden Himself away behind His own universal law, which can be made use of by any individual who has faith in his own rational mind. Those who do not realise this Swaraj which is ready to hand, those who fill the throne vacated by God with pretenders; these are defeated in the race of life and insulted by all the

powers of the earth; therefore, the one true path of attaining freedom in the external world is knowledge and faith in these immutable laws, which have now been made known to mankind. In order to attain this knowledge we shall have to accept the West as our teacher.

Dr. Tagore said he was not satisfied with what he had seen in the West. The scientific attitude of mind which tended to exclude personality from the operations of the universe, tended also to undermine the very basis of all human relationships. The spirit of professionalism also had become the predominant motive in the evolution of society in the West. The late war had made it evident to the West and to the whole world that some great truth had been lost to sight. The best minds of the West were employed in seeking for that missing truth, and, in doing so, had instinctively turned towards the East. The East had unshakeable faith in the infinite living ideal, and time had come for the West to come to the East, for the soul of the West was famished, and her social life had been wounded to the quick. That was the point reached in the world's history to-day.

It was the problem of every country to bring to pass the deeper reconciliation of East and West so that humanity might become one. When, therefore, the thought of the education of his country, he kept that problem of reconciliation always before his mind, for education should have that object in view that it might fit them for the great to-morrow, when the meeting of the human races of the world would find its truth in mutual understanding and co-operation.

The address suffers from want of sufficient definiteness and from an idealism which does not condescend to a discussion of details, but there is no denying the fact that the spirit underlying it is the right one in matters educational. India stands in need to-day of

the culture and civilisation of the West as much as ever.

We drew attention the other day to the inordinate delay in undertaking the establishment of the University of Nagpur. In response to the resolution passed at a recent meeting of the Legislative Council of the Province the Government has appointed a Committee to advise the Minister of Education on the drafting of the Nagpur University Bill. The Bill is to be introduced into the Council at least in the February Session. Other activities are also evident in the Province in the department of education. The Council has just accepted a resolution demanding a programme of the expansion of Primary Education throughout the rural areas within the next ten years. The Government is also contemplating the creation of a statutory body as in the United Provinces to control Secondary Education, though the desire seems to be to entrust Intermediate Education to the proposed University and not to any other body in the Province.

There were a few resolutions relating to education before the last meeting of the Education in the Local Council. Madras Legislative Council. A resolution recommending that Local Boards be assisted from provincial revenues so as to enable them to raise the minimum pay of the elementary school teachers to Rs. 30 and Rs. 20 respectively for the higher and lower

grade teachers could not be moved, because it was not in order. Rao Bahadur T. Narasimhacharlu moved a resolution recommending the provincialization of the headmasterships of all Local Fund and Municipal Schools, but it had unfortunately to be withdrawn. The mover did not put the case for the provincialization properly and many of the objections to the proposal could have been answered without much difficulty, but they were not. There could be 'Provincialization, without increased Government control over local bodies, by the establishment of some central board for the purpose by the local bodies themselves. The service will become more attractive by being made wider, with prospects of good transfers with promotion involved in the fruition of the scheme.

In the course of a somewhat grandiloquent speech delivered at the Teachers' College, Saidapet, Rao Bahadur A. P. Patro, the new Minister of Education, outlined the educational 'policy' which the Government of Madras proposed to follow at present. The difficulty in the expansion and reform of education, the audience was told gravely, not for the first time we are sure, was the absence of funds. It would appear the Government was trying to find whether at the end of the year, it would be possible to snatch any money for education from other departments. The audience was also assured that the subject of Secondary

Education was receiving consideration, as a committee had been appointed to consider and report on the whole question. As for Vocational Education, had not the Government done enough because it had issued circulars to Inspectors of Schools to encourage its introduction into schools? It would however also appear that 30 or 40 men have been trained for Vocational Teaching and have been sent to some schools as an experiment.

We invite a discussion on the following recommendations made by a Sub-Committee of the last Madras Provincial Conference appointed to consider the question of Secondary and University education:—

1. The school course shall be divided into two stages, the first or elementary stage being of 3 years' duration and the second or secondary stage lasting for 5 years.
2. There need be no Public Examination at the end of the school course.
3. There need be no specialisation of studies in the school course.
4. The medium of instruction in non-language subjects shall be entirely the vernacular.
5. The following shall be the subjects of study in the school course:
 - (a) Vernacular. (b) English. (c) Elementary Mathematics. (d) (1) History of India and Civics. (2) General Geography. (e) Elementary Science. (f) Drawing, Manual Training and Music. (g) A second vernacular or a classical language. (h) Religion.

The distribution of these subjects in two stages shall be adjusted to local conditions.
6. At the end of the school course the

Headmaster shall, in consultation with his Assistants concerned, issue a certificate to each pupil as to his having completed the course of studies and as to his attainments and character.

7. The Intermediate course shall extend over two years after the completion of the school course, so as to afford, as the Sadler Commission point out, preparation not only for the ordinary Degree course of the University in Arts and Sciences but also for Medical, Engineering and Teaching courses and for careers in Agriculture, Commerce, and Industry.

8. The subjects for study in this course shall be divided into two groups—(1) Compulsory and (2) Optional.

A. Compulsory:—For both University and professional courses:—

(a) Vernacular or a classical language, (b) English.

B. Optional:—Any three of the following:—

(a) Ancient History, (b) Modern History, (c) Geography, (d) English Literature, (e) Logic, (f) Economics, (g) Physics, (h) Chemistry, (i) Mathematics, (j) Natural Science (Biology, Botany, and Geology), (k) Pedagogics, (l) Banking and Accountancy, (m) Shorthand and Type-writing (n) Book-keeping and Commercial Arithmetic, (o) Practical Mathematics, (p) Business Management, (q) Politics and Journalism.

9. This Committee is of opinion that each District have a District Educational Board which shall be in charge of administration of all education up to the University degree in the District, including general and vocational courses, adequate representation on the Board being given to managers and the teaching profession.

10. This Committee is of opinion that until these recommendations are effected there should be four S. S. L. C. Boards instead of a single Board.

11. A Sub-Committee consisting of all the signatories to this report, with power to add to their number, should be appointed to frame a syllabus for both the courses, the School and the Intermediate, publish the same in the dailies,

invite criticism and place the same before the Special Conference.

It will be noticed that the recommendations are of far-reaching importance and the proposals in many places differ radically from the present system obtaining in the country. The School course is to be shortened; School-examinations have to take the place of Public Examinations; District Councils, it is suggested, may be entrusted with education of all stages up to the University standard and so on. Secondary School teachers must have a lot to say on these matters and we should like to hear their views.

The report of the Syndicate of the Bombay University for the year 1920-1921 which has just been issued gives a comprehensive record of the work of the University during the period. The University abolished the age limit for the School Leaving Examination. We have already drawn attention to this movement in other Universities also. Another important change is the recognition of the Matriculation Examination of all other Indian Statutory Universities and the Mysore University unconditionally. This removes a long-felt grievance. Students will thus have the opportunity of coming to the Bombay University and studying there exactly on the same terms as in their own University.

B. A. DEGREE EXAMINATION, 1923.

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SOUTH INDIA AND HER
CONQUEST BY THE
MUSSALMANS—A REVIEW.

THE recent publication of Prof. S. Krishnaswami Iyengar's *South India and her Mussalman Invaders* (Milford, 1921) supplies an authentic and digested narrative of events that took place in South India just on the eve of its first conquest by the Mussalmans and that led up to the foundation of the Empire of Vijayanagar. The ground traversed is one that, with a few exceptional corners, has been 'but little scratched by the plough of investigation.' The decadence of the Chola Empire in the thirteenth century, the rise of a congeries of warring principalities on its ruins, the apparent impotence of South India in opposing the advance of Malik Kafur and his successors, the foundation of the Muhammadan power and Sultanate at Madura—all these are shown but to lead up to the Hindu re-organisation, which, beginning under the Hoysala, Vira Ballala III, culminated in the great Vijayanagar Empire. The book

should be summarised in detail and though such a feature should be too long for a review, it is eminently desirable in this case.

The Imperial Cholas began to decline in power even with the death of the great Kulottunga; and his successors, with all their capacity, could barely maintain themselves and their empire intact for just a century (1118-1218 A. D.) This period was one of great literary activity marked by a number of brilliant writers. About 1170 or 1171 A. D., there arose two rivals for the Pandya throne and the civil war which then began involved both the Cholas and the Ceylonese. In the course of the war the Ceylonese generals, Lanakapuri Dandanatha and Jagadvijaya, succeeded, according to the one-sided account of the *Mahavamsa*, in inflicting considerable damage on the southern Chola frontier country; though Chola inscriptions make it out that their intervention was equally effective and forced the Ceylonese to retire. This war (1171-75 A. D.) greatly weakened

the Chola hold upon the Pandya country. Kulottunga III (1178—1216 A. D.) who had already taken a part in the war, had again to interfere in Pandyan affairs on behalf of the son of the old Chola ally. Kulottunga's victorious entry into Madura, the pomp with which he celebrated his overlordship of the Pandyas and the Keralas, his conquest of the two Kongus, his alliance with the Hoysalas and his triumphant advance to Nellore marked the high-water level of the latter-day Chola power. But in spite of outward splendour and show, "the forces of disintegration were already visible under the surface, in the sullen discontent of the Pandyas in the South, the aggressive ambition of the neighbouring powers in the North and the smothered restiveness of the ambitious chieftains within." (p. 25).

In the reign of the next Chola, Rajaraja III (1216 to circa 1248 A. D.) the danger of disruption became still more imminent. Maravarman Sundara Pandya I, who ascended the throne of Madura in 1216, smarting under the insults offered to his predecessors, revenged himself on the Chola by burning Tanjore and Uraiyur, anointing himself at Mudikondasolapuram and further crowning himself as hero-victor in the great temple at Chidambaram. He prided himself upon driving the Chola out of his patrimony, but exhibited his magnanimity to the fallen enemy by restoring to him his kingdom upon terms. As if this was not enough, the Telugu feudatory chief of Nellore, advanced as far south as Kanchi ostensibly to help his overlord, but showing no inclination to retire back into his territory. Kopperunjinga of Sendamangalam, another feudatory chief, who gave himself pretentious titles like *Avanijālapirandān* (he who was born to rule

the world) and *Sakalalōka-chakravartī* attacked the Chola and even kept him a prisoner for some time. It was only the intervention of the Hoysala monarch, Narasimha II (1220—35 A. D.) that restored the Chola monarch to independence and saved the empire for the time being from destruction. The Hoysala must have encountered Pandyan resistance also, as his titles were *Magara-Rajya-Nirmūlana*, *Pandya-Disapatta* and *Chola-Rajya-Pratishthāpanacharya*. His successor, Somesvara (1233—54 A. D.), intervened again in the affairs of the Chola; and this intervention unlike the first, resulted in the permanent settlement of the Hoysalas in the Chola country with a new capital at Kannanur (north of Srirangam). This establishment seems definitely to have been intended against the rising power of the Pandyas and to prevent their junction with the chiefs of Sendamangalam.

To crown all these misfortunes there arose a civil war between Rajaraja III and his successor Rajendra, in which the Sambuvarayans, Kopperunjinga, the Telugu chieftain of Nellore, the Pandyas, the Hoysalas and even the Kakatiyas from the distant North, played, each their own part, and succeeded ultimately in crippling the power of the Cholas.

The Pandyas were nursing themselves into greatness in the reigns of Maravarman Sundara Pandya I and his successor Sundara II. The latter however appears not to have done much. Then came Jatavarman Sundara Pandya (1251-74 or 75 A. D.), the greatest of the line, whose records are found all over the country up to Nellore. He defeated the Chera, placed the Chola under tribute, destroyed the army of the Hoysala, attacked Kannanur, overthrew Sendaman-

galam, came into occupation of Kanchi, and defeated the Telugus driving them right up to the Krishna (பேராறு). It is in this campaign that he was called as a tiger to the antelope, Ganapathi, a Kūtapākala fever to the elephant Kātaka (the Kadava Kopperunjinga) the jungle-fire to the forest Viraganda Gopala, etc. On his return from the campaign which might have lasted from about 1252 to 1262 A. D., he reached Kannanur and Srirangam. There was now probably another war with the Hoysala in which Somesvara fell. Sundara now made his great donations to the temple, covering the shrine with gold plates and acquiring the name Koil-Pon-Vēynda Perumal. His name is handed down in various forms in coins and inscriptions like எல்லா மண்டலமும் கொண்டருளிய, எல்லாம் தலையாளுண், வாளால் வழிதிருந்தான், etc. There seem to have been other Pandya chiefs who claim to have won similar victories, probably not separate rulers, but lieutenants of the empire who took an active part in the achievements of the chief ruler. From about 1250 to 1275 there seem to have been as many as four, even five, Pandya rulers.

Under Maravarman Kulasekhara, the *Khalas Dewar* of Muhammadan historians and the *Asciar* or *Ashar* of Marco Polo (1268 to 1311 A. D.) there must have been brother kings, members of the royal family, liable to be referred to as kings of their respective territories by foreigners visiting their shores. He is said to have ruled over both the Chola and the Pandya countries and to have been in residence at Gangaikondapattinam. The Sundara Pandya referred to by Marco Polo was one of the name who died in 1292 and who was in charge of the coast district of Ramnad and the neighbourhood which the Venetian traveller touched. Maravarman

had two sons, one Sundara, the legitimate son, who was associated with him from 1302-3, and the other Vira, a natural son, whose date of accession is 1296. The old king was finally murdered by his legitimate son Sundara who was incensed at his father favouring the illegitimate brother. The disputed succession that followed gave the opening for the invasion of Malik Kafur.

By this time, i.e., the close of the first decade of the fourteenth century, the Cholas had almost completely disappeared, and the whole Coromandel Coast, the Ma'bar of the Muhammadan historians was in possession of two dynasties only, the Pandyas ruling up to the Pennar, and the Kakatiyas ruling beyond. The Hoysala power extending to Kannanur and Tiruvannamalai, stretched as far north as a line drawn from Goa to Nellore. To the north of this line the Kakatiyas and the Yadavas brushed shoulders. Thus in the place of the powerful Chalukya and Chola empires, there stood out four mutually jealous and warring kingdoms and a number of smaller chiefs when the great wave of Mussalman invasion under Malik Kafur broke out.

Malik Kafur's invasion of the Deccan and siege of Warangal was quickly followed by another expedition which had as its objective Dwarasamudra and the Pandya kingdom. He marched first against the Hoysala, Vira Ballala III, who wisely submitted for the time being. Taking advantage of the fratricidal war then raging at Madura between Sundara and Vira Pandya and listening readily to the appeal of Sundara for help, the Malik crossed from the Mysore country down the Saththiamangalam Ghat into the Coimbatore plain and advancing along the bank of the Kaveri reached Kandur (Kannanur).

After taking it and destroying temples at Bir Dhul and Jalkotta (the former of which can best be identified with Vira Solan, Jayangondasolapuram) the Malik turned in the direction of Madura. The Muhammadans on this occasion might have sacked Srirangam, as Amir Khushru, the contemporary historian, makes a clear statement that the invaders sacked all the temples in the country round Kandur; and there is also direct evidence to confirm this presumption in the *Koyiloluhu*. A few epigraphs make it clear that this Muhammadan invasion reached certainly into the Pandya country and presumably went as far south as Madura and Ramesvaram, though it formed a mere raid undertaken for the sole purpose of plunder. There seems little doubt that a Mussalman garrison was left behind at Madura. Malik Kafur returned to Delhi in 1312 A.D.; and circumstances made any return either by himself or by deputy impossible.

Soon afterwards we find an enterprising Kerala ruler, Ravi Varman Kulasekhara (born 1266-7) over-running all the territory as far north as Kanchi and gaining a certain ascendancy over the Pandya—a record of his, giving him credit for a victory over a Sundara Pandya, apparently the one who was the protégé of Malik Kafur and was probably restored by him. Ravi Varman took the title of *Sanghrama Dhira* (the brave in war) and was so learned as to get the title of *Dakshina-Bhoja-Raja*. Ravi Varman's conquests however were not of a lasting character; and when Khushru Khan invaded South India in 1318 and after him the Tughlaq generals, the Kerala ruler does not figure in the campaigns at all. Ravi Varman possibly dislodged the Muhammadan garrison from Madura and thus Khushru Khan had to do the conquest all over again.

In another quarter also there was a swift restoration after the Muhammadan raid. Vira Ballala busily and quickly restored order in his kingdom and before 1316, was ruling in great happiness at Dwarasamudra after having rebuilt it.

The invasion of Khushru Khan in 1318, resulted in the submission of Warangal and an advance into Ma'bar where, according to Barani, the official Muhammadan historian, the King fled and the invader got a number of elephants. Warangal was again invaded by Prince Ulugh Khan, that became afterwards Muhammad-bin-Tughlaq. Soon after he became Sultan, he undertook another invasion of Warangal and Dwarasamudra (1327-8) and brought the two kingdoms once more completely under Muhammadan allegiance. According to Mr. Rice, the Hoysala capital was completely destroyed in the course of this expedition; and Vira Ballala seems to have retired to Tonnur (near Seringapatam) and finally to Unnamulē (Tiruvannamalai).

Soon rebellions broke out everywhere in the Empire and Deogiri and Malabar were among the earliest defections. The latest coin of Muhammad-bin-Tughlaq that Dr. Hultzsch found in the South is of 1334 A.D.; and the earliest of Jalal-ud-din, the first independent Sultan of Madura, is 1335 A.D. He is called the *Adi Sarattan* (the first Sultan). On the evidence of coins, it is pointed out clearly in the book under review, that Mr. V. A. Smith's date for the revolt of Ma'bar (1338-39-40 A.D.) is far too late; and the grounds upon which he relies are not very clear. When the Sultan of Delhi tried to march South and put down the rebellion, he was taken ill at Bidar and had to abandon the enterprise contenting himself with sending an army. Shortly afterwards came the

organised revolt of the southern Hindu States, Warangal, Kampli and Dwarasamudra.

What is very important for our purpose is that Vira Ballala, who was able during Khushru Khan's and subsequent invasions to re-organise his resources quietly and unobserved, possibly went about this time farther afield than Dwarasamudra and laid the foundations of the city generally called Hosapattana or Virupākshapattana which ultimately became Vijayanagar. This was with a view to secure his northern frontier against any Mussalman advance. Records of this monarch prove that while he was living peacefully at Tiruvannamalai in 1342, where he first settled in 1328-29, he was also in possession of Sri Vijaya Virupakshapura as his residential capital (Nilēvidu). A grant of 1340 records the fact that at this latter place he had his son anointed with the title Vira Vijaya Virupaksha Ballala. Thus the Hoysala was apparently preparing himself for possible campaigns on his northern frontier and had his son anointed as ruler against eventualities. A Chikkamagalur inscription refers to the coronation of the Hoysala prince at Hosapattana. There is also an inscription in the temple at Hampi referring itself to the Hoysalas, indicating that Hampi was originally in the territory of the Hoysalas. And a further inscription of A.D. 1354 says that Bukkaraya was ruling from Hosapattana. The next year he was said to have been in Vidyanagara, his capital. As the learned author says, "This series of facts would put it beyond doubt that Hosapattana and Vidyanagara are the same as Virupakshapattana or Hampi and that this had been recently fortified against eventualities sometime in or before A.D. 1339 by the Hoysala, Vira Ballala III, himself."

Nor was Vira Ballala quiet on his southern frontier. A record of 1342 ascribes to him a pillar of victory at the beginning of the bridge at Ramesvaram (Sētu Mūla Jayasthamba). Two records at Tiruppattur in the Ramnad District prove that Vira Pandya (of Malik Kafur's expedition) must have been still ruling in that part of the country about 1340 and 42. Vira Ballala when he advanced to Ramesvaram probably united with him against the Muhammadan Sultan at Madura. The next year Vira Ballala was fighting near Trichinopoly against the Muhammadans, as an inscription on a *Viragal* (hero-stone) in the Kadur District of Mysore says that one Kankayya had gone to heaven in battle with the Muhammadans along with the king at Chirichirapalli (probably the Kannada form of Trichinopoly) which was wrongly read as Beribi by Mr. Rice.

Ibn Batuta, the famous Moorish traveller, who came to South India from Delhi about this particular period, and was related through his wife to Ghiyath-ud-din, the reigning Sultan of Madura, says that the battle between the Mussalmans and the Hindus was fought at Cobban (the nearest Tamil equivalent of which is Koppam) which is equated in this book Kannanur-Koppam or Kannanur. The probability must have been that Kannanur was lost to the Muhammadans either during Malik Kafur's invasion or later; the Hoysala shifted his eastern capital to Tiruvannamalai which would serve as a good place from which to prevent reinforcements from the north reaching the Muhammadans of Madura; between the Sultans of Madura and the Hoysalas there were constant wars and campaigns along the Kaveri-Coleroon frontier; and Vira Ballala died in one of the battles fought between Kannanur and Tri-

chinopoly which are not far distant from each other.

Vira Ballala's heroic death did not end the struggle with the Mussalmans of Madura; his successor Ballala IV continued the wars of his father for the next few years down to 1346, when he disappeared either by natural death or otherwise. It is just possible that he also fell fighting against the Muhammadans. It was soon after the death of these last of the Hoysalas, that the five brothers, Harihara, Bukka, Kampa, etc., to whom inscriptions of the time ascribe the foundation of Vijayanagar, rose into independence. Even under Vira Ballala III they must have been stemming the Muhammadan tide along the northern frontier of the kingdom. Harihara is no other than Ibn Batuta's infidel King Horaib, who controlled the Mussalman ruler of Honowar. Bukka or Virā Bukka Rayulu was, according to an inscription of 1352, ruling at Dwarasamudra and Penukonda and 'became the elevator of the Hoysala Empire.' The Harib, Kapras, and Kamraz of the Muhammadan writers, who were ruling all the country from Goa to Gulburga, are obviously no other than Harihara, Kampa and Bukka; while the last two brothers Muddappa and Marappa were just behind this front line.

In the South the only obstacle to the complete establishment of Hindu independence was the Sultanate of Madura. Ghiyath-ud-din, the victor over Vira Ballala III, died early in 1343; and of his successor Nasir-ud-din we have only coins dated 1344 A. D. From that date to 1356 A. D. there is a break in the coinage. This is most probably due to the conquest of the Sultan and of Madura by Kumara Kampana, son of

Bukka, who according to the *Kamparāya Charitam* (or *Mathurā Vijayam*) of Gangā-devi (and other sources also) won victories over the Sambhuvarayans of Rajagambira Rajya (N. Arcot and Chingleput Districts) and the Sultan of Madura who, according to the poetess, had proved a hatchet to the creeper the prosperity of the Ballala (*vide Sources of Vijayanagar History pp. 23 et seq.*) A record of 1358 at Tirukkalakkudi states that Kamparaya destroyed the Tulukans, established a stable administration throughout the country and appointed Nayakkanmars as supervisors. The truth may be that some years before this date, either Sultan Nasir-ud-din or his successor suffered a crushing defeat and Muhammadan rule at Madura was put an end to at least temporarily. When it revived as could be seen from the revival of its coinage in 1355-56 A. D. it was barely nominal and even that nominal rule was finally destroyed in A. D. 1377-78, which was the last year of Bukka, the second Vijayanagar sovereign.

This new chronology of the Muhammadan Sultanate of Madura, of course, completely upsets the accounts given by Nelson and Sewell that the dynasty lasted from 1310 to 1358 A. D.

Shortly before the extinction of the Muhammadan power, Srirangam was restored to its ancient glory and greatness. Harihara II assumed imperial titles only when all the chances of the Muhammadans ever recovering their position had completely vanished away; and in 1378 he could call himself 'the supporter of the four castes and orders;... the publisher of the commentaries on the Vedas; the master in establishing the ordinances prescribed by the Vedas'. It was

the stumbling block of the Madura Sultanate that so long delayed the assumption of their proper imperial titles by the Vijayanagara monarchs.

But all this would not have been possible had it not been for the brave stand made by Vira Ballala III for over thirty years against the Muhammadan advance. "He devoted his life to the cause of Hinduism and made it possible for the South Indian Hindus to be the Hindus they are to-day." And Vijayanagar was his foundation.

Vijitya Visvaih Vijayābhidhānām
Visvōttaram yō nagarim vyadatta.

About this great hero, Mr. Rice and other earlier writers have nothing eulogistic or even complimentary to say; and Mr. Rice was uncertain even as to the identity of his foundation (see Rice—*Mysore and Coorg*, p. 107.)

The book under review contains an exhaustive geographical account of the principal places mentioned in it and copies in full of a few important inscriptions together with their translations, as well as an account of Ibn Batuta in South India taken from the French edition of that traveller by Defremery and Sanguinettie. There is also a good map of South India illustrating the campaigns and the lines of march of the armies during the period. The geographical notes are specially valuable with their shrewd identification of places; and there are, interspersed here and there, notices of administrative activity and communal life.

THE EQUIPMENT OF SCIENCE LABORATORIES.

ANY Science teacher who has had experience of preparing an indent of apparatus required for use in a Science Laboratory of a High School will grant that the work of preparing an indent is not an easy one and besides requiring great care and skill is one also demanding a large amount of time. In fact science teachers spend a certain portion of their leisure time every week for such work, making a note of odds and ends required in their laboratory need-book, whenever any such need is felt in the actual performance of experiments by students or in demonstrations by the teacher. It must have been a rather common experience of science teachers of having omitted to do this in a case or two and consequently forgetting to include the articles in the annual indent and feeling their want badly in the succeeding year. In this connection it may be pointed out that it is highly important, that if any part of an apparatus, such as a locking-nut or a pin or a small screw, is broken or otherwise rendered useless, the loss must be specially noted in the need-book and the substitute ordered for in the next indent.

For science teachers in India the difficulty of procuring proper and suitable apparatus is great. There is no firm in this country which keeps such a large variety and stock of scientific apparatus as the continental firms. It is a pleasing thing that some firms have sprung up of late dealing in scientific apparatus, but experience with them has not been always of the pleasantest kind. We have to be satisfied with what they give us and not with what is required by us. Often the required apparatus is not had and in its stead some inferior substitute is sent. The

annoyance so caused cannot be expressed in words. So long as such a state exists, a state no doubt due to the lack of a sufficient stock of suitable apparatus, so long the science teacher will have to look to the foreign firms for the supply of the necessary articles. It is well-known that certain kinds of apparatus and parts of certain other kinds can be had here with the help of the local carpenters and blacksmiths, but the difficulty in procuring them is so great that the over-worked science teacher in despair has to place the order in the hands of foreign firms. If there is a co-ordination in works of this nature, there is considerable scope for local firms in working in this direction.

Even in sending an order to English firms, great care has to be exercised. Besides giving references to catalogues which, ever since the war, have been legion though rarely complete, a brief description in the form of the size of the essential apparatus should be given, for it is found that old patterns which more or less agree with the scanty description are sent instead of what the teacher has in his mind; for this the dealer is not alone to be blamed, for he must find a place where he could sell old types and patterns. I make special mention of this fact as I have found in many schools in consequence of my constant migration, types of apparatus, though of recent purchase, which are of old make or difficult in manipulation instead of their simple but valuable substitutes.

If a purchase from a local firm which is fairly well stocked with apparatus is contemplated, a visit to the firm and personal choice will enable us to overcome all such difficulties. In this connection it may be pointed out that it is worth while to send the science teacher to Madras whenever we make any

large purchase from a Madras firm. The little extra expense involved in meeting the travelling charges of the science teacher is more than counterbalanced by the purchase of useful apparatus which are in working order. The science teacher will be indeed very glad to undertake the extra trouble involved in the journey, for he knows he can subsequently save a lot of physical and mental trouble involved in examining and setting up defective pieces of apparatus; it is, however, a pity that the management generally demurs the extra expense involved.

In addition to the scrutiny involved in the selection and ordering of apparatus another important point which should be borne in mind is how the climatic and other conditions peculiar to the locality bear upon the apparatus selected. It is only necessary to point out a few examples in illustration of these. It was indeed a surprise to me to find the state of some pieces of apparatus in which glue is made use of in construction, in different places. I never knew how much trouble would be caused when we proceed from comparatively dry climates to moist climates in a matter of this kind. In a place like Salem where the air is comparatively dry, much trouble is not caused by apparatus in which glue is made use of, Weight boxes, cameras, small induction coils and a host of other apparatus in which glue is used give very little or no trouble. It is only when we proceed to humid places like Palghat or Mangalore that we find how soon glued pieces of apparatus become useless by easily coming off into parts. The double dark slide of a camera gets all the small pieces of wood used in its construction separated. So in such places apparatus in which no glue is used or even if glue is used some tongues of

metal are used to fasten together the various wooden parts must be got; for example, the 'Tropical Victor' is a kind of camera specially suited for use in climates such as ours.

Again, the comparatively high average temperature of our country renders certain kinds of apparatus made in Europe to suit European conditions unserviceable. The wood used in the construction of apparatus though declared seasoned is often found to warp, so apparatus in which special wood with climate resisting properties is used should be purchased. To avoid this trouble metallic portions of apparatus are often purchased through English firms and the wooden parts made locally.

One more example of what I mean may be given. A laboratory on the top of the Nilgiris requires specially constructed apparatus for its purpose. Consider by way of illustration a Fortin's barometer. If it is remembered that the atmospheric pressure there is only 23 inches, it can be seen that the graduated part of the instrument should be different from that in use in the plains. Again, consider the use of a calorimeter. The average temperature of the place is very low, so in performing calorimetric experiments calorimeters with special provision for minimising the loss of heat have to be employed. Again, if it be remembered that water boils there at 93 or 94 °C., it will be found that apparatus in which the boiling point of water functions in construction have to be correspondingly altered.

Sensitive specific heat thermometers are usually sold in two gradings 0° to 50° and 50° to 100°C. I would think that the type useful in our country is 15° to 60° and 60° to 110°C., as we hardly get temperatures less than 15°C. The patterns mentioned before are however use-

ful to the science teacher at Ootacamund and for a few special experiments. To mention one more instance, in the apparatus usually supplied for humidity experiments the graduations in the thermometers are given only below 15°C. no doubt suited for European climates, but the graduation in our country should be above 15°C. or so, as the dew-point is rarely less than 15°C.

Certain delicate pieces of apparatus such as a delicate balance or the suspension of a galvanometer are made of alloys which are said to have weather-resisting properties or constancy of torsional properties under variations of weather conditions. They may be so in cold countries, but our experience with them here is not such. The alloys fail to withstand for a long time the high temperature and humidity of tropical climes. The point argued here therefore is that considerations of latitude, altitude, humidity and average temperature have to be made before a final selection of apparatus is decided upon.

It is interesting to have a rather extensive record of experiences peculiar to our country with regard to apparatus made in Europe. It seems to me that even within the limits of our Presidency there will be a diversity of experiences. To collect them and to collate them must prove to be extremely useful in the selection of apparatus by science teachers. No single teacher is likely to have the opportunity for all the experience of this kind and it is in the belief that more teachers will come forward and give the results of their experience, often learnt at much sacrifice, for the benefit of their brethren that I write this article. If this article is found to be of any use, I should like to contribute a few more articles of this nature.

V. N. VISWANATHA AYYAR.

MILTON'S "COMUS."

I. SOURCES.

THE task of searching up the "sources" of a work of creative art like "Comus" is not without justification and without profit. The story of Comus (a Greek word meaning 'revel') is suggested by that of Circe in Homer's 'Odyssey.' In the Tenth Book we read of the adventure of Ulysses in the island of Circe. She is

*Goddess, and queen, to whom the powers belong
Of dreadful magic and commanding song.*

Her palace is bosomed in the grove. Ulysses sends his scouts to examine the place. Eurylochus is in charge of the party. Wolves and lions are roaming before the palace and greet the visitors. Circe takes them in all except the leader who is watching from a distance, and treats them to delicious food in which are mixed

drugs of force to darken all the soul.

Then Circe waves her wand.

To hogs transforms them, and the sty receives.

The news of this transformation is carried to Ulysses by the amazed Eurylochus. The indignant Ulysses starts to wreak vengeance on Circe but is met by Hermes on the way who provides him with the plant which would act as the antidote to Circe's poison. He further gives instruction:

*Soon as she strikes her wand, and gives the word,
Draw forth and brandish thy refulgent sword,
And menace death.*

He is even to accept her wanton love but to demand on oath at the outset the freedom of his fellows.

Milton's Comus is born of Circe and Bacchus and possesses the qualities of both. Though the story is strictly classical in conception, Milton has evolved his moral allegory

in "Comus" essentially in the form of a pastoral and this takes us forcibly to Fletcher's pastoral tragic comedy, "The Faithful Shepherdess" which was written and published sometime before 1610.

Fletcher defines in his prefatory words a pastoral as follows: "Understand, therefore, a pastoral to be a representation of shepherds and shepherdesses with their actions and passions, which must be such as may agree with their natures, at least not exceeding former fictions and vulgar traditions; they are not to be adorned with any art, but such improper (common) ones as nature is said to bestow, as singing and poetry; or such as experience may teach them, as the virtues of herbs and fountains, the ordinary course of the sun, moon, and stars, and such like." The characters in Fletcher's play owe their homage to Pan as their greatest god. A satyr appears as Pan's worthy messenger, paralleled by Milton's Attendant Spirit. The satyr declares his office in these words:

*Here must I stay,
To see what mortals lose their way,
And by a false fire, seeming bright,
Train them in and leave them right,
Then must I watch if any be
Forcing of a chastity;
If I find it, then in haste
Give my wreathed horn a blast,
And the fairies all will run,
Wildly dancing by the moon,
And will pluck to the bone,
Till his lustful thoughts be gone.*

Clorin, the shepherdess, bewailing her husband's death and preserving her widowhood in the strictest devotion to the departed lover instinctively arouses the satyr's high praise and devoted service. Clorin explains:

*Yet I have heard (my mother told it me,
And now I do believe it), if I keep
My virgin-flower unscorpt, pure, chaste, and full*

*No goblin, wood-god, fairy, elf, or fiend.
Satyr, or other power that haunts the groves.
Shall hurt my body, or by vain illusion
Draw me to wander after idle fires.*

The play takes us through the love-affairs of several shepherds and shepherdesses. Perigot and Amoret are true lovers who arouse the jealousy of Amarillis who with the help of the Sullen Shepherd tries to sow discord between the faithful couple. There is a holy well the bathing in which helped any one to assume the form he or she wished to take. Amarillis deceives Perigot by transforming herself into Amoret, but her wanton character repels Perigot who proceeds to injure her. The faithful Amoret herself makes her appearance and is wounded by the mistaken lover. When she is flung into the well by the Sullen Shepherd, the god of the river makes his appearance and takes Amoret in his arms. This will remind us of the story of Sabrina introduced in Milton's Comus. Amarillis pursued by the lust-stricken Sullen Shepherd also suggests by the words uttered in her distress, the legend of Sabrina:

*If there be
Ever a neighbour-brook or hollow tree,
Receive my body, close me up from lust
That follows at my heels! Be ever just,
Thou god of shepherds, Pan, for her dear sake
That loves the rivers' brinks, and still doth shake
In cold remembrance of thy quick pursuit;
Let me be made a reed and, ever mute,
Nod to the waters' fall, whilst every blast
Sings through my slender leaves that I was chaste!*

The play is concluded with cures and exhortations to chastity before the bower of Clorin.

The story of two brothers seeking their sister has also its parallel in Peele's "Old Wives Tale" (printed in 1595) which is described by Wharton in the following words:—"This very scarce and curious piece exhibits, among other parallel incidents, two

brothers wandering in quest of their sister, whom an enchanter had imprisoned. This magician had learned his art from his mother Meroe, as Comus had been instructed by his mother Circe. The brothers call out on the lady's name, and echo replies. The enchanter had given her a potion which suspends the powers of reason, and super-induces oblivion of herself. The brothers afterwards meet with an old man who is also skilled in magic; and by listening to his soothsayings, they recover their lost sister. But not till the enchanter's wreath had been torn from his head, his sword wrested from his hand, a glass broken, and a light extinguished."

It has been pointed out that the name "Comus" might have suggested itself to Milton either through Ben Jonson's masque "Pleasure Reconciled to Virtue" or the Dutchman Vander Putten's Latin play "Comus" (1608).

We should also remember that earlier than "Comus," Milton had written "the part of a masque," entitled "Arcades" in which we have a "genius of the wood" who by lot from Jove, was the power of the wood to nurse the saplings and save the plants from nightly chill and all the other troubles incidental to vegetable growth.

II. WHAT KIND OF COMPOSITION IS "COMUS"? "Comus" is professedly a masque on the Italian model. The essential lyrical quality of the masque is preserved largely in "Comus". As Macaulay puts it, the speeches read as majestic soliloquies and they possess enrapturing eloquence, sublimity and music. As a masque "Comus" provides rich scope for scenic pageantry in the wood densely overgrown with trees, in the splendid attractions of the palace of Comus and lastly in the

President's castle. Much convenient masking is allowed for in the tale of transformation resulting from the tasting of the liquor offered by Comus :

Soon as the potion works, their human count'nance,
The express resemblance of the gods, is changed
Into some brutish form of wolf or bear,
Or ounce or tiger, hog, or bearded goat,
All other parts remaining as they were.

Dancing is also provided first by Comus and his creatures and later by country dancers followed by the aristocratic persons of Ludlow Castle. Two songs, one addressed to Echo and another to Sabrina, contribute to the music of the masque.

Earlier than Milton, Ben Jonson had used the masque as a vehicle for moralising. In evolving a moral allegory, Milton has however more largely pressed into his service the conventions of pastoral poetry, which were to distinguish his later poem "Lycidas" written on the death of his college friend. The reminiscence of Pan whose worship is openly avowed in Fletcher's play, is recognisable in "Comus." When the noise of the revelry of Comus and his companions reaches the lady's ears it suggests to her merriment

Such as the jocund flute or gamesome pipe
Stirs up among the loose unlettered hinds,
When, for their teeming flocks and granges full,
In wanton dance they praise the bounteous Pan,
And thank the gods amiss.

When she sees and hears Comus talk, she addresses him as the "gentle shepherd"; and it was to "a low but loyal cottage that Comus promised to conduct the lady. The Attendant Spirit himself puts away his sky-robes and takes the weeds and likeness of a swain

That to the service of this house belongs,
Who, with his soft pipe and smooth-dittied song,
Well knows to still the wild winds when they roar,
And hush the waving woods.

It adds to the interest in this shepherd-char-

acter to remember that it was borne by Henry Lawes, the celebrated singer. The elder brother offers him also a tribute of praise :

Thyrsis ! whose artful strains have oft delayed
The huddling brook to hear his madrigal,
And sweetened every musk-rose of the dale.

Thyrsis explains that he had not come in search of strayed sheep. He relates the story of Comus of which he had come to know even as he was

Tending my flocks hard by t' the hilly crofts,

After apprising the brothers of the lady's danger under the power of Comus, Thyrsis (the Attendant Spirit) gives them

" a small unsightly root,
But of divine effect "

which a certain shepherd lad had recommended to him as of sovran use

'Gainst all enchantments, mildew blast, or damp.

The Attendant Spirit conducts the lady at the end of the poem to her father's residence and

All the swains that there abide
With jigs and rural dance resort.

The devotion to Pan, the shepherd love of song and of "simples and herbs," and the general features of shepherd life on the mountain, in the forest and under the sky, are all evidenced in "Comus."

Macaulay tells us that the fine lyric illusion in reading "Comus" is rudely interrupted by the dialogue in it. The dramatic quality of "Comus" is indeed not much. That some of the characters are non-human is not the greatest objection. The Attendant Spirit may be paralleled to Ariel in Shakespeare's "Tempest," and Sabrina will be justified by the river-god in the "Faithful Shepherdess." Milton has done little to individualise his human characters. As Johnson remarks, the

invitation to pleasure put into the mouth of Comus is in too general terms to signify the alluring attractions of vice. The philosophical discourses delivered by the lady and the brothers are too long to be dramatic. That the poem is too much of an allegory to be a drama may be concluded from the behaviour and feelings of Comus in the presence of the virtuous. And the development of the story allows for no real *denouement*.

III. THE MORAL AND RELIGIOUS CHARACTER OF THE POEM.

"Comus" is essentially a moral and religious allegory. It is akin to "Paradise Lost" in justifying the ways of God to men. It illustrates the triumph of good over evil. Only "erring men" believe in chance while in truth, virtue can never be enthralled by vice and

Even that which mischief meant most harm
Shall in the happy trial prove most glory.

The poet's faith is unshaken by the existence of evil for

Evil on itself shall back recoil,
And mix no more with goodness, when at last
Gathered like scum, and settled to itself,
It shall be in eternal restle's change
Self-fed and self-consumed.

Milton is no doubt a devoted student of Plato and of Spenser and we have touches of Platonic philosophy in the poem. We learn from the elder brother that

Oft converse with heavenly habitants
Begins to cast a beam on the outward shape,
The unpolluted temple of the mind,
And turns it by degrees to the soul's essence,
Till all be made immortal.

Similarly inward defilement by inclination to lust makes the body quite lose the divine property of her first being. We are acquainted in Spenser's Hymns with how man or woman is created after a pattern of Heaven and the qualities of the soul form the outward

appearance of the body. The lines occur in the Hymn in honor of Beatie :

For of the soul the body form doth take :
For soul is form, and doth the body make.

Again we are told in the same poem :

All that fair is, is by nature good.

The complete identification of the good with the beautiful is expressed by the lady in "Comus," in another way :

None

But such as are good men can give good things.
And that which is not good is not delicious
To a well-governed and wise appetite.

Also the elder brother says, earlier in the poem :

He that has light within his own clear breast
May sit i' the centre, and enjoy bright day :
But he that hides a dark soul and foul thoughts
Benighted walks under the mid-day sun ;
Himself is his own dungeon.

This idea of the soul's capacity to radiate light is taken up again in "Samson Agonistes." The blind Samson exclaims in sadness:

If it be true
That light is in the soul,
She all in every part, why was the sight
To such a tender ball as the eye confined,
So obvious and so easy to be quenched,
And not, as feeling, through all parts diffused
That she might look at will through every pore ?

The chorus also later exclaims :

For inward light, alas !
Puts forth no visual beam.

P. R. KRISHNASWAMI,

THE MODERN TEACHER AND HIS TEACHING.

A PLEA FOR CORRELATION.

(Continued from June number.)

I SHOULD begin the continuation of my article with an apology. Much as one should like to restrict oneself to the topic indicated by the title, frequent digressions and occasional perorations become a necessity by virtue of the close and practically inseparable relations that exist among the various educational topics and also by the fact that the teacher phalanx has during recent years gained so very considerably in strength that by its vociferations, sometimes justifiable and oftentimes suicidal, it does not only hide its weaknesses from public gaze but does also deceive itself. If in this dissertation I am deemed anywhere unduly hard on the poor teacher, it is only on account of my tender feelings of love for the taught rather than out of any ill-will towards the teacher. I hope this explanation will assist me in securing thoughtful readers. Let me now proceed to the second part of my original programme, *viz.*, what the term correlation denotes, what it does not and the dangers that attend an ill-conceived and improperly-understood system of correlation.

A laboured effort on the part of the teacher to correlate the subjects can never succeed. Spontaneity is productive of better results at correlation as in everything else and spontaneity could be achieved only by love of work, enthusiasm and mastery of the subject, though I do not deny the fact that experience always plays a part. But experience unfortunately now-a-days has been used as an expedient to tide over a thousand and one foibles of the teacher. With due deference

to the experienced but up-to-date teachers in High schools, I should say, that a teacher who has put in a service, as a teacher, of more than 15 years, should not be trusted with the very young and as I fear a dissertation on the subject of "fitness for work" would create a stream of vexatious correspondence, I drop the subject altogether.

Of the three desiderata for successful correlation—love of work, enthusiasm and mastery of the subject—I discard the former two and take the last for the simple reason that the last is concrete while the other two are abstractions which could be treated only on the basis of philosophical considerations.

What then is meant by saying "mastery of the subject"? The teacher who has taken his degree in that subject knows evidently much more than what the boys want. In the case of the experienced teachers, they have been teaching the same subject for years together.

"Week in, week out from morn to eve
You have heard his bellows roar,"

and all these—do not they constitute the mastery of the subject? My humble answer is an emphatic "No."

The very thing that the teacher knows more than what the boys want has often-times proved dangerous. He is not able to bring himself down to the level of the boys. Knowing more is not at all the disqualification. It is excellent of course to have a giant's strength but it is tyrannous to use it like a giant. Will the readers believe me if I say that only very recently and that in a popular institution in the metropolis itself a teacher was giving notes on more or less the Theory of Logarithms for the IV Form students? This is the direct result of superior but untamed knowledge.

Again, is it not a truism that no two teachers could teach the same subject and that the same teacher on two different occasions could not teach the same subject on identically the same lines? Either the old matter should be presented in a new setting or the new matter in an old setting. Experience is useless, even dangerous and highly prejudicial in the interests of the children, if it is to be simply a claim for greater emoluments, having induced in the individual a sort of apathy. How many are victims to this, a sort of routine having taken hold of them!

The factors that determine efficient teaching being the teachers' frame of mind, at least at the time of giving the lessons, and the frame of the child's mind, which in Sir Walter Scott's language is,

"As variable as the shade
By the light quivering aspen made"

it is needless for me to remark that mastery of the subject once attained could not be relied upon even for the very next occasion in front of even the same set of students.

At least half an hour before going to the school the teacher will do better to put the following questions to himself:—

1. What are the subjects I shall have to handle?
2. Where have I left the boys the other day?
3. What are the difficulties of the boys left uncleared the other day and how to tackle them to-day?
4. Is there going to be anything new to the boys in my lesson to-day? How to make it agreeable?
5. What should be the course through which I shall have to take the boys? How will the knowledge already possessed by the boys either in this or in any

other allied subject facilitate their understanding this new piece of information?

6. Do the boys really have in store that fund of knowledge to enable them to assimilate the new matter, *i. e.*, in technical language, have I a clear idea of the apperceptive masses of the boys in the class?

It might be remarked of course that many other questions of the type might be drawn up embracing all the principles of effective teaching. The questions are many, but the really interested teacher could very easily satisfy himself on all the points in a few minutes. Even to-day there are many who are unconsciously following up the course intended to be chalked out by the answers to the series of questions and also there are many—unhappily the majority—who blindly rely on their knowledge and experience and miserably fail in the proper discharge of their duty, though not in life. Do these really work with "Heart within and God overhead" and are they blind to the fact that 'Heaven will award the vengeance due'?

One may be inclined to ask—'what then is mastery of the subject'? What should one do to attain that mastery? A set of 'Do's & Don't's' might be formulated but it should not be swallowed as a capsule of miraculous potency. All available information should be gathered, weighed and selections made out of them. These should be analysed and arranged and presented in a readily assimilable form. Wherever possible elicit the information but it is highly objectionable to be a faddist of 'heurism'. There is no use of beating about the bush in one's zeal to elicit or to correlate. Anything quite

new to the boys, not capable of derivation from previously acquired knowledge may better be given as such and drilled in. The inventive faculty (if at all one like that exists), might be stimulated but not created. For the matter of that, many of the great inventions have been the results of chance and not of any deliberate intellectual pursuit. The new bits of information elicited or given as such should be made clearer and clearer by bringing to bear upon them the knowledge already in store. All the pedagogical maxims if properly viewed will reveal that they exhort the teacher to correlate

From the particular to the general

" " concrete " " abstract
" " known " " unknown.

What do these want of the teacher? So direct the minds of the youngsters that they bring to bear upon the particular or concrete or known, the fund of knowledge they already possess and step by step widen that knowledge that it may lead to the general abstract or unknown; but the teacher's work does not end here. The general and abstract should be applied to particulars to see if those are true or the general and abstract if they are not to be applied to particulars become unused knowledge which is more a curse than a blessing. Induction or deduction both mean the same thing ultimately.

The facts that the theory of the faculty psychologists has been exploded that the mind has recognised as one and indivisible whole to be trained as a whole, and the physiological basis of acquirements of knowledge—*viz.*, the overcoming of the resistances at the synapses between centres—the growth of the concept—apperception and—apperceptive systems—all these implicitly or

explicitly demand of the teacher the correlation of the subjects of the school curriculum.

It would appear that I am only theorising and putting in less forcible language what the so-many up-to-date treatises on the art of teaching scream out, without at all realising the difficulties. I shall, therefore, take a concrete example. The III Form student is expected to have a knowledge of longitude, latitude, isotherms, isohyets and isobars as also a knowledge of the abscissae, ordinates, plotting of points and the IV Form student knows to draw statistical graphs: but have these boys been made to understand that the net-work of latitudes and longitudes correspond to that of the abscissae and ordinates, that the isobars, etc., are simple statistical graphs, that by plotting on squared paper a few of the important turnings of the coast line an outline of the country or of the continent could fairly be drawn.

A conscientious teacher who has a living interest in his pupils cannot but correlate these subjects and the elegance with which the knowledge subjects, mathematics, science and geography, lend themselves to correlation facilitates the work, nay, even interests the teacher—makes him almost passive or rather passively active; his presence is felt, but not feared; himself in the background, but always with a ready helping hand—arouses the interest in the children, their curiosity is stimulated—he stands watching the result, noting their weaknesses and the diverse ways of the pupil's work.

That is the kind of passive activity on the part of the teacher that is now-a-days recognised as being conducive to efficient teaching. I do not think that a fair trial has been as yet given to this system of teaching.

I fear even teachers imbued with the modern spirit are forced by a variety of causes into the old routine and between two stools they come to the ground. Attempts at correlation, well intentioned, become simple co-ordination, facts having a close relationship are huddled together and dictated to the boys with the result that more often we educate the boys out of their commonsense. A thorough correlation is a possibility only when the tendencies and the impulses of the children are given free play to, under control. Their self-activity should be the means of their learning. The child mind is not clay to be moulded, slate to be written on or a repository to be poured into. The teacher is a gardener who adjusts a healthy and favourable environment for the growth of the child plant. He cannot inflate the stem to grow bigger nor the leaves to become thicker and broader. It grows of its own accord and lest the growth should be exuberant the teacher's watchful care becomes a necessity.

Alas! at the age of five the child mind is enslaved, cries for freedom are not paid attention to and even the consequent marked effect retarding the physical growth is uncared for. A sound mind in a sound body is as true as 'A sound body has a sound mind.' The face, eye, the whole corporeal frame is the index of the mind.

We have now-a-days in every school time set apart for practical geography, practical science, practical mathematics and yet the pupil is as unpractical as he could be. One cannot expect a slave to be a practical man. To a slave from childhood, the idea of freedom is quite foreign and even after relief from bondage we see so many unpractical slaves to books and after death these are fit subjects

for a Browning to write his "Grammarians' Funeral" on.

In the June number of this Review, under the heading 'Students of the Indian Universities,' Mr. T. K. Sreerangachariar has written two nice paragraphs wherein he has given in the form of questions, subjects well worth the deliberate consideration of those interested in the well-being of our countrymen. I do not quite agree with his conclusions as expressed in the third paragraph. The Universities hold examinations, publish syllabuses, give directions for efficient teaching and confer degrees. Examinations *cannot* test one's originality. I cannot see what the gentleman wants of the University 'to train the students in methods of observation and inference.' The University is, I believe, encouraging 'research work'. Every conceivable facility is given to the student of post-graduate study. The University is not as much to be found fault with as the teacher in close contact with the pupil. We train the pupil only for 'clerical work' under the Government and why, then, complain? In addition to the pupils being shut up within the four walls of a room, from 10 A.M. to 8 P.M., there is the private tutor (anxious to earn his living) for the remaining part of the wakeful portion of the day; and during the examination-time sleep also is denied. Our boys are 'dumb driven cattle.' Whereas it behoves us to make up for the indispensable weaknesses in the system laid down by the 'more sinned against than sinning' Universities, we do actually entrance them. Nobody says that the Indian student is *not* painstaking, only he is made or rather forced to be *too much*. In America and in the Continent 'Education' is meant for making out of the youngster, a fit citizen,

whereas here in India 'Education' is meant for earning a living. I have to make these observations for the simple reason that 'the self-activity' should be the means of the pupils' learning, and that properly controlled freedom alone could make 'originality' exhibit itself. The teacher is conscious of the defect of the products of the Indian Universities, and has the remedy in his hands.

(To be continued.)

P. R. SUBRAHMANYAN.

Lower Secondary Arithmetic

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INDIAN LABOURERS AND PRIMARY EDUCATION.

THE Indian Labourer is said to be a lazy, unpunctual and inefficient man and that the wages he is paid, though meagre when compared to the wages paid to an English workman, is more than what he deserves to be paid for his work. And the means suggested for bettering his half-starved condition is that of giving him Primary Education. The 'Experts' say that such a course will improve the efficiency of the man and thus will get him better wages. Primary Education, it is said, is the only salvation for Indian workmen.

But the workman himself thinks otherwise. He is unwilling to send his son to school because he thinks it to be an expensive luxury which brings him no returns in the shape of material prosperity. He cites the examples of many a young man who after a five-year course in a Primary School derides his father's profession but who finds it difficult to earn even a scanty living by any other means except by entering the Government service as a low paid servant. His brother who had stayed at home to help his father had easily learnt his father's trade and had become able to get on independently. Now, when the labourers themselves, whom we expect to be directly interested in the Primary Education Movement have such grave doubts as to the usefulness of the schools, let us pause for a moment to consider whether there is any foundation for the doubts entertained as regards the utility of Primary Schools.

The Primary School course, as it is at present, covers a period of five years and the net result of the course is that the boy has learnt a little of reading and writing, and a little of Arithmetic. To his father these accomplish-

ments are not of much value. He wants that his son should learn something which would enable him to earn more than he would do if he stayed at home. But the present day Primary School not only gives him nothing, but deprives him of the chance of learning his father's trade and getting on as his father had done. Nor does it stop with this. The school boy learns a number of vices which his brother at home is ignorant of.

But it is urged that this education widens his mind and breaks through his conservative habits and thus helps him to make progress. But practical experience shows that the result produced is just the opposite. The father is right in saying that his boy has learnt practically nothing in school except smoking, lying and stealing, not to speak of the many infectious diseases he had caught.

In a few of the schools, which are said to be more advanced than the rest, a manual training instructor is employed. He engages the pupils for two periods a week and the subjects taught are commonly Clay-modelling, Paper-cutting and a little of Carpentry. The managers and heads of such institutions are carried away with the fond notion that they have introduced a step which would prove to be invaluable to the poorer classes. But they commit one serious error. A training in Clay-modelling and Paper-cutting will not help a man to earn his livelihood. Even such a useful subject as Carpentry, if taught for only two periods a week, will not make a workman of a boy. To become a skilful workman in one of the handicrafts, a man should have a training for five years working at the rate of three hours a day.

But if the Primary School is organised in a different way useful results might be produced and the labourers themselves can be made

to give their whole-hearted support. Such a school in addition to teaching the pupils reading and writing, should also train them in one or two of the various handicrafts. The education given should directly help them to earn their livelihood, while at the same time conferring on them the benefits of a general education.

The labourers in India can be divided into two classes, the Agriculturists and the Handicraftsmen. The needs of the two classes are different and one kind of school cannot be suitable to the two classes. Thus we will have to deal with two kinds of schools, the Agricultural and the Industrial.

In rural parts, where the greater number of people live by agriculture, Agricultural Schools have to be opened.

In such schools, the sons of the farmers should be taught the principles underlying agriculture and the methods and implements which can be used to obtain better produce than what their fathers had got. The old farmer is generally very conservative and often neglects to adopt new methods though he may know them to be beneficial to him. In such schools the pupils can be taught to discard the conservative habits and adopt more easy or more profitable methods. They can also be taught to make use of science to increase the fertility of the soil and to remove pests destructive to the crop.

In working such institutions, due consideration should be given to the conveniences of the villagers. The farmer will be unable to spare his son during certain portions of the year. During those periods the boy has to help his father in cultivating his farm. Attending the school during those periods will not only deprive the boy of an opportunity of helping his father but also of acquiring a first-hand knowledge on the subject.

In towns we have a large number of men who live by one or the other handicrafts such as carpentry, smithery, spinning, weaving, metal work, etc. In such places Industrial Schools can be opened. The school should consist of a number of departments, each under the supervision of an expert workman, where the pupils are taught the trade of their fathers. Here the skill of the boys should be carefully developed by organised work so that they are enabled to make more rapid progress than they would do, when left in their homes. There will be ample opportunities for introducing the up-to-date instruments used by expert workmen in the other countries, which their conservative fathers would be unwilling or unable to use. In teaching these handicrafts the pupils should be made to prepare articles which are useful in practical life and which can be readily sold. Thus the school will be a regular workshop, and the thought that the articles, the boys themselves prepare, are saleable, will make the boys take an interest in the work as nothing else does.

In such schools the serious error of omitting such subjects as Reading, Writing, Arithmetic, History, Geography, Science, which widen the mind of the pupils and break through their conservative habits, should not be omitted. During the morning hours these subjects may be taught, and the afternoon hours can be utilised for the handicrafts.

Such schools, when once started, will receive the whole-hearted support of the Labourers. Any number of schools as those at present will not materially improve the condition of the poorer classes in India. Unless the people are trained to become skilled workmen and skilled agriculturists, there will not be, in these days of competition, any salvation to the poorer classes.

T. K. SREERANGACHARIAR.

DISTRICT SECONDARY EDUCATION COMMITTEE.

FOLLOWING the wake of the formation of District Elementary Education Councils, the Local Government has thought fit to consider the formation of a Secondary Education Committee for each district for the efficient organization of Secondary Schools under the management of local bodies. Accordingly the Local Government approved of the proposals of the Financial Relations Committee appointed by it in G.O. No. 1193 M., dated 30-8-1920.

Para. 99 of the Financial Relation Committee Report says, "Co-ordination of the activities of the different local bodies therein is urgently called for, for the efficient organization of Secondary Education in each district. Co-ordination will still be necessary in districts where there are both Municipal and District Board Secondary Schools. In such cases, we suggest that full and early advantage should be taken of the provisions of the New Local Boards and District Municipalities Act, which permit the constitution of Joint Committees with delegated powers for attending to particular branches of administration. A District Secondary Education Committee may be created under whose control a district service of Secondary School teachers may be recruited and administered."

So the para. contemplates (i) the creation of District Secondary Education Committees, (ii) A district service of Secondary School teachers, and (iii) limits its scope to Municipal and Board Schools.

Its Scope:—Taking the *third point* first for consideration it is not known why Government have neglected privately-aided schools to be

brought under the scheme. Is it because they are not under the control of the Government as much as do the schools under local bodies? The Government have as much control over the privately-aided schools as they have on the quasi-official schools. The former are as much subject to the Education Rules and Inspection Code as do the latter. Why then should the Government limit its scope? Is it because the private schools resent their interference while the local bodies do not? If it were so, it is these self-governing bodies that do resent more in these democratic days of national education and national advancement. It is only by the inclusion of the privately-managed schools that they would have saved the humiliation and prospects of teachers in those schools. Secondly the scheme would not be complete without the inclusion of private schools and also Government schools. The Government ought *soon to take up the question of organisation of Secondary Education in general* in each district and pass an Act similar to the Elementary Education Act. But it is extremely doubtful whether they would take up such a question at present in view of its avowed policy and financial crisis, though the following remarks of the Hon'ble Mr. Patro in his inaugural address to the Teachers' Association, Teachers' College, Saidapet, give us some hope and assurance: "Before the close of the year some steps would have to be taken for the re-organization of Secondary Education. A Committee would have to be appointed to find out how far the recommendations of the Calcutta University Commission could be given effect to with advantage in this province. The scope of the Committee would be very extensive; it might have to go

into the question of curriculum, courses of study, medium of instruction, etc., and only upon the findings of the Committee, the Department of Education would proceed on the work of re-organising the scheme." But it will be a long time before we can expect any reform.

1. *Creation of District Secondary Education Committees.*—The Government in its Memorandum No. 8753-1 L., dated 23-11-20, drew the attention of the Local Boards to para. 99 of the said report on the formation of a Secondary Education Committees for each district and requested to report whether the Boards are prepared to adopt the suggestion made by the said Committee. The Ganjam District Board invited the opinions of the various Municipalities in the District, but none of them were in favour of such a Committee. So the Ganjam District Board at its meeting held on 30th July had to drop the question as there was no co-ordination from Municipal bodies. A similar state of affairs should have occurred in various districts and accordingly the question of the creation of such Committees would take its own time before such co-ordination as is expected in para. 99 is found feasible. This want of co-ordination on the part of local bodies is a sufficient proof that they should make provision for seeing that the privately-managed schools should fall in line with the suggestions of the said Committee if Government really wishes that the District Committee should be a useful and thoroughly successful one; otherwise the Grants-in-Aid and recognition should be withdrawn. Even in the case of Government schools the Committee should function except in the matter of financing the institutions. Otherwise they should also come under its

supervision. The Committee appointed at the recent Provincial Educational Conference held at Palghat under the presidency of Mr. S. Srinivasa Iyengar, C.I.E., in its draft report on Secondary and University Education opines that "each district must have a District Educational Board which shall be in charge of administration of all education up to the University degree in the district, including general and vocational courses, adequate representation being given to the managers and the teaching profession."

So far as the charge of administration is concerned, the Financial Committee suggests the constitution of Joint Committees with delegated powers to attend to particular branches of administration. But the Committee's suggestions are defective as regards the vague statement and uncertainty regarding the nature and scope of the Committees that should supervise the particular branches of administration while the Provincial Education Conference Committee's suggestions are clear.

I would suggest the following functions for the successful working of the said Committee:—(F.R.)

(i) The Joint Committees contemplated in para. 99 do not seem to give room for representative non-members of Local Boards and Municipalities. So it is suggested that adequate provision should be given to Managers and the teaching profession in the District Secondary Education Committee. Among the teaching profession at least one Headmaster and two Assistants should be given scope to be elected from the members of the District Teachers' Association which should be asked to send them before a fixed time to sit on the Committee for a year.

(ii) The District Secondary Schools Committee should include representatives from private schools which should be made to fall in line with others.

(iii) The Committee should call for the opinion of the District Teachers' Association on matters relating to (a) uniformity of text-books in schools and syllabuses, (b) uniform standard of question papers for the schools in the district, (c) payment of remuneration for valuation.

(iv) The Committee should (a) fix uniformity of scales of fees in all schools, (b) insist upon establishing Provident Fund Scheme in schools which have not got it, (c) have powers to transfer teachers once in 3 years or earlier as circumstances go, so that they may not exercise undue influence.

2. *District Service of Secondary School teachers.*—Suggestion (iv) brings us on to the question of District Service of Teachers which is to be under the control of the District Secondary Education Committee. Two conditions have to be observed in such a service:—(1) Qualifications, and (2) Service. My information from some District Board Presidents shows that the District Boards have not thought of establishing such a service nor is it under their contemplation. The District Service should be based on principles followed by Government, i.e., service and qualifications. The District Service should be so constituted as to make one's pay personal, i.e., irrespective of the post one holds as in Government service. Such an arrangement would be in the interests of all teachers and be a boon to them.

Thus the District Secondary School Committee should be a sort of *Advisory body* to the District Board in matters of finance

and administration and on all other matters of general and vocational education, it should consult the District Teachers' Association which every district should have and the District Service of Teachers, organised under its control on the basic principles suggested above, would be a very important adjunct to it.

If the suggestions noted above are considered, the District Secondary Education Com-

mittee will not only be a useful function in the organism of Secondary Education but it will prevent friction with the legitimate functions of the District Board and District Teachers' Association and thus form a harmonious and complex whole. Otherwise it defeats its own ends and thus falls foul of its good intentions.

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EDUCATION AND EDUCATORS.

IT must be admitted by all that the school should be the centre of light and learning. How can the school fulfil this function to the satisfaction of all concerned and to the satisfaction of the sincere worker himself? It seems to me that it is possible to do so if the teacher is given more freedom and more encouragement to do his work by the authorities concerned, i.e., the teacher must be encouraged to take his share in the public life of the country. To begin with, he must be "egged on" to do some social work or other—the Co-operative Society and the Depressed Classes may be his spheres just at present.

Next, certain changes must be introduced in the personnel of the staff. So far, the school is manned especially by L. T.s and Secondary-grade teachers. But now a change may be brought about by importing men of other professions and giving them a status and a place in the teaching profession. For instance, the doctor and the agriculturist ought to find a place on the staff of the school for the reasons given below.

Among the subjects that are taught for the S. S. L. C. are Physiology and Botany and however qualified the L.T. may be, I am sure that the Sub-Assistant Surgeon and the Licentiate in Agriculture will be able to teach these subjects with more knowledge and with more practical experience than the ordinary L. T. They are the men that know the subject and know the practical working of the same.

The presence of such men on the staff will be appreciated for other reasons as well. That a Sub-Assistant Surgeon is on the staff of a school is in itself sufficient to inspire confidence

in the parents that their children's health is attended to in the school and that every provision is made for the same. Add to it, such a measure will facilitate the much-desired medical inspection of schools and put it on a better basis. The justification for the employment of the Licentiate in Agriculture is based on more or less similar, if not on identical, grounds of utility. The agriculturist will give an impetus to the study of agriculture in all schools and will be able to convert every school compound into a model farm and a lecture-hall for the use of the pupils and for the benefit of the population.

The financial consideration will not stand in the way for the simple reason that the Sub-Assistant Surgeon will be given a starting of Rs. 75 according to the Salaries Committee's report and that the Licentiate in Agriculture is started on Rs. 50 whereas the L. T. is paid not less than Rs. 80 to start with.

K. SRINIVAS KINI.

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THE AGE OF THE MAHABHARATHA.

IT is a well-known fact, that scholars have tried to fix the date of the Mahabharatha war. Although several opinions have been offered regarding that point, it may be noted that no two opinions agree on that point. An attempt will be made to fix the age (be it noted the age only not the actual date) of the Mahabharatha from Tamil sources alone.

In Purananuru, Agaval II, a Tamil scholar முருகசியூர் முடிநாகராயர், has sung the praises of a Chera King உதியன் சேரலாதான். There he says that the Cheran acted as the distributor of food, to the armies on the battlefield of Kurukshetra. It is also well-known to us that the Sanskrit Mahabharatha mentions of the Tamil Kings who had taken part in the war and so this Cheran உதியன் சேரலாதான் might have been one of them.

From the account of the three Sangams as given in இறையனார் அகப்பொருள், we find that there were 549 chief Sangam poets. Among them we find முருகசியூர் முடிநாகராயர்.

There is every probability that this முடிநாகராயர் who figured in the first Sangam was the same, who eulogised the Cheran உதியன் சேரலாதான். As this Cheran took part in the Mahabharatha fight, he ought to have been living in the first Sangam.

As regards the date of the first Sangam, the same account of இறையனார் may help us to some extent. He says that the first Sangam lasted for 4440 years and the second Sangam for 3700 years, while the third Sangam lasted for 1850 years.

If we are able to fix the age of the last Tamil Sangam, then we can fix the age of the First Sangam. As for the date of the Third Sangam scholars assign dates varying from 200 to 800 A.D. Whatever that may be

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even taking the latest date assigned 800 A.D. (which is not probable) we can see that the Third Sangam must have lasted from 1050 B.C. and adding the age of the Second Sangam 3700 years, the First Sangam must have ceased to exist before 4750 B.C. So, முருகசியூர் முடிநாகராயர் ought to have lived before 4750 B.C. So the Chera King உதியன் சேரலாதான் ought to have lived before 4750 B. C. and hence the Mahabharatha war must have been fought before that same date. Adding 4750 to 1920 of the Christian era it comes to 6670. The Mahabharatha war ought to have been fought at least 6670 years before.

Strange to say the date given by Modok corresponds to this date as worked out here, for he calculates from certain astronomical data that about 7000 years must have elapsed since the date of the Mahabharatha war. Whereas according to the calculations given above we come to the conclusion that it must have taken place before 6670 years ago. So it can be taken that Mr. Modok's date of 7000 years is more or less correct judged even from independent Tamil sources.

P. R. VENKATASUBRAHMANYAM.

CLOUD MESSENGER.

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STRAY THOUGHTS ON THE STUDY OF LITERATURE.

"HOW refreshing it is to meet now and then with those who never read at all!" an author is said to have exclaimed on one occasion; and although we might feel surprised for a moment at the supremely sarcastic tone of such a remark, yet the sentiment is one which we could often appreciate. No doubt, the making up of a scholar is indeed an admirable achievement; but when we are constantly bored by the so-called learning of the prodigies that come out of our Universities, how often do we feel our hearts sink within us under the weight of such oddities of human nature! A love for books is certainly a most precious gift; but with many an unhealthy craving for them has almost become a chronic disorder of the human mind; and I have seen people who live upon books with a parasitic tenacity. I have heard of a Professor who, on being told that one of his students used to read twelve hours a day, exclaimed, "Good Heavens! Then when does he think?" And he was right. For if on finding a student without a book, we imagine that he is losing his time, does it not stand to reason for us to assume that a student who is never without a book is losing his thoughts? Then again there is another class of people to whom reading is merely a matter of cant and convention. They read books in a very superficial manner with highly destructive consequences; for often when one reads a book so quickly and carelessly it is its eccentricities that strike one's attention before its intrinsic worth is really discovered. If at all our reading should do us any good, we ought to pay special attention to its literary excellence; and it is owing to this fact that the

study of literature has come to such an overwhelming importance in our education. Literary scholarship is indeed a valuable asset. It gives sufficient food for our intellectual cravings; it forms the foundation for a high æsthetic enjoyment of life, and above all, it gives a dynamic force to our moral evolution. Such are the triple advantages of a proper study of literature; but as I have already hinted at, any kind of unsystematic revelry among a bundle of books should not be mistaken for genuine literary scholarship.

Now you may ask how this literary scholarship is really attained. Every Tom, Dick and Harry you meet in the street could not be dubbed with the dignified title of a literary scholar; and if there are persons of this description who have smuggled themselves into this category, well, you may take them for mere asses in the lions' skins. But there are people—and fortunately their number is not very few—who have a genuine instinct for literature; and it is to them that literature should mean anything, if at all it should do so. But mere instinct won't make you a scholar. Like every other inherent faculty of man, the literary instinct as well should be developed and kept under proper control. Byron might have risen one fine morning to find himself famous; but that doesn't mean that he was born with the pen in his hand.

In order that the literary instinct be properly developed, it is desirable that this should be enkindled in its earliest formative stages. So it is highly necessary for us to pay special attention to the kind of literature we make use of in our early days. In this connection I should like to draw your attention to the importance of juvenile fiction, particularly the fairy tales. In fact it is from fairy tales

and stories of a similar nature that we first begin to derive some of the noblest ideals of human life. We get ourselves fully saturated with romantic emotions and impulses, and conceive ourselves to be for the time being some heroic Sindbad the Sailor or an undaunted Jack the Giant-Killer. Readers of that remarkable collection of tales, the *Arabian Nights Entertainments*, might perhaps remember, how often in our childhood we catch a glimpse of the glory and grandeur of human existence; how often do we spend sleepless nights in ecstasy over the incredible fortunes of an Alla-addin or the hair-breadth escapes of an Alli-Baba. Well, such recollections will ever cling to our memory in inefaceable form; and surely such juvenile fancies might not have been insignificant factors in the making up of a Byron or a Burns, a Goldsmith or a Gladstone. So it is such kinds of books that should form the real basis of which you could build up your literary edifice, and I am sure any student with an average claim to intelligence and commonsense, could not but profit from the pursuit of such a literary study.

Another field of literature we might very profitably traverse not only in our youth, but all through our lives is Biography. It is a pity that biography has been so much neglected in our country; and I am sure a proper study of English biographies will be a sufficient lesson and a rebuke to all of us. We trace the footsteps of Garfield and Lincoln from a Log Cabin to the White House; we see Nelson winning the mighty victory at the Nile as we would see a photo-play on a cinema screen; and the voice of Dr. Johnson breaks through the silence of centuries, and we hear him as if he is our dining companion. Well, such is the secret of English biographies. On the other hand what has

become of our great men? The notable services of Mr. Malabari have been long forgotten; the bones of Mr. Ananda Charlu are merely whitening in his grave; and perhaps the wise and witty sayings of Dr. Nair, worthy of Johnson or Pascal, would too soon be evaporated from our dull dry unimpressive ears. Even the echoes of Ranade and Gokhale are but faintly heard in this generation; and the little leaflets that pass for their biographies only give us the distorted images of their great personalities. Well, such a state of affairs is indeed a tale for tears. I hope I will be excused for this piece of digression, for it is a matter I have felt rather very keenly about; and unless we try to understand our great men and follow in their footsteps, surely there would be no progress in our national life. So it is highly necessary for us, Indians, to devote special attention to this field of literature which would impart such a vital force to our national growth.

Another field of literature that has been quite undeservingly neglected and very often abused is poetry. Well, I don't mean to suggest that every one of you should be a poet, in fact in that case the earth would certainly become an insufferable hell. Indeed I have often wished there were less poets amongst us than there are actually at present. The real defect of our present situation is that there are too many poets amongst us with too little poetry in them. You could not call everything that has four legs a quadruped animal; in that case your footstools and tables and sofas would have to go under that category. And at present the majority of the stuff that passes for poetry both in English and the Vernaculars is no better than your footstools and tables. It is indeed a gift for the

few to have the real poetic genius in them; but it is not beyond the capacity of every right-minded man to appreciate genuine poetry, which, I am sure, will be to his lasting advantage. In fact it is poetry that has been the inspiring force for some of the highest achievements of mankind; and again it is poetry that vitalises with an emotional spirit the dry bones of ethics and morality. It is on this account that I insist on a proper study of poetry apart from what are being prescribed by the University as Text-books for students. But it is essential that great care should be taken in the choice of authors and books as cheap imitations are in abundance and are likely to mislead us in our quest for learning.

Now I may pass on to consider for a moment how far literature as taught in our schools and colleges, gives us the scope for culture and education. Whenever I think of this matter I fall into a most pessimistic vein, and I couldn't help heaving a deep sigh over it. I am afraid the defect of our system is due to the fact that the question of examinations looms very much larger in the eye of the student than the study of literature as a means to either education or culture. Of course I don't deny examination has its uses; indeed I could not possibly conceive how we could very well do without it. Examination is really one of the best methods to test the results of teaching; the real defect lies in the fact that it has silently grown and stiffened into an artificial system with the result that instead of proper text-books, examination papers have come to be the real subjects of study. Indeed, I don't blame any body for that; it is the vicious system that is in fault. My complaint is against the fact that by the frequency of examinations,

our learning has stereotyped into a highly artificial system by which education is being distorted and poisoned. The anomaly of our position could very well be understood if we would consider for a moment how some of the best literary men would have fared had they been put to the test of our modern examinations. Carlyle would have been deemed too original to suit either the school-room or the college desk; the style of Ruskin with all its richness and elegance would have been quite unpalatable to the taste of our Examiners; Gibbon would have found his philology a hard nut to crack; and Byron would have long ago been dismissed for his misconduct! Yet their genius has triumphed and the world has become all the better for that.

Apart from our examinations, even the system in which literature is being taught in schools and colleges merely puts us on the wrong scent, and eventually we come to the dispiriting conclusion that after all the study of literature is only a path in the wilderness. The cause for this is not far to seek. We aim a "specialisation" in our studies; and therefore we are obliged to pay more attention to the dull details and technicalities of literature rather than to the intrinsic worth contained in it. And thus the danger has arisen that in our efforts to "specialise," even with the ablest teaching, we would generally leave the study of an author with a considerable knowledge of his language, his allusions and his relations to other writers, without enjoying even for a moment the beauty of the works of the author himself. Indeed it is a Herculean task to master all the facts about the author, and I have often wondered how a student manages with all these dull details which might possibly

ELEVATION OF THE DEPRESSED CLASSES.

have resulted in an elephantiasis of the human brain; and "still my wonder grows how one small head could carry all he knows"! By neglecting the author himself in his appetite for the mastery of the details about him, the student invariably finds the study of literature a wearisome task as he merely confines his attention to the accidents of the subject and never finds time to come to its essence at all. Take for example the case of Shakespeare. His plays are full of historical references, and allusions to obsolete manners and customs, together with a vocabulary and grammar that give ample scope for specialists to indulge in. We could spend days and days together merely confining our attention to the date of *Julius Caesar* or the difficulties in *Coriolanus*, or again the interpolations in *Macbeth* without ever arriving at the sublimity or pathos of the dramatist's treatment of his subjects. Of course, I admit no study of Shakespeare is worth anything that does not take account of such matters. But the pity of it is that in our efforts to satisfy the cravings of our examinations on these rather uninteresting points, we lose sight of the essential beauty of these works as masterpieces of literature.

Well, we are used to such a melancholy state of affairs in our study of literature as a result of which we fail to understand its primary function as a factor of education and culture. The essential aim of literature is to give us a *real enjoyment of life*, and it is by virtue of this enjoyment that our imaginative emotionalism is enkindled; and until and unless we realise this fact all our literary excursions will be mere wanderings in the wilderness.

G. P. SENGUPTA.

NO more important question can occupy the attention of any nation than that of the elevation of the depressed classes. For the immediate future of India mostly depends upon this. If this class of people are elevated without distinction of caste and creed the future greatness of India is very near. How can we be proud of our nation if the majority of people are sunk in the darkness of ignorance? Now-a-days the struggle between caste and caste for social superiority has become a constant source of ill-feeling and so there is disunion between caste and caste. If such disunion continues from time to time how can we claim for "Swaraj"? When our people at home are in utter darkness how can we be content and happy, how can we claim for equality amongst nations? Every individual in the nation should realise the aspirations of a nation; and how can our country take her place amongst the nations of the world, if we allow a large number of our countrymen to remain sunk in ignorance and degradation? Unless we raise this class of people to a higher level morally and intellectually, how can they understand our national aspirations to co-operate with us?

It might be a fact that they are dirty and unclean in habits and impure in speech and action. I know some of the untouchables or the depressed classes are very intelligent and are anxious to learn. But the pity is they have no scope because there is no one to teach. I know of many instances where these people are looked down contemptuously and as menials. Most of the so-called orthodox people disallow them to pass by their way and also there are many instances where these

people are not allowed to take water from ponds and wells.

Fortunately or unfortunately for India many Christians have organised their Missionary societies to convert people of other religions into theirs. The Missionaries cannot be blamed for it, for, they think their own religion would give them salvation and they think it to be the greatest of all, and so they work hard to establish it. The poor despised depressed classes think that Christianity would alone show them respect and so they give up their own faith and establish the other faith. In a way these Christians are doing a lot of havoc in India. Until the people are converted they show respect and treat them well but after a few days they do not care for these people. What a pity is this! But there are also some cases where some converts are treated well and are shown some proper means of livelihood. This is very rare. These converts who are better in this faith imitate Westerners and come with a suit on. When these people come like this, those very orthodox people who ill-treated them before would treat them as equals and at times as superiors. What is this hypocrisy due to? Because culture and manners were lacking in them, they were treated like that and now that they have learnt them they are treated better. Instead of losing one's own faith and religion and to prohibit people from conversion let us try and devise some plans of elevating them.

Can culture and manners not be got by education? Mazzini says that education is the key-note of everything and the bread of all souls. And all great men's conclusion of education is that it wipes out ignorance. Then let us base our aspirations of the soul on education and by this means alone we can uplift India to her old level.

In ancient days there had been a system of free education carried on by learned men. The Ramayana states that people flocked around their Gurus under the shade of trees; often free clothing was given to the poor children and they used to take delight in learning. In many parts of the country schools were scattered, in which children used to trace letters over sand. That shows the interest of students in learning. The Ramayana also states that in the reign of Sri Ramachandra there was not a single individual who did not know how to read and write.

Look at the condition of the present and the past and when we speak of India's greatness of the past we should try to raise her to her old level. It is our duty to look to it if we are really good citizens. We, who are supposed to be the men of to-morrow should consider this at first. So, we should strive hard to put the principles into practice. To preach and to protest is easy, but such speeches and protests are necessary when they are put into practice, for, thought that is not followed by action is futile. Better to be silent and not to think over when we are not prepared to live to what we say. Fortunately there are some movements which are rendering a great service to India in this connection. One of which is the Society for the Promotion of National Education. In Adyar, Madras, a small school was built where education for the depressed classes and scavengers was and is promoted. The first thing they look to is cleanliness of dress and body. They have provided an extra dress for them and insisted that they should wash and bathe. And the washed clothes were kept in the schools and were given the next day. In this way they continued for an year and half and now those boys are as neat and

cultured as some educated villagers are. And next to cleanliness we should promote moral education by reading the Ramayana and the Mahabharatha and various religious books, and should also teach them good manners. The education for this class of people means something more than a mere capacity to read and write. We should show them means of a refined way of living happily. The result of this is the highest of our struggles. Now this Government is opening its eyes and is realising its responsibilities much more than it has hitherto done. Before it can take its proper place amongst the civilised governments it should also consider its duties. So let us also appeal to the Government by means of agitation and request to adopt education based on Indian lines. Till then we shall try our best to organise schools for them by collecting funds which means the sympathy of the rich. Then we shall stretch out our arms and claim "Self-Government" or "Swaraj" which is our birth-right.

Thus let me conclude this by appealing to the public to co-operate in this important work by collecting funds and if it be impossible, offer help as teachers. Try and start Night Schools for them and thus promote the cause of education.

Show your sympathy to your down-trodden brethren. W. Shakespeare says :

If men only understood
All the emptiness and aching
Of the sleeping and the waking
Of the souls some judge so blindly,
Of those hearts they pierce unkindly
They, with gentler words and feeling,
Would apply the balm of healing—
If men* only understood.

Then the day shall surely come when sleeping India shall awake and rise again amongst the people, rise not to lead them along the material domination but along the road of spiritual triumph to union at last.

D. ANANDA RAO.

* Educated men.

MADRAS LEGISLATIVE COUNCIL.

SECONDARY AND INTERMEDIATE EDUCATION.

The following resolution was moved by Mr. Thangavelu at a meeting of the Madras Legislative Council on the 1st September 1921:—

"That this Council recommends to the Government the appointment of a committee of officials and non-officials to consider in the light of the recommendations of the University of Madras, the applicability of the report of the Calcutta University Commission to South India and to make suitable recommendations to Government which will enable it to give effect to its conclusions."

In accepting the resolution on behalf of the Government, the Hon'ble Mr. A.P. Patro, Minister of Education, said:—

In order to co-ordinate various changes that are taking place in higher education in the Presidency and in view of the fact the Madras University Senate appointed a Committee to deal with the Report of the Calcutta University Commission and the final recommendations of the Senate on the subject, Government consider it desirable to examine specially the recommendation of the Commission and ascertain how far they may with advantage be adopted in this Presidency. While Government do not wish to commit themselves beforehand to any opinions they are fully aware of the essential differences between the character of the Secondary and Intermediate Education imparted in this Presidency and the Bengal Presidency as well as the differences in the nature of authorities administering and controlling this part of the education system in both the Presidencies. Government recognise the value to be attached to the recommendations of the Madras University. Yet they have come to the conclusion that it will be very valuable to have before them the opinion of a body of officials and non-officials and their advice as well before final action is taken on the reorganisation of the educational system in this Presidency. They have accordingly decided to appoint a representative Committee.

The main recommendation of the Calcutta Uni-

versity Commission may be summarised as follows:—

(1) *Secondary and Intermediate Education.*—The Commission dealing with this part of the system had to face a set of conditions which I believe has no parallel in this Presidency. The system there, was far too wide and unfortunately far too inefficient. Within it were over 850 high schools, roughly half the number of all the high schools in British India. These were all nominally under the University, but the University having no inspecting staff of its own and with little control over the grant-in-aid was in a position of absolute helplessness, when it came across schools which needed improvements. Many of the schools again were proprietor-managed institutions and these for obvious reasons fought shy of any departmental control, the result being that about half the total number of schools in Bengal were not in the words of the Commission, even in the remotest degree under the supervision of any other authority. As regards the teaching staff, the teachers there, as may be clear from the Commission's report, are very ill-paid generally and ill-equipped for the profession. "The control of this system"—whatever that might mean was vested in the University which was ill-equipped for efficiently discharging its liabilities. This power, it may be noted in passing, is vested in this Presidency in a Department which is helped in certain matters by an independent Board and which latterly has been under the guidance of a Minister responsible to the Legislative Council.

It was to reform a system like this that the Commission felt bound to recommend measures which appear to be at the outset to be radical. They suggest that the Intermediate stage should be definitely regarded as part of the school course, an opinion which I note has the approval of the Madras University and recommend that its control should be vested in the same body as has the control of the High School course. Ruling of the

University and the Department of Public Instruction of Bengal as not being suitable for reasons which appear to me to be more local than general, for efficiently looking after the Secondary education (including the Intermediate stage), they propose the creation of a Board representing all shades of opinions with all or nearly all the power exercised hitherto by the University and the Department. It will be one of our main acts to ascertain and report what we in this Presidency need. Our system is not perfect but it is more than doubtful here if we are even within a measurable distance of what the Commission found to exist in Bengal.

(2) *Calcutta University.*—Here again, the circumstances into which the Commission had to look seem to differ to an appreciable extent from the conditions with which we are familiar. We have not got over here a University which on its teaching side deals with over 1,200 students in its M. A. and M. Sc. classes alone with something like 200 members responsible for their teaching and which has in some of the individual colleges affiliated to it something like 1,800 students under instruction. Nor do we have here any proprietor-managed colleges which show huge profits and starved teachers at the end of the year. Our University and colleges seem to be of more manageable character. But some of the defects noticed by the Commission in Calcutta occur also here and it is for us to consider whether we cannot gain something from Calcutta's experiences. The Commission recognise in their recommendations that on the several bodies responsible for a University, elements of varied character, State, popular, lay, academic, industrial, should all find a place and have with great precision marked out the respective spheres of each. The day of nomination seems to be over in this as in most other public bodies. The future relation of all the colleges to one another and to the University are all clearly marked out and it cannot be that we shall not find much in all these that will be to our profit.

(3) *Unitary Teaching University.*—The Dacca University. Early in their deliberations, the Commission seem to have come to the conclusion that a University should as far as possible—a very real qualification—be a unitary teaching University and where it has to affiliate colleges, there should not in any case be at any one time among them anything like 26,000 students, the number under instruction in the college classes in Bengal in 1917-18. To avoid this as well as to make the University, real teaching corporations and not merely examination syndicates, the Commission suggest that at the outset, the Dacca University which has been under discussion since 1912, should be established as a simple unitary teaching University. They recommend also that some of these mofussil colleges after having been carefully chosen at the outset, should be fostered and treated as potential Universities fit to become independent teaching Universities like Dacca in due course. Our own University, though it cannot compare in magnitude with the Calcutta University, is yet large enough and the question of a separate University for the northern districts is not either a new or a weak one. It may be, other Universities may be useful in other centres but the whole question is primarily though not solely a question of finance. The Commission have dealt with, besides the above, a number of topics which are of great importance not only for Bengal but also to other Presidencies. Their views on these as on the rest may not be binding as recommendations, but as suggestions, they will be of much use to this Committee.

As regards the general terms of reference, the Committee's work will be to discuss the following main resolution:—

"That this Council recommends to Government the appointment of a Committee of officials and non-officials to consider the applicability of the recommendations of the Calcutta University Commission's Report to the Madras Presidency with special reference to the recommendations made in this regard by the University of Madras, and to "make suitable recommendations to Government in this respect."

The Committee will also examine the other questions relating to the same—

1. The necessity for making general changes in the curriculum and scope of the Secondary and Intermediate Education and recommend measures to bring it into a line with the present day needs, that is, the immediate needs of Secondary education with special reference to vocational education.

2. The relation that Intermediate education should bear to Secondary Education and to what is really University Education.

3. The authority in whom the control and administration of the Secondary and the Intermediate education should vest, the relation that should exist between the local Government as the agency in general responsible for this part of the educational work and authority that should control this, the financing of University and Secondary Education.

4. The Committee is at liberty to make recommendations if any which are not contemplated by the Calcutta University Commission or the Senate of the Madras University.

The Committee should submit its report not later than November 1st, 1921.

DACCA UNIVERSITY :

THE INAUGURATION OF THE COURT.

IN the presence of a large gathering of members and visitors, Lord Ronaldshay, as Chancellor of the Dacca University, presided at the first meeting of the Court. The ceremony was held in the Durbar Hall of the building, erected in 1905 to accommodate the Lieutenant-Governor of the late Province of Eastern Bengal and Assam, now known as the University Court Buildings. On the dais there were three chairs to accommodate the Chancellor—on his right the Vice-Chancellor, Mr. Hartog, and on his left the Treasurer, Mr. James Lindsay. On the right of the dais were the University officers and on the left His Excellency's staff. In the body of the hall there were members of the University Court to the number of about 100 and at the back of the hall and under the gallery the public were accommodated, while the gallery itself was given up to lady visitors.

Among those present were the Hon. Nawab Syed Shamsul Huda, Sir Jagadish Bose, the Hon. Khan Bahadur Aminul Islam, the Nawab of Dacca, the Nawab Mahammed Yusuf, Mr. Thomas Emerson, Commissioner of the Division, Mr. Delevingne, the Sessions Judge, Mahamahopadhyaya Haraprasad Shastri and the President of the Saraswat Samaj. His Excellency, who was accompanied by his staff, was met at the main entrance by the Vice-Chancellor, the Treasurer, the three Provosts (Messrs. Turner, Rahman and Sen Gupta), and the Registrar, Khan Bahadur Naziruddin Ahmed and conducted to the robing-room and from there a procession was formed, the officials of the University preceding the Chancellor and his staff.

His Excellency opened the proceedings by calling upon the Registrar to read a statement regarding messages of congratulation and good wishes received on behalf of the University, including messages from the Hon. Mian Muhammed Shafi, Member for Education, Government of India, the Hon. Mr. P. C. Mitter, Minister for Education, Government of Bengal, the Hon. Sir Asutosh Mookerjee, the Maharaja of Mymensingh, Mr. H. S. Sharp, Secretary to the Government of India, Mr. Richey, Educational Commissioner with the Government of

India, Mr. A. Hydari, Judicial Minister in H. E. H. the Nizam's Government, Hyderabad, Sir P. C. Roy, Mr. W. R. Cunningham, Director of Public Instruction, Assam, and Mr. H. A. Stark.

CONGRATULATORY LETTERS.

His Excellency the Chancellor then rose and said:—"I have a further letter of congratulation and good wishes, and coming as it does from the Hon. Sir Asutosh Mookerjee, Vice-Chancellor of the University of Calcutta, I propose to read it before we go on with the business of the meeting. Sir Asutosh writes to me as follows: I keenly regret that pressure of judicial duties at this time of the year renders it impossible for me to be present at the first meeting of the Dacca University Court. I am deeply interested in the success of the new University, which I fervently hope will develop into a great centre of culture and learning in the seat of the ancient capital of Bengal. The members of the Syndicate cordially join with me in this message of our good wishes for the success of the great undertaking in which the Vice-Chancellor and staff of the Dacca University are engaged."

DACCA UNIVERSITY SCHEME.

The Chancellor then continued:—"I need hardly tell you how great is my satisfaction at finding myself present at the inauguration of the Court of the Dacca University, for I have been reminded on many occasions during my term of office of the disappointment which has been caused by the long, though unavoidable, delay which has taken place in giving effect to the promise made by His Excellency Lord Hardinge in 1912. Indeed, the address of welcome which I received from the Bengal Provincial Mahomedan Association on my first arrival at this city contained but a solitary prayer that, namely, for the speedy establishment of the proposed University of Dacca, which they assured me would be welcomed by every section of the people of this part of the Presidency.

"I need say little now of the many vicissitudes through which the project has passed during the past nine years. The committee appointed to work out the details of a scheme for a University of a teaching and residential type, rather than of a

federal type, submitted their report in 1913 and after its submission to the public for criticism and advice, it received the general approval of the Secretary of State in December of the same year. With the outbreak of the war the following year the scheme met with the fate which overtook so many other projects and remained in abeyance until the appointment of the Calcutta University Commission, by whom it was examined during their visit to this country in 1917 and 1918. After the recommendations of the Commission had been duly considered, a Bill to effect them was framed and submitted to the Imperial Legislative Council. The Bill became law in 1920 and it is by virtue of that Act that the Court which now meets for the first time has been set up."

Speaking of the features of the institution, His Excellency said:—"The first thing upon which I would lay stress is that the University is not a Government institution; it is a self-governing institution and the Court which comes into existence to-day is so constituted as to embrace representatives of diverse interests so that if the use of a metaphor is permitted, it constitutes a mirror reflecting those varying shades of view which when synthesised may be described compendiously as public opinion. It is true that up to now during the transition period between the passing of the Act and the setting up of the Court the spade work, without which no University could have come into existence at all, has fallen upon the shoulders of myself and certain officers of the Education Department and last, but by no means least, since his arrival in December last, upon the Vice-Chancellor. The task has not been an easy one, and, speaking for myself and for those who have been associated with me, I feel constrained to confess, after weighing the very generous measure of criticism which has been heaped upon our humble effort, that the net result of our united labours has been such as might be described by a cynical observer as possessing the supreme merit of having impartially dissatisfied every one. I can only plead that we have done our best in face of no mean difficulties, and that you have our best wishes in carrying on the task of which you are to-day relieving us.

TWO MAIN DIFFICULTIES.

"Let me say a word about the two main difficulties with which we have been faced. First and

foremost has been the financial difficulty. The University is at present almost entirely dependent upon public revenues, and upon the present state of the public revenues in Bengal there is no need for me to dwell. It most resembles that of a piece of elastic which has lost the quality of elasticity. The result has been that a strict economy, to the detriment of the University, has hitherto had to be enforced and with regard to the future it has to be remembered that so far as educational matters are concerned, the people now have complete control over the public purse. Not a rupee can be assigned to the University without it being voted by the Legislative Council. It will be for the people themselves to say, therefore, through their representatives in the Legislative Council the extent of the financial assistance which they are prepared to render to the University. Other sources of revenue are fees and endowments. In this latter respect there is a splendid opportunity for the wealthy patrons of learning to render enduring service to their fellow-men, and while expressing gratitude to the Hon. Mr. Altaf Ali, the first benefactor of the new University, for his generous gift I would also express the hope that the example which he has set will find many followers. Our next difficulty has been in satisfying the expectations of the Mahomedan community. In spite of our best endeavours we have so far been able to secure only a comparatively small number of Mahomedans for the teaching staff. This is not altogether surprising when it is remembered that less than nine per cent. of University students in Bengal belong to the Mahomedan community and that of this small percentage a considerable proportion is attracted by the executive services. The remedy lies largely in the hands of this University and it is my earnest hope that Mahomedan students will come here in large numbers and that from the portals of this building will go forth a continuous stream of men equipped to undertake the task of teaching the generations of their co-religionists that follow after them.

CATERING FOR MUSLIMS.

In the Muslim Hall, under the guidance of an able and sympathetic Mahomedan gentleman of Bengal, Mr. A. F. Rahman, the community possesses

the seed from which will surely spring a vigorous and a spread tree; and I would point out to those who still feel disappointed at the present inadequacy of the representation of their community upon the teaching staff, that both in the Court and in the Executive Council special provision has been made for securing to them an adequate share of control over the destinies of the University and that thenceforth they will be called upon to play the part not merely of critics but to assume their share of responsibility for the future welfare of the University. But while I am most anxious to see this University proving a boon to the Mahomedan population I would venture to remind you that it was never intended that it should be a purely denominational institution. It is, indeed, laid down specifically in Clause 5 of the Act that the University shall be open to all persons of either sex and of whatever race, creed or class and the imposition of any test of religious belief or profession in the case of any teacher or student is specifically forbidden, and it would be the most profound anomaly, surely, if, situated as it is in such close propinquity to historic Vikrampur, with its great traditions of Oriental learning, Sanskrit studies did not find an honoured place side by side with the studies of Islam. If the University is to preserve a specifically Indian character, such studies must necessarily form an essential part of the curriculum. But alongside of the humanities an important place will be assigned to the sciences. I have every hope that in future, as funds permit, the University will develop the economic, the physical and the biological sciences, especially in relation to industries and agriculture as I have good reason for knowing an important section of the Dacca public so eagerly desire.

WARNING TO STUDENTS.

"But I feel bound to repeat a warning which I gave in the course of my last Convocation Address at the University of Calcutta. The openings for men with highly specialised scientific training are by no means unlimited, even in countries which have reached a high stage of industrial development. Still less are they unlimited in Bengal. A B.Sc. may fail to find employment no less than a B.A. and it is important that we should ascertain that the

vocation itself exists in the wider world outside the University walls before we embark lightly upon vocational schemes within them. Moreover, if I may venture a mild rejoinder to some of the criticism with which we have met, I would point out that it was a University and not a technological institute that the people asked for and it is a University consequently and not a polytechnic that has been provided. Finally, let me lay stress upon the character of the teaching which I hope to see flourishing here and the nature of the responsibilities which rest upon the whole of the teaching staff. It is for them to see that the teaching in this University is redeemed from the reproach that it is the mere handmaiden of a tyrannical mistress—the examination. It is for them to minister to the moral and physical well-being of those committed to their charge no less than to their intellectual advancement. It is for them to set up the ideal of learning for learning's sake, an ideal congenial to India, surely, whose sons have from the dawn of history toiled ceaselessly in their quest of eternal truth. It is for them also to foster amongst the different communities gathered under the banner of this University that spirit of toleration, of mutual understanding and sympathy, which alone can provide a firm foundation upon which a great and lasting structure can be raised up and by so doing to build for the true happiness and progress of Bengal and of the Indian Empire. It is with feelings of high hope that I inaugurate this Court and in so doing commit to your fostering care the destinies of this University."

THE VICE-CHANCELLOR'S SPEECH.

His Excellency the Chancellor then called upon the Vice-Chancellor to address the Court. Mr. Hartog, rising, said:

"My Lord and Chancellor, members of the Court:—It is not without some emotion that I stand here to-day. It is 9½ years since a University in Dacca was promised to Eastern Bengal and the University of which I have the honour to be the executive head, has to confront the dreams of all these years with the hard facts of reality. I do not shrink from the issue. It is the business of a University at once to imagine ideals and to put to the test the extent of their realisation. It is of the

A MODEL UNIVERSITY.

actual position that I wish to speak to-day and I will only mention briefly the main features in the history of the Dacca scheme, its political origin, the educational aim with which it was endowed by the Committee presided over by the late Sir Robert Nathan, whose death we lament and to whose untiring energy and enthusiasm the first Dacca report owed so much, the modifications of the scheme under numerous criticisms of the scheme by persons who seemed to forget that there are times when perfect inaction may be a greater blunder than imperfect action, the setback of the Great War, the report of the Calcutta University Commission which sat for 17 months in the years 1917-19, the passing of the Dacca University Act in 1920. While it did not occur to me as a member of the Commission that I should ever be connected with the Dacca University, I confess that no part of our scheme fired me more than the Dacca proposals, a site more splendid than that of any modern University I know in Great Britain, a College already on that site only second in achievement in Bengal, the Presidency College with traditions going back to 1841 or earlier, another college in the town, mainly for poor students, worthily working its way upwards, the offered inheritance of noble buildings originally destined for the Government of Eastern Bengal and Assam, the anticipation of a capital sum of between 60 and 70 lakhs accumulated for the University by the Government of India and of ample funds for recurring expenditure and above all a great ideal, the ideal of a University, to quote Lord Hardinge's words open to all but one, of which one of the main functions would be to give extended opportunities of education to the Moslem community, which contributes less than one-tenth to the University population in Bengal, though it forms more than half the whole population, to make those opportunities for Mussalman and Hindu alike of a new kind, opportunities for the mind and spirit, free from the grind and slavery of a series of external examinations conducted on a mechanical system, opportunities for an equal development of the body and the resuscitation of a Greek ideal from which the whole world has still much to learn. These were the limits of the Dacca scheme.

The Government of India expressed their view that the University of Dacca should serve as a model University for the whole of India. It is rather more than a year ago that the Government of India asked me whether I would help to put to the test the ideas and ideals to which my colleagues and I had subscribed in our report. I confess that for personal reasons, into which I need not enter, I hesitated for some time before accepting that flattering offer, but I will say this, that as to the possibility of realising the plans which we had made with the material advantages which I understood would be at my disposal, I never felt the slightest doubt. I felt sure that a new spirit essential for the carrying out of the scheme would be found in course of time in India and in the United Kingdom, though I was aware that as far as Great Britain was concerned she had suffered so terribly 'from the five years' war through the killing off of many thousands of her most brilliant men, and the severance from University studies for five years of many more thousands, that it might not be easy to secure all the men we needed from the West. Your Excellency knows more than anyone else how difficult it has been to keep a cheerful heart under the series of disappointments which we have experienced since I accepted the Vice-Chancellorship. Those disappointments have been of three kinds—disappointments in regard to securing a number of European members of the staff, disappointments in regard to securing a number of Moslem members of the staff, the disappointment in regard to finance and its serious consequences.

DEARTH OF PROFESSORS.

"The dearth of available men in Great Britain was even greater than imagined. We formed ten Selection Committees including some of the most distinguished experts. We failed to find in England professors of English, of History, of Economics, and Education; we failed to find readers in Politics, in Economics, in Phonetics and other subjects. Islamic studies were to form one of the corner-stones of the University; we have so far failed to find in India any scholar able to satisfy the severe theological and

literary requirements of Eastern Bengal. Rightly or wrongly, after taking the most expert advice available, I had come to the conclusion that the Professor of Arabic should be an Indian Mussalman trained in Western methods and not a European as originally proposed by the Calcutta Commission. It will now be for the Executive Council to begin the search anew. In the meantime, Shamsul-Ulema Abu Nasr Waheed, head of the Dacca Senior Madrasa, who originated the idea of the Dacca School of Islamic Studies, has most kindly consented to act as its head while retaining the headship of the Madrasa, which forms the pivot of his scheme. It was not only for the Arabic Chair that I found to my great regret a dearth of adequate Moslem candidates, but in many other departments. This was one of the greatest of my disappointments. As I have had occasion to discuss this matter elsewhere in detail with leading representatives of the Moslem community, I shall not do so here but I wish publicly to state my desire to increase the number of Moslem members of the teaching staff without relaxing the standard of University teaching. It should, I think, be the aim of the Executive Council to increase the strong and efficient nucleus of Moslem teachers already secured by the addition of others no less efficient. I fully understand and sympathise with the anxieties of the community in this matter, but I do not think there is the slightest possibility of the interests of Moslem students being neglected or overlooked in the Dacca University. The addition of weak Moslem members to the teaching staff, merely with a view to an increase of numbers, would be to sacrifice the reality of the educational future of Moslem students to a shadow of advantage.

FINANCE AND POLICY.

"As we are dealing with appointments and standards I think it will be well before turning to finance and the questions of policy determined by finance to make plain the principles on which the Advisory Committee have proceeded in making recommendations to Your Excellency in respect of the first appointments to the teaching staff. The Committee included *ex-officio* the Director of Public Instruction (Mr. Hornell, who has gone on leave and has been recently replaced by Mr. Wordsworth), the Vice-Chancellor of the Calcutta Univer-

sity (first Sir Nilratan Sirkar and later Sir Asutosh Mookerjee), Sir Shamsul Huda and recently, Nawabzada K. M. Afzal Khan Bahadur, who was added when Sir Shamsul Huda was debarred by absence in Madras from attending and, lastly, myself as Chairman. I offer to my distinguished colleagues my sincere thanks for the services they have rendered in this matter. Your Excellency, to build up the Dacca University on the model condemned almost unanimously by the witnesses before the Calcutta University Commission and by the Commission itself would have been to create something which was not a University at all in the modern sense of the word and an institution which in my judgment would have been of no particular benefit to any section of the community. If we were to get free from the old slavery of the examination room and examination ideals from which Bengal has suffered so gravely, we were bound to choose as professors and heads of the departments men who, by actual performance, had proved that whatever might have been their training, they had freed themselves from the old fetters, men who had not only learnt but had advanced learning or science; and by the advancement of learning I do not only mean the writing of a book, for some of the books that one sees afford the most solid proofs that their authors are incapable of advancing learning, though they may be able to put money into the pockets of publishers. I lay stress on this point because I think insufficient stress has been laid on it hitherto in India. In one centre alone has there been active production on any considerable scale, and that is in Calcutta, largely owing to the efforts of Sir Asutosh Mookerjee. But there many of the teachers engaged in research are at present not so much by design as by the force of things removed from contact with the ordinary undergraduate student, who is thus in too many cases deprived of the inspiration which comes from contact with men who do not depend solely on authority, but are themselves authorities, men who have practised independently the methods of the authors whom they teach. In the inspiration and guidance of men of this type lies the true antidote to what is called the slave mentality. Against such slavery the whole teaching of the University of Dacca will be directed. It is of the essence of true University teaching that it

should cultivate the individual mind and the individual judgment. If I have laid stress on the power of example in our professors I can no less lay stress on their high personal character and technical powers of teaching, and we have made careful enquiries on these points which often do not appear in paper qualifications. I come last, and designedly last, to the question of degrees. Gentlemen, a degree is a promise, it is not a performance and cannot be weighed against the performance of—I fear to take great examples—men like Darwin, Newman, Matthew Arnold, John Richard Green, Huxley, Tyndall, W. E. Ayrton, men distinguished in different ways in different measure, but whose names are all known in every University in the world and who would have been regarded as second class men by the persons to whom I refer because they either did not take first class degrees or took none at all. It is right to count degrees where you have no other evidence to go on. After 10 years a man should have done work of some kind or another which ought to overshadow entirely the performance in the examination room of his youth. I have no doubt that the confusion in the public mind arises from the false analogies with service systems which loom so large in India and which can only be entered at an age before the candidates have had time to specialise. The requirements of a University are very different from those of the administrative service. The qualifications for a first-rate administrator and for a first-rate University teacher are different. The Advisory Committee and experts whom they have consulted, to whom we likewise owe of our gratitude, have had a hard and delicate task. They have taken into account original work, teaching power and experience and academic record. There have also been what are called vested interests to consider. I shall not go deeply into that question. We have done our best, remembering that the supreme interests to consider were the interests not of the candidates but of the students of the University, and we have secured the nucleus of a staff, European, Muslim and Hindu, of which we are proud and I think justly proud. They are men who fully deserve and I know will earn your confidence.

THE FINANCIAL POSITION.

"I now come to the question of finance and the curtailment of our plans which has resulted from the unfortunate financial position of Bengal under the Reforms scheme, a position which I hope may be remedied before long. It is an open secret that the matter is under consideration by the authorities in Simla and in London. The recurring expenditure on the Dacca University proposed by the Nathan Committee was nominally 13 lakhs, but was actually nearly 15 lakhs when allowance is made for contributions towards leave and pensions. The actual position is this, that for recurring expenditure we have been promised a sum of only 5 lakhs, and of this only 3 lakhs is new expenditure. The expenses to Government of Dacca College and of Jaganath College together were for the Post-Intermediate classes which we have taken over not less than 2 lakhs taking into account the invisible item for leave and pension allowances. Dacca University has been supposed to be expensive. We are starting with a little over one-third of the expenditure contemplated by the Nathan Committee, and for this sum we have been asked to do the following among other new things—to provide a residential organisation combined with a tutorial system, to provide departments of Islamic and Sanscritic studies, to double the provision for physics and chemistry, to found a University Department of Education, to organise an adequate library and to provide special facilities for the poor Mussalman students. To do all these things adequately with the amount provided was impossible. The necessary retrenchment has been felt most severely in the departments of Islamic studies, English, Chemistry and Economics in which our appointments had not been completed when I received Mr. Mitter's warning and there are thus inequalities of treatment between the different departments due not to design but to the lateness of this warning. I now come to the capital expenditure. When Mr. Hornell thought there would be plenty of money available from the Dacca balances, the Department entered on an ambitious scheme for water supply, sewerage and building, all perfectly justifiable at the time, but which we think should now at any rate in part be deferred for the more urgent necessities of

laboratory and library equipment, whereas on the basis of the scheme of the Dacca notes I estimated that a sum of 15 lakhs would be needed for capital expenditure in 1921-22, a sum of only 4 lakhs has been made available for 1921-22 together with, say, 1½ lakhs in the P. W. D. budget. Let there be no mistake about it, these sums do not come directly out of the pockets of the Bengal tax-payer, as has been supposed. They come out of the 60 odd lakhs accumulated by the Government of India for the Dacca University and recently transferred to the Bengal balances. If there had been no Dacca University scheme there would have been no 60 lakhs and though the money to my personal regret has not been legally ear-marked, the Government has admitted the moral claim of the University to it. Your Excellency has stated your conviction that we shall receive every rupee of it in time and I do not doubt that the Court and the representatives of Eastern Bengal generally will insist on their moral claim being satisfied at the earliest possible opportunity. If we are to be a great University we must have adequate funds. I notice with satisfaction the splendid benefactions of private benefactors to the University of Calcutta which has over 60 years of history behind it. I hope we may rival them before so long a period has elapsed, but in the meantime we must not lose that great public benefaction to Dacca, the chief city of Eastern Bengal, a benefaction for your sons, gentlemen, and those of your fellow-citizens."

STUDENTS AND THEIR FEES.

The Vice-Chancellor next referred to the students and their fees, denying certain rumours in this connection spread by extremist propagandists, and proceeded to pay tribute to all who had helped in working the University scheme. Continuing, he said:—"Gentlemen, we are a business body met here to do business and I have confined myself mainly to the business aspect of affairs, but Ruskin and others have taught us that business is not only business and that the material in a properly ordered community is inseparable from the ideal. In India the ideal of learned communities is an old one. My honoured friend and colleague, Mahamahopadhyaya Hara Prasad Sastri, tells me that the schools of Taxila and of Pataliputra, sometimes

called Universities, were not Universities in our modern sense of the word; they were not corporate bodies but they were gatherings of devoted and unselfish scholars whom we may emulate. The fame of the great Islamic schools of culture, which spread from Arabia westward over Europe and eastward to India, is universally known. The modern development of philosophy and science in Europe is largely due to their influence. In Dacca we look forward once more to the fruitful union of the ideals of East and West."

The Court then proceeded to the election under the statutes of two Mahomedan and non-Mahomedan members to the Executive Council. Voting papers were distributed and scrutinisers nominated. Meanwhile the Court passed a vote of condolence with the family of the late Sir Robert Nathan, K.C.S.I., and in a resolution recognised the work done in the initial stages by the late Nawab Sir Khawaja Salimulla Bahadur of Dacca. The scrutinisers then handed their lists to the Chancellor who announced that the following members had been elected to the Executive Council of the University:—Moulvi Fazlul Haq, M.L.C., Khan Bahadur, P. K. Bose, Barrister, and Rai Sarada Prasad Sen Bahadur. The meeting of the Court was then adjourned.

Before he left the dais His Excellency expressed the wish that each member of the Court might be presented to him. The Vice-Chancellor accordingly presented each member personally. The members of the University entertained the Court and the visitors to tea on the terrace at the north of the Court buildings. Mrs. Hartog and Mrs. Lindsay, in the caps and gowns of their degrees, acted as hostesses and the Chancellor, Vice-Chancellor and the members of the Court were present in their academic robes.

THE SOUTH ARCOT DISTRICT TEACHERS' GUILD, VILLUPURAM.

A meeting of the Guild was held on Saturday, the 17th instant, in the Pachaiyappa's High School Hall, Chidambaram. More than fifty members of the Guild were present and a long programme was gone through.

Mr. P. B. Vijayaraghavachariar, Headmaster, Pachaiyappa's High School, Chidambaram, welcomed the delegates. In the course of a long address, bristling with suggestions, he remarked upon the changes in the educational outlook occasioned by the reforms. He said that one of the most pressing problems of Secondary Education would be to improve the pay and prospects of teachers which, on an equitable scale, would occasion an expenditure of 20 lakhs of rupees for the Presidency. If the public wanted efficient education, this amount will have to be forthcoming first and foremost from the Government and then from private contributions. In Madras, Government had been parsimonious and did not spend as much as, for example, Bombay, the Punjab and the United Provinces. Therefore it beheld the teachers to continue to agitate and instruct the public in this urgent need of Secondary Education.

The Joint Secretary, Mr. V. Jayaraman, then gave a report of the work of the Guild since April last. A library was organised and it now consists of 100 vols. The Elementary teachers in the Villupuram Taluk solicited the help of some members of the Guild in the matter of laying before the President of the Taluk Board their grievances. The Secretary and some of the members helped them to do so with the result that the President was convinced of the reality of their grievances and has shown substantial concessions. These teachers are now anxious to join the Guild in a body.

The discussions of the Draft Rules of the South Arcot District Teachers' Protection Fund was postponed for consideration by a Special Committee before being taken up by the general body of the Guild.

The following resolutions were then taken up for discussion and passed:—

1. This Guild expresses its deep disappointment at the delay of the Government in issuing the necessary G.O. on the Provident Fund Scheme proposed long ago and therefore begs to urge upon the Government to grant necessity for the immediate introduction of the scheme.

2-a. That this Guild affirms that, if the teacher is to gain his proper position in the life of the nation, nothing at the present stage short of the scale authoritatively fixed by the S. I. T. U. shall satisfy the members of this profession.

2-b. That this Guild protests emphatically against the G.O. that fixes the initial salary of the Secondary-grade Teachers at so low a sum of Rs. 30 and regrets that while the pay of the S.S.L.C. entering service as a clerk begins on Rs. 35, the initial pay of the teacher who has spent two more years in equipping himself for the profession should be fixed at less than that amount.

And that therefore, the Guild requests the Government to reconsider their order and following the recommendation contained in the interim report of the M.L.C. Committee fix the initial salary at least at Rs. 40.

2-c. That this Guild views with surprise and disappointment the absence of any distinction between the S.S.L.C. and the Intermediate trained teacher in its order and recommends that the latter be started on a salary of at least Rs. 60.

2-d. That in the opinion of this Guild, Pandits, Drawing and Drill-masters and Commercial Instructors in schools should be included in any general scheme laying down scales of salaries for teachers.

3. That this Guild expresses its keen disappointment at the unsatisfactory pace at which the salaries of teachers in aided schools and in schools under Local Board management are bettered; that it holds that it is the duty of Government to supplement the resources of private institutions and of local bodies wherever necessary and that it views with satisfaction the attempts

of Government in this direction made so far but that, in its opinion, much quicker action on a more generous scale is needed to allay the growing discontent among teachers and safeguard the efficiency of public instruction.

4. That this Guild requests all managers of institutions in the district to adopt as the minimum without further delay the scale of salaries recommended by the S.I.T.U. and that the Secretary be authorised to communicate this resolution to the respective managers.

5. That this Guild begs to request the Government that it be registered as a correspondent and that all communiques, &c., of an educational character laid on the Editors' Table be supplied to it.

6. That rules 4 and 6 be amended as follows: affiliated associations of elementary schoolmasters having a membership of or more than 8 at Rs. 2 for every member subject to a maximum of Rs. 10. Individual subscription to be reduced from 4 as. to 2 as.

The recent Government communique on Religious Instruction was next taken up for discussion. The following resolution was unanimously carried:

That this meeting of this Guild welcomes the idea of giving religious instruction in schools, that each school shall declare beforehand what religion it undertakes to teach, that facilities for teaching other religions in the school premises be given if a considerable number of parents would insist on their boys being given such instruction; that in all cases the syllabuses be previously approved by the department, that the hours of instruction be not made to clash with school routine and that any scholar may be withdrawn by his parent from such instruction without forfeiting any of the other benefits of the school.

In the afternoon session, the question of the revision of the S. S. L. C. syllabus was taken up. The Guild went into Committee and informally discussed it. The following opinions were expressed:—That the vernacular should be the medium of instruction and examination in all non-language subjects. The Guild was of opinion that this innovation should be immediately

introduced in Elementary Mathematics where the large number of failures was due to the difficulty in understanding the question paper. Opinion was expressed strongly in favour of abolishing the B group subjects and re-introducing them as C group subjects. It was said that less importance may be attached to these subjects in determining the eligibility for a University course. The importance of introducing Indian History and Geography and the abolition of C group Vernacular and classical languages and the substitution of a more advanced language course in the A group, the expansion of Elementary science syllabus by the inclusion of an elementary course in agricultural botany, the question of substituting one in the place of two optionals in the C group were then discussed. Eventually a strong Committee was appointed to go into the question and submit a report to the Director of Public Instruction after obtaining the approval of the executive committee of the Guild.

The President, Mr. K. A. Nilakanta Sastri, Principal of the Sri Minakshi College, Chidambaram, in an enthusiastic address urged once more the immediate necessity for greater organization among the constituent associations and readier response to the requests of the Secretary. He remarked that, throughout the meeting, the perceivable note was the dissatisfaction of the teacher with the present status and wanted that the Guild should do something to better his prospects in the profession. The Protection Fund, instituted after careful consideration, might provide the necessary support in such a case.

Mr. C. S. Rangasamy Ayyangar proposed a hearty vote of thanks to the President and to the hosts—the Teachers' Associations in Chidambaram—for the hearty welcome they accorded to the guests.

Reviews and Notices.

LONGMANS' "EXPLICIT ARITHMETICS" FOR INDIA: BOOK I, BY M. S. E. THOMPSON, B.A., I. E. S., HEADMASTER, CENTRAL HIGH SCHOOL, MERCARA. PP. 92. Price 9 annas.

This is the first of a series of books proposed to be published by Messrs. Longmans, Green and Co., adapting their "Practical Arithmetics" and "Explicit Arithmetics" for Indian schools, and sketches in outline a course in Space and Number work up to 100.

We are glad to be able to congratulate the author on the excellent manner in which he has performed his task, so far as this the first book of the projected series is concerned.

The hints to the teacher prefixed to the book and covering some 3 pages as also the notes of typical lessons given in the body of the book are very good, and form a most valuable part of the book.

We cordially recommend the use of the book as a Text-book of Arithmetic in schools in which English is the medium of instruction in Arithmetic, and as Teacher's book in schools where an Indian vernacular is the medium of instruction.

THE INDUCTIVE ARITHMETIC: BOOKS I—VII FOR PUPILS, BY E. SANKEY, HEADMASTER OF THE DERKER COUNCIL SCHOOL, OLDHAM, AND AUTHOR OF "PRACTICAL MATHEMATICS," "DRAWING," "SCIENCE," ETC. (EDWARD ARNOLD, LONDON.) PUPILS' BOOKS I, II, III, 4½d. each. PUPILS' BOOKS IV—VII, 6d. each.

This series of 7 books for pupils (of which we have seen the first six) is a welcome addition to the several similar series of excellent books issued by English publishers. The examples both practical and theoretical are graduated as well as exhaustive, and cover all the topics of Arithmetic and Mensuration studied in our High schools, while the typography, paper, and diagrams for graphically illustrating Arithmetical rules and principles leave nothing to be desired.

For obvious reasons the books contain no examples bearing on Indian Money, Weights and Measures; but this need not stand in the way of their being used in Indian schools, as the Indian teacher can easily supply this deficiency.

Seven books for teachers corresponding to the seven books for pupils seem also to be available; and we dare expect the former to be as good as the latter.

(1) PRACTICAL COURSE OF ENGLISH COMPOSITION FOR MIDDLE AND UPPER FORMS, BY W. J. GLOVER. BOOK I (GEORGE PHILIP AND SON, LONDON).

(2) PRACTICAL COURSE OF ENGLISH COMPOSITION FOR MIDDLE AND UPPER FORMS, BY W. J. GLOVER. BOOK II (GEORGE PHILIP AND SON, LONDON).

(3) ENGLISH EXERCISES, BY J. H. FOWLER, PART II. (MACMILLAN AND CO., 1921).

Though no subject needs more care in handling than English Composition, nowhere else is more fad tolerated or cant allowed to go unchallenged. It is true we have happily outlived the days when it was widely believed that there was nothing to teach in English Composition, but it is to be doubted whether the methods adopted are always the right ones. There is a general agreement among teachers of English that the best approach to the subject is through the study of well-known authors. At the same time there is a peculiar danger to be guarded against. No enthusiasm for grammar and rhetoric should be allowed to go too far. Under no circumstances should the beauty and finish of the passages selected be allowed to be lost upon the pupils. There are some teachers who go even to the length of saying that none but mediocre writers should be chosen for purposes of analysis and dissection. While conceding the truth contained in the above observation, we may say that, in the hands of a skilful teacher who knows what he is about, the selections like the ones under review are invaluable. They are carefully graded and arranged and if the teacher so likes he can substitute passages of his own without deviating from the general scheme. Mr. Glover's two books have been compiled with a view to aid the teacher in selecting literary passages of well-known authors for purposes of intensive study and original composition after the models presented. Especially happy are the selections in Book I. Mr. Fowler's volume is intended for senior students. English writers of over four centuries are represented within the compass of some 180 pages and various suggestive exercises have been appended. As the author himself points out in his prefatory note, the book can be used not merely for composition purposes, but for lessons in the growth of English Prose and Poetry and the development of literary forms.

The Educational Review.

At the last meeting of the Madras Legislative Council, a number of resolutions relating to educational matters formed the subject of discussion. One of the earliest resolutions to be passed, related to the appointment of a Committee of officials and non-officials to consider the applicability of the recommendations of the Calcutta University Commission Report to the Madras Presidency, with special regard to the recommendations made in this regard by the University of Madras and to make suitable recommendations to Government in this respect. The Committee will also examine the other questions relating to the same, the following being the matters referred to it:—

1. The necessity for making general changes in the curriculum and scope of the Secondary and Intermediate Education and recommend measures to bring it into a line with the present day needs, that is the immediate needs of Secondary education with special reference to vocational education.

2. The relation that the Intermediate education should bear to Secondary Education and to what is really University Education.

3. The authority in whom the control and administration of the Secondary and the Intermediate education should vest, the relation that should exist between the local Government as the agency in general responsible for this part of the educational work and the authority that should control this. The financing of University and Secondary Education.

4. The Committee is at liberty to make recommendations if any which are not contemplated by the Calcutta University Commission or the Senate of the Madras University.

It has been laid down that the Committee should submit its report by the 1st November and we hope something will result from this appointment. Expression was given to the dissatisfaction felt in certain quarters with the way in which Government colleges did not often admit the maximum number of students possible. A certain amount of pressure from official superiors seems to be necessary to compel Principals of Colleges to admit as many students as possible. The temptation to avoid increase of numbers in the interests of alleged efficiency and in utter disregard of the hardships of students is great indeed and should be severely checked. Dr. C. B. Rama Row's resolution that a course of Elementary Physiology and Hygiene should be introduced as a compulsory subject in all Elementary Schools for boys and girls was withdrawn on the assurance of Government that the suggestion would be considered. The Government announced with reference to another proposal that steps had already been taken for raising the Government Islamia Secondary School to the standard of a High School. It was well that a member moved the appointment of a Committee to reorganise the School of Arts. We have ourselves on more than one occasion drawn attention to the gradual deterioration of the School of Arts in Madras and to the urgent need for reform. The unfortunate communal differences which have been disgracing public life in Southern India for some time past found expression in the Council in a request asking for the reservation of

50 per cent. of the seats in Government and Aided Colleges for non-Brahmins. The resolution would undoubtedly have had the effect of penalising the young men of certain communities, and we are glad it was withdrawn. No case was made out for the creation of additional special scholarships for Christians, the only ground urged being that India will get emancipation only when all people owed allegiance to Jesus Christ and that the Indian Christians possessed special virtues! We are not surprised that the President promptly called the member responsible for the remark to order and asked him not to dilate any longer upon the virtues of Indian Christians. Hopes were held out by Government for the appointment of a Committee to consider the question of an Andhra University. A resolution for the creation of additional agricultural institutions in Telugu districts was lost. If the net result of these educational resolutions has not been much, it is some satisfaction that educational subjects at least came in for discussion on such a scale.

The affairs of the University of Calcutta have come in for considerable criticism at the hands of the public in recent months and it is desirable that they should be probed into the very bottom and the suspicions of the public should be set at rest once for all. There is no reason therefore why the Vice-Chancellor, Sir Ashutosh Mukherjee, or any other authority of the University, should

resent the action of the Bengal Legislative Council which has recently resolved on the appointment of a Committee to investigate into and report on the financial condition and management of the University. It is being said that the University is doing things which it ought not to, in its financial dealings; that the foundations are very weak and that unless drastic measures are taken the University will soon be involved in serious disaster. If anything, the University authorities must welcome an enquiry so that they may have the chance of clearing themselves of the charges which are being made in such respectable organs of the press as the *Modern Review* and the *Prabhasi*.

Several important resolutions have been passed at recent meetings of the Bombay University, giving

effect to the recommendations of the Committee appointed to consider the Calcutta University Commission's Report with reference to conditions in Bombay. It was resolved to remove the Intermediate classes from the University course; to remove the last year of the High School course from the High School, and to give the instruction at present given in the High School and in the Intermediate classes in the new Intermediate Colleges to be constituted. The period of education in the University is to be increased by one year, and we are rather surprised that all attempts to knock out this provision failed. The Senate also resolved upon the creation of

a Central Board for the control of Middle Schools and Intermediate institutions and request the Government to recoup the loss which the University will sustain by the transfer of the College instruction up to the Intermediate standard. With regard to the medium of instruction and examination, it was resolved that it should be English, though any institution may be given the option of giving instruction in the Vernacular and in Oriental classical languages, the medium of examination shall be both English and Vernacular.

We must confess to a certain amount of sympathy for the recent resolution of the Legislative Council of Bihar and Orissa demanding the appointment of an Honorary Vice-Chancellor. It is true that in any strong and well-organised residential University there should be work enough for a full-time paid Vice-Chancellor, but Universities like those of Patna are so small in magnitude that it seems a luxury to have a highly-paid Vice-Chancellor doing probably only about an hour's work a day. The University has not been able to embark on any scheme of residential University life, nor has it been able to make any provision for special University teaching of an advanced kind at the head-quarters but the University keeps a paid Vice-Chancellor on a salary good enough for attracting three first-class Research-professors among the best men available in India. It is possible to get retired

gentlemen of considerable experience of public life and sometimes even of expert knowledge of educational matters, to accept posts of this kind on a mere nominal allowance and we hope the Patna University will be able to get rid of this costly luxury as soon as possible, in view of the existence at present, of a permanent incumbent of the office.

We have seen a statement in the Press, though we are not sure on what authority, containing an account of the 'Policy' by the present Minister of Education in the Madras Presidency.

We have a suspicion of such manifestos, as they often stop with the statements without leading to any practical action, but we hope it will not be so once more in this case. A special officer is said to be making recommendations for the introduction of Vocational Education in our schools. The scheme will include the training of junior teachers at the Teachers' College, Saidapet, for the purpose. The training of the hand and the eye is said to be the purpose underlying this proposal, though it is necessary to point out that sometimes it may degenerate into a fad and a mere distraction from the intellectual training attempted to be given in our educational institutions. Reference has been made elsewhere in connection with the discussion of education in the local Council, to the proposed appointment of a Committee to consider the entire question of Secondary and Intermediate education. Another proposal is to introduce educational build-

ings of a new type, much cheaper than the present ones. The decision to have cheaper buildings will be welcomed in a poor country like India, but it must be remembered that buildings of cheap materials which are not of a permanent nature may sometimes prove more costly ultimately than good *pucca* buildings and educational buildings cannot be built without any consideration to æsthetic sensibilities. We hear of another Committee to decide this matter also.

We have just received the Report of the Maternity and Child-Welfare Exhibition held last year at Delhi. It is a document of considerable educational interest as it deals with the conditions most suitable for the proper development of the child. The physical interests of the child have got to be safeguarded and improved upon, before any educational progress is possible and it is desirable that members of the teaching profession entrusted with the training of the very young should familiarise themselves with all aspects of child-life if their work is to be effective. Besides dealing with problems of maternity and child-welfare, there are in the neatly got-up volume, papers on kindred subjects, one, in which our readers will be specially interested being on the Kindergarten System by Miss Corrie Gordon of the Teachers' College, Saidapet. There is a lucid exposition of its principles and their bearing on the healthy progress of a child's mind and body. "The general principle of the Kindergarten" says Miss Gordon "is

to recognise the individuality of the child, to regard him as a living, growing organism, and as such to furnish him with ample opportunities for self-development, without in any way forcing our own ideas on him. In short, the aim of the Kindergarten is to make the child his own educator under the most favourable conditions. Just as in a garden the plants and flowers are allowed the utmost freedom for growth, the gardener confining himself to preparing the ground, watering the plants and removing the weeds, so also in the human garden the children are allowed the best opportunities for growth without let or hindrance. In fact, the name Kindergarten itself means the children's garden, thus bringing home to our minds the analogy existing between plants in a garden and the children at school."

The authorities of the Poona Women's University — which is now called the Srimati Nathibai Damodhar Thackersey Indian Women's University, after the mother of Sir Vittaladas Thackersey, who has recently given the princely donation of 15 lakhs of rupees to the University — has just issued its first Quinquennial Report which is a very interesting record of progress. Started under the most unpretentious auspices and sustained by the zealous enthusiasm of a few self-sacrificing workers, the institution is a striking example of constructive work of the best character. Those who have had the privilege, as the present writer has had, of visiting

the University at Hingne Budruk in a retired place far away from the din and bustle of the city of Poona will have realised the admirable opportunities furnished them for the education of Indian girls on the best lines possible. We wish the institution all success and prosperity and hope that the organisers will get from the Indian public the support they are seeking for further growth and development on the strength of such a good record of work as they have now to their credit.

The Government of the United Provinces of Agra and Oudh have just published a scheme for the encouragement and organisation of Public Libraries in the Provinces, a matter to which other Provincial Governments also may pay some attention. It consists in the main of recommendations made by a Committee appointed to consider and report on the question. It is suggested that Government should give grants to books rather than to buildings, though the Government should also help in the selection of sites and in the erection of buildings; that Government should also give a liberal supply of all Government publications. Government should encourage the starting of new libraries by the promise of initial grants and also of recurring grants, preference being always given to an institution organised by a Local Body, Municipality or District Board. Provision is also made for the creation of Circulating Libraries by District Boards

with the help of Government grants. The creation of centres of enlightenment and culture in the form of public libraries in large number should have far-reaching effects on the progress of the people and no efforts in the direction should be spared by any Government which wishes to be recognised as "progressive," or even as "civilised."

A well-informed correspondent gives a detailed account in the columns of the *Pioneer* of the work being carried on at the Indian Army School at Belgaum. One of the functions of the school is to train teachers for the educational corps and the school will also be a centre of general education. Attempts are being made to teach English, Urdu, Arithmetic, History and Geography. It is amusing to know that considerable difficulty was experienced in the teaching of the last subject because many of them had never seen the sea and some of them had not even seen a good river. The main feature of the school is described in the following words:—

There are curious and unsuspected gaps in the knowledge of many even of these picked students, and nothing can be taken quite for granted; but it is the method of teaching rather than the subject matter, that occupies most of the attention during the present course. Consequently the students will spend most of their time practising their pedagogic powers on one another. The realisation of the fundamentals of learning and teaching is the chief thing to be got well into the minds of these pioneers of Indian Army education—to train the brain, to think and to speed up the consequent action; to let all knowledge be

real, a knowledge of things and not of words: to depend on the reasoning power and not solely on the memory: to get the learner to use his judgment, and not merely to absorb without comprehension the written or spoken word. Education in the Army, it is here taught, is not a matter of acquiring a knowledge of facts or mechanical processes in order to pass an examination—examinations need not worry the Army, for it controls its own. It aims at making the soldier fit for promotion, adaptable to some other manner of fighting, if the progress of military science demands it, able to hold his own in the conduct of his country's affairs, and when he comes to take his discharge, better skilled in his ancestral calling.

Speaking at the Dacca University the other day Sir J. C. Bose complained that in the management of educational affairs in India there was great extravagance and the real trouble seemed to be that they were extravagant in non-essentials and penurious in the essentials. Complaints were heard constantly of want of money as excuse for the absence of valuable research-work at an educational centre. But he pointed out that countries like Norway and Japan which were not particularly rich had a very efficient system of University education. Vice-Chancellors on princely salaries; imported Registrars on equally extravagant salaries; efficient office arrangements and considerable expenditure of money on clerks, typists and *chuprassis* and generally on educational administration, these seem to raise the cost of education constantly without any adequate return for the enormous outlay of money. Sir J. C. Bose's complaint

must cause serious heart-searchings in those responsible for educational administration in this country.

We have apparently not come to the end of the complaints we have been hearing from Indian students in

England against their treatment at the hands of English Universities as well as the Indian Students' Department of the Secretary of State for India. We hope that as the result of the deliberations of Lord Lytton's Committee which was appointed to consider the question, there will be an improvement in the conditions. The Glasgow Indian Students' Union presented a long list of grievances to Lord Lytton's Committee. They complained against the general condition in India of giving preference to people trained in England or with English degrees to the best men with Indian training and degrees thus driving Indian students to England even against their will. It is said that the facilities in England for the education of Indian students, especially in technical branches of learning, and the Advisory Committees appointed at various centres have not helped matters. The students naturally resent the close control attempted to be exercised on the life of the students by the Students' Department of the Secretary of State for India. They protest emphatically against the "excessive solicitude" and the "grand-mothering" of the authorities and they only desire to be "left alone" in matters of social intercourse like the other students at the

British Universities. The students make the following recommendations to the Committee and they seem to represent the general current of feeling among Indian students in Great Britain; it is time the question was settled once for all removing a long-felt discontent:—

(1) That the Government of India should try to remedy all the defects and inequalities which we have enumerated above as the reasons which induce Indian students to come to this country.

(2) That the Government of India should give absolute powers in India to the educational authorities there, to make education and educational institutions wholly national, with not the least official control over them.

(3) That the Government should use their influence with firms here which trade with India to make it a condition that they should every year take a certain number of Indian students to undergo practical training under them as has been done by the Government of Japan and even that of Mysore.

(4) That the India Office use their influence to get removed all the restrictions to Indians being admitted to the Officers' Training Corps, and also in the Naval, Aerial and Military Training Colleges.

We reproduce elsewhere the proceedings relating to the inauguration of the Court of the Dacca University with the addresses delivered on the occasion by H. E. Lord Ronaldshay, the Chancellor, and Mr. P. J. Hartog, the Vice-Chancellor. Lord Ronaldshay struck a high note when he dwelt upon the responsibilities of the teachers in the University. "Finally," he said, "let me lay stress upon the character of the teaching which I hope to see flourishing here and the nature of the responsi-

bilities which rest upon the whole of the teaching staff. It is for them to see that the teaching in this University is redeemed from the reproach that it is the mere hand-maiden of a tyrannical mistress—the examination. It is for them to set up the ideal of learning for learning's sake, an ideal congenial to India, surely, whose sons have from the dawn of history toiled ceaselessly in their quest of eternal truth. It is for them also to foster amongst the different communities gathered under the banner of this University that spirit of toleration, of mutual understanding and sympathy which alone can provide a firm foundation upon which a great and lasting structure can be raised up and by so doing to build for the true happiness and progress of Bengal and of the Indian Empire. It is with feelings of high hope that I inaugurate this Court and in so doing commit to your fostering care the destinies of this University." Mr. Hartog drew attention to a very widespread weakness in this country to attach too much importance to degrees and divisions. "I come last and designedly last to the question of degrees," said Mr. Hartog: "Gentlemen, a degree is a promise, it is not a performance and cannot be weighed against the performance of men like—I fear to take great examples—men like Darwin, Newman, Matthew Arnold, John Richard Green, Huxley, Tyndall, men distinguished in different ways in different measure, but whose names are all known in every University in the world and who would have been regarded as second-

class men by the persons to whom I refer, because they either did not take first class degrees or took none at all. It is right to count degrees where you have no other evidence to go on. After ten years a man should have done work of some kind or another which ought to overshadow entirely the performance in the examination-room of his youth."

The annual report on the examinations under the control of the Government Commissioner for Government Examinations held during 1920-21, submitted to Government by Mr. R. Littlehailes, the Commissioner, is before us. It is as usual interesting and informative. In reviewing the report, the Government state, in their Order No. 1277, Law (Education), dated 10th September 1921, that they are pleased to note the Commissioner's testimony to good work done by the Secretary and his staff headed by Rao Sahib R. Krishna Rao Bhonsle. The Commissioner's testimony was as follows:—

"In conclusion, I wish to state that a considerable amount of additional work fell on the office owing to the increase in the number of examinations, the total number of candidates having been about 33,300 including those for the Secondary School-Leaving Certificate Examination (11,700 at 200 centres) and for the European School Examinations (600 candidates). I am glad to record that all the work was carried out with expedition and accuracy, reflecting great credit on the

Secretary—Mr. D. A. Hobday—and his staff headed by M.R.Ry. Rao Sahib R. Krishna Rao Bhonsle Avl." We congratulate all concerned on the successful work done by them. Multitudinous as these examinations have been in the past, their number is being added to, the office of the Commissioner, a well-organised and specialised agency, being utilised for the conduct of these as well. Last year three examinations were thus added:—

(1) Examination for the award of certificates of competency to persons qualified to teach in schools for physically defective (blind, deaf and dumb) children.

(2) Women's Secondary Grade Final Examination which is open to all women without any restriction as regards age or attendance at school,

(3) Sub-Assistant Inspector's and Supervisor's Tests (Educational Department).

The number of candidates (in round numbers) registered for some of the examinations were: S. S. L. C. Examination 11,700; Technical Examinations—11,000; Training School Examinations—5,200; and Special Test Examinations—3,100. The receipts amounted to two lakhs and 31 thousand rupees, while the expenditure was one lakh and 96 thousand rupees.

It is stated in the report that a committee of experts with Mr. Littlehailes as Chairman and Mr. Hobday as Secretary, is engaged in revising the scheme of the Technical Examinations and also the syllabuses for the several subjects mentioned in the scheme.

B. A. DEGREE EXAMINATION, 1923.

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Sanctioned as a text-book by the Madras Educational Department
(Vide The Fort St. George Gazette, September 13, 1921.)A CONSTRUCTIVE GRAMMAR
OF PRESENT-DAY ENGLISH

BY

G. M. FAULDING.

Price—Re. 1

PREFACE.

The aim of this book is to provide for Indian children a three years' course of study of the English language, the actual grammar being regarded not as an end in itself so much as a practical guide for the understanding and use of contemporary speech. The pupil is led to take consciously the steps which when learning his own language he takes unconsciously—that is, he is expected to make use of English from the beginning for the discussion of his daily needs, and for the free and natural construction of simple sentences. At the same time an effort has been made to let the words themselves appeal to the imagination of the learner; there is no reason why grammar as such should rank as a dry-as-dust subject, and when its rules and exceptions are relegated to their proper sphere, it should interest and even fascinate the normal child.

The writer agrees with those modern grammarians who take the Sentence as the unit of study, and it is from this standpoint that the following constructive Manual has been planned.....The success of a method depends in the long run less on the writer of grammar than on the teacher, who should be free to modify the lessons as experience in particular cases may direct.

An attempt has been made to anticipate some of the difficulties proper to the Indian student, and time is arranged for special work where they occur, but here and throughout the book the teacher is allowed latitude for such alterations as appear to him advisable. It is hoped however that he will be able to adopt some of the writer's suggestions as to the encouragement of initiative in the pupils, and that if he is unable to agree with the views set forth as to class work, he will at least find that the notes on the lessons and exercises may have their practical value.

The text begins in very simple English, but by the time the second year is reached the necessary use of grammatical terms calls for a more difficult style, and by the third year the constant practice in reading and composition should have made the class thoroughly conversant with the language.

From the first page to the last the children are set not only to examine but to construct Sentences, with the intent that they should "realize that the real life of language passes not only in the minds of authors and scholars, but in their own."

G. M. F.

COOPER, Publishers, BOMBAY.

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SOME OPINIONS ON THE SECOND EDITION.

The first edition was welcomed by competent critics in Asia, Europe and America as one of the most successful expositions of Sakyamuni's teachings and in its present form—practically so much rewritten and enlarged as to amount to a new book—it will long hold its own as one of the standard works on the subject. We can give it no higher praise than by saying that it is quite worthy to take rank with the books of scholars like Rhys Davids and Oldenby.—*Hindustan Review*, May-June, 1912.

To those who wish to obtain a knowledge of the noble religion promulgated by Sakyamuni from the standpoint of the scientific scholar imbued with the spirit of modern research there is no work that we can recommend better than the *Essence of Buddhism*.....The compilation from Buddhist sources embodied in the *Essence of Buddhism* is splendid, and we sincerely trust that the book will have a very wide circulation in Buddhist and non-Buddhist countries where English is spoken. Buddhism is intended for the honest searcher of philosophic truth, and in these days of scientific scepticism when theological religion is losing its ground, a work like this is opportune. To those who wish to know the path leading to enlightened peace we cordially recommend Mr. Narasu's *Essence of Buddhism*.—*The Mahabodhi and the United Buddhist World*, July 1912.

The Educational Review

A Monthly Record for India.

VOL. XXVII.]

OCTOBER 1921.

[NO. 10.]

All literary contributions, books for reviews, newspapers or magazines, sent in exchange, &c., should be addressed to the Editor, No. 4, Mount Road, Madras. Articles and communications intended for publication in the succeeding issue should, as far as possible, reach the Editor not later than the 20th of the month. The Editor solicits contributions on all subjects of educational interest. Stamps should accompany the MS., if the writer wishes it returned, in case of non-acceptance. The Editor can in no case hold himself responsible for accidental loss.

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THE HEADMASTER'S 'TASK.'

MY usual holiday amusement is to prepare the time-table for the next term, assigning to the various subjects their due number of hours, and to my various colleagues the classes they expected. I must not forget that as far as possible I should not assign work in the first period in the morning to those of my colleagues, who arrive by suburban trains which usually set for themselves their own special codes of punctuality. At the same time I must endeavour to avoid any arrangement too burdensome or inconvenient to myself. Nevertheless, I must bear in mind that I take a due proportion of the teaching work myself. I must also remember the limited accommodation at my disposal for the distribution of classes and sections.

I. Enter a gentleman with a benevolent expression, bald head, and gold-rimmed spectacles.

Visitor.—You will, at once, excuse my XXVII—71.

intrusion, I am sure, when you know my errand. I am a botanist and a zoologist. I take considerable interest in entomology. I do not think I need enlarge upon the importance of the science I profess, to you an educated man, but I might perhaps say that the discoveries of recent years due to this science and the value of the measures it has enabled us to adopt to combat various diseases cannot be exaggerated. In future, entomologists will be required for agricultural work. Early training in the right direction is essential. I wish you to introduce the subject at once into the school curriculum and devote not less than three hours per week. By the bye, have you got an entomologist on your staff?

H. M.—I haven't got one such. But I suppose this subject would form part of plant geography. Any way I shall try to comply with your request.

1st V.—Thank you, good-bye. I am glad I have extracted from you a promise that you would not ignore this subject. (Departs).

H. M.—My time-table now gets a little complicated.

Enter 2nd Visitor.

2nd V.—I can see you are busy. So I will not waste time. You may have heard about me. I am interested in astronomy. You cannot be ignorant of what the modern world owes to that science—navigation, the prediction of celestial phenomena, deliverance from superstitious fears, an appreciation of the infinite littleness of man, yet, at the same time of the might of human intelligence that has known how to fathom such mysteries. What more inspiring subject for the young?

H. M.—Indeed, it is. I completely agree with you. The first elements of the science are even now taught for one hour in the week.

2nd V.—By whom? Is he a Professor of Astronomy?

H. M.—As part of geography, in cartography.

2nd V.—One hour! only one hour for such an important science, and it is not taught by a specialist in it. Well, try to make it four.

H. M.—I shall try. I can't promise.

2nd V.—Thank you. I won't take up more of your time, as I notice you have a number of visitors to-day.

Enter 3rd Visitor.

H. M. (rising to offer a seat). I know you from your photographs in the papers. I read with pleasure much of what you say, particularly when occasional leisure permits me to indulge in varied studies.

3rd V.—Oh, I'm so glad to hear that. The subject I have made my own is one of vast importance. It is essential that everyone of us should understand at least the main prin-

ciples of political economy. Popular fallacies teem around us.

H. M.—True. But what can I do? The curriculum is already heavy.

3rd V.—You can do very much. The subject I represent is of such great practical use in life that I would ask for three or four hours of instruction in it each week. Put it in your time-table, four hours a week—a small allowance out of so many, especially as the knowledge is essential in business.

H. M.—I think we are already including the elements of the science in our scheme of teaching geography.

3rd V.—You are a true friend of education. I will not detain you longer. Please remember to give at least four hours to this subject in your time-table.

Enter 4th Visitor with a clean-shaven face and a well-cut suit of clothes, and boots brightly polished.

4th V.—With a smile and forced laughter. You must excuse me. I have not seen you for a long time.

H. M.—Pray tell me how I can serve you.

4th V.—I am a skin merchant.

H. M.—What do you want to do with me?

4th V.—No, I have got a son studying in your school—I want to——put him to business. He must understand book-keeping. You school-masters generally deal in all sorts of luxuries—Sanskrit, Tamil, Mathematics, History—useless in business; but I wanted the boy to have some culture and now he is really fifteen, he must go on to something real. He may take to the dyeing business, which is very profitable now-a-days or to some other business.

Can you therefore arrange to give him book-keeping instead of Tamil and Mathematics?

H. M.—It is a little difficult. We haven't a regular class in book-keeping. I must know how many students are likely to learn book-keeping in case a fresh section is opened. But I am now engaged on a time-table and I will see what can be done. We have got more than four hundred boys but only about a dozen teachers; it is therefore a little difficult to arrange for individual tuition.

4th V.—What sir! You get so many holidays. We business people have no holidays at all. You see you are now in your house enjoying your holiday, but I have got work, plenty of work, to-day. Is it difficult to arrange for the tuition of one boy in book-keeping when you have a dozen teachers?

H. M.—I enjoy my holiday with racking my brain in framing time-tables, syllabuses, courses of studies, my teaching notes, etc. I have a staff meeting to-day. I shall see what I can do for your son.

4th V.—Please do so. He will be leaving school in a month or two and I do want him to learn something useful in place of Tamil and Mathematics. As you say you are framing a time-table, please arrange it in such a way as to permit my son to take book-keeping in place of those subjects. There is another person to see you, sir. Good-bye.

Enter 5th Visitor.

I am glad I was able to see you to-day. I want you to take an interest in these matters—(draws a bundle of pamphlets from a small bag). It is to save postage that I brought them with me. Will you be so good as to distribute these to the members of your staff; and may I have a word with you.

I am the Secretary of three Societies—the Temperance Association, the Society for the Prevention of Juvenile Delinquency, and the Social Service League. I want you to distribute these pamphlets among your staff, and if possible try to allot two periods a week for general instruction to the pupils in these subjects which you find elaborated in the pamphlets.

H. M.—Most certainly, sir, we are already doing something in the form of moral instruction. I shall ask my colleagues to make use of the subject-matter of these pamphlets in their instruction.

5th V. (rising)—I see there is another visitor wanting to see you. Good-bye. Thank you.

Visitor.—I see you are somewhat busy, and hence I do not wish to take up much of your time now. As the Headmaster of an institution that you are, I think it is superfluous for me to expatiate upon the aspect of education as a training in sound citizenship.

H. M.—Oh yes! We are of opinion that education in its wide sense is but the full development of one's resources in the direction of making one a good citizen.

Visitor.—Exactly. A training in citizenship is not merely a matter of study. It is a thing which is dependent upon habits which have to be fostered very early in life.

H. M.—Quite so. The Boy Scout and the Girls' Guide Movements, our school games and sports, the direct instruction through biographies and ideals, and above all, the moral training through school discipline and the personality of the teacher, are all hopeful moves in the direction of rearing good citizens.

Visitor.—You see games, sports, &c., are no

doubt good. But in addition to this temperamental equipment citizenship involves the study of a particular kind of literature which might fit one, if not to solve, at least to understand the problems of administration and to judge fairly of the men who have to solve them. In this connection History, Political Economy, Civics and Sociology, readily suggest themselves as contributing rich material for the equipment of a citizen. As a proper study of these subjects is part of the necessary equipment of every citizen, I would ask you to kindly devote at least two hours a week for each of these subjects. Surely, it should be easy to devote eight hours in all for this important subject, leaving all other periods or hours to be devoted to other subjects.

H. M.—I am just engaged on a time-table. I shall try to embody your suggestions therein. Perhaps the subjects may be tacked on to Geography.

Next Visitor.—Carrying a bag from which he draws a prospectus.

I represent the firm of the Modern Educational Suppliers and Scholastic Bureau. The firm has opened several departments. We supply all requirements of teachers and pupils. We sell or make to order caps, belts, badges, flags, etc., for boys, syllabuses, time-tables, notes, etc., for teachers and.....

H. M.—This sounds interesting indeed! My own time-table has undergone several changes and I have received very many valuable suggestions which I should like to incorporate in it. See what you can make of it.

Visitor.—Give us the figures—number of hours, number of masters, number of subjects,—and we shall complete it and you shall have it in three days. We have on our staff an

experienced educationist, one who studied for the old Matriculation Examination for twelve years continuously but unfortunately failed to get a pass. He thereafter took service as a teacher in a Board High School where he stayed for a whole year. He then opened a school of his own and was manager and teacher for about six months when our firm were able to secure his valuable services as our expert educational adviser. You must see him draw the time-tables in a trice. He follows the vertical order as he calls it. History, Geography, History, Geography; History; Mathematics, Drawing, Mathematics, Drawing, Mathematics; and so on. If you want more periods for any one subject begin the line, he says, with that subject first. Oh! it is wonderful how easily he drafts these time-tables.

H. M.—It is wonderful indeed! I am bothering my head with a number of psychological principles, in the matter of framing time-tables. I consider subjects from the point of view of their utility or advantage in the future career of my students, and I take care to see that the more fatiguing subjects should be taken early in the day when the pupils are fresh and...

Visitor.—You can never succeed in framing a time-table, if at each step you should be hampered by psychical,—is it?—you used some word just now.

H. M.—You mean psychological?

Visitor.—Oh yes! excuse me, bid good-bye to those considerations. The easy way is to copy the time-table we print in the outer cover of the exercise note-books that we supply, or if you require a time-table for yourself, let me see the data—you've allotted, I suppose, the number of hours to each subject,

OUR EDUCATION AND THE VERNACULARS.

IT is a healthy sign of the times that great interest is evinced in educational matters by the general public and new educational activities loom large in the national horizon. This interest is a true manifestation of the people's awakening, the Renaissance that is stirring the placid waters of our national life to its very depths; for education is the vital dynamic force that will stimulate and regulate the proper development of the life of the nation. Moreover, as education is a transferred subject under the new dispensation, a wider and intenser study of educational problems is quite essential.

For a hundred years the vernaculars have occupied quite an insignificant place in our scheme of education, the imperious English language having been enthroned on a high pedestal to the exclusion of her humbler sisters. But the new consciousness can become articulate and the national soul can find her genuine voice only through the vernacular, the mother-tongue.

For the neglect in the past the Government and the people are both responsible. The Government, from the Court of Directors downwards, have never been wanting in good intentions and pious wishes towards the vernaculars. Macaulay's Minute on Education has been criticised savagely enough to make his gentle soul turn uneasily in the grave. The rulers have naturally provided such an education as would furnish them with the necessary men for the learned professions and for carrying on the administration of the country; and the people would have been more than human if, in the face of the cold neglect on the part of the Government, they

H. M.—Yes, you see the data given in the margin. As our accommodation is somewhat limited, that factor also must be considered in the distribution of work.

Visitor.—Please excuse me, sir, if I indulge in a candid observation. You seem to create these difficulties. After all, a time-table seems to be, more or less, one of the several items of the decoration of the walls of a class room. Time-tables are rarely adhered to strictly. Anyhow, let me see your data. We charge Rupees Twenty only for drawing special time-tables; the fee is fixed low enough to attract a large clientele. How many hours (looking into the paper) have you allotted for English, what time for Sanskrit, what time, what time?".....

Headmaster's Brother.—What time are you going to get up? It is 9-20 now and you must be in your school at 9-50. You are injuring your health by this working at a stretch at all hours of the day. You've hardly twenty minutes within which to take your bath, your food.....you must give up bath and prayer to-day or you must give up dinner.

H. M.—No, I shall not give up my bath or my devotional prayers. I shall give up dinner and be content with tiffin. I shall give up some other thing. Will give up the data for the time-table to my friend here.

C. P. VENKATARAMA AIYAR.

had disinterestedly devoted themselves to the cultivation of vernacular literature. The apportionment of blame for past neglect is not the path of wisdom; and as practical men and women interested in the cause of education, it is our imperative duty to devise measures for the future development of the vernaculars.

English education, with all its defects, has served a very useful purpose in the past. For the political unification of India, for inter-provincial communication and for international commerce, it has been and will for long continue to remain invaluable. That it has laid open to us the priceless treasures of English literature, infused a new life into our conservative and dormant people, and inspired us with new hopes, aspirations and ideals, let us cheerfully admit. At the same time we should bear in mind that for the rapid and thorough diffusion of knowledge among all classes of people, for bridging the gulf between the classes and the masses, and above all for rousing the dumb millions to a sense of civic and corporate life, the vernaculars should play a more important part in the future.

Educated men and women, old and young, should feel a pride in using the vernaculars and encourage those who do their best to promote the growth of vernacular literature. In our daily conversation and correspondence, at our clubs and public meetings, the vernaculars should be given their natural and inalienable right of priority. Vernacular newspapers and magazines, ably conducted on modern lines, should be encouraged and patronised in every way. Persons endowed with literary taste and capacity should devoutly offer their literary fruits at the altar of Saraswati, in the shape of translations from

other languages and original productions in the vernacular.

In our scheme of education, the mother-tongue should be assigned its legitimate place of honour equally with English. From the obscure position of a Cinderella she should be elevated to the rank of a Queen ruling in her own right. While English should remain a compulsory second language in all stages of education, a systematic and efficient training in the use of the mother-tongue should be made compulsory from the Elementary to the University course, so that every young man or woman should be able to gain a good mastery in speaking and writing his or her vernacular.

While making the study of the vernacular obligatory upon all, we should also see that in the High School and the College a scientific and critical study of the vernacular is attempted, quite unlike the indifferent and slovenly method in vogue till now. The lessons assimilated from the study of English language and literature should stand us in good stead in this new attempt. In that lies our only hope. That implies that competent and properly-trained teachers, more handsomely paid than our present-day Pandits, should be entrusted with the work. As the Calcutta University Commission recommends, the teaching of English and the vernacular should, wherever feasible, be undertaken by the same teacher so that a comparative study of their structure might be made to the improvement of both languages.

What should be the medium of instruction? That the present practice of using English as the medium by immature minds imperfectly acquainted with English has tended to stunt and dwarf our intellectual development by

encouraging blind memorisation at the cost of the understanding and by leading to the study of words instead of things, that it has largely killed all power of initiative and originality, judgment and independent thinking, and that it has caused enormous educational wastage, are admitted by all unbiassed educationists. On the other hand, that the vernacular medium is natural and economises time, and that it makes the acquisition of knowledge pleasant and easy while affording good mental training without undue strain, are psychological facts.

How far then is it practicable? Leaving faddists on both sides—the champions of the vernacular medium even in the University courses and the advocates of English medium even in the lower classes of Secondary schools,—to fondle and be enamoured of their own pet theories, we find that there is an increasing consensus of opinion that up to the end of the High school course all subjects except English should be taught and the examinations conducted through the vernaculars: and the well-considered and weighty opinion of the Calcutta University Commission is practically to the same effect. Of course our ultimate ideal should be to make the chief vernaculars the media in the University also. But at present, can our vernaculars cope with our requirements? Are our teachers equipped for that work? Are there vernacular books of a high standard fit to be used as text-books in the University courses? When the attempt has been successfully made in the Secondary school, then will be the time to think of realising the ideal we have in view.

In the meanwhile, teachers and others interested in education should set themselves to the no easy task of writing books on

physical science, history, geography and other subjects to be used as text-books in the High school; but, in achieving that object, State encouragement and help are essential. Wherever the vocabulary is defective and technical terms are lacking, they can be coined or borrowed from Sanskrit or English according to our needs.

When these reforms have been sincerely introduced and honestly tried, not only will the vernaculars be enlarged and enriched and fitted to perform higher functions, but our educational system itself will be so transformed in the course of a generation as to enable our children to fulfil their higher national destiny.

P. K. ANANTANARAYAN IYER.

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INDIAN EDUCATION AND ITS IDEALS.

By MR. D. JAGANNADH RAO, M. A.

1. *National Ideals*:—Everybody feels that there is something wrong in the present system of education, and that a change for the better is an immediate necessity; but nobody is able to suggest a satisfactory scheme as yet. Thoughtful persons like Sir Aurobindo Ghose, Sir Rabindranath Tagore, Sir John Woodroffe, Mr. C. K. Ananda Comaraswamy, etc., present some ideals of national education, while they themselves feel that it is not possible to crystallize those ideals into action under the present conditions of our country. Even Mr. Gandhi, the most practical idealist, so far as he himself is concerned, is not able to give any definite scheme of Indian national education. All talk of national education, I too once talked so, but none have any workable scheme of such education. We have learnt, of late, to condemn the West and sanctify the East, but we are not able to revive the East in the least. Why is all this? Why should there be so much restlessness in the nation regarding all matters educational?

2. *Their Impracticability*:—The cause seems to be in the deplorable conflict between our ideals of education and the existing conditions of our life. Indian society has undergone, for years, a change which it is impossible to efface now. At the first contact with the West we foolishly and thoughtlessly condemned our traditional mode of life, and eagerly embraced the western mode as far as was possible, lost in all admiration for it; after a close association of over fifty years with the western mode of life we now learn, to our cost, that we have

foolishly heated the precious diamond handed down to us from generations, and converted it into mere worthless carbop. But alas! there is no use of crying over spilt milk. The type of education that had been in vogue in our country some centuries back cannot be revived now. The life we live and the system of education we preach must go hand in hand, and if we cannot live up to our ideals, it is certainly wisdom not 'to cry for the moon'.

3. *The Present Out-look*:—The ancient Hindu ideals of education were all spiritual, and our present ideals are all mundane. We want to make our education a means to an end, but not an end in itself; as long as this is our aim, our ancient ideals can never have a place in any scheme of education drawn up with such an end. Let us, therefore, calmly bid good-bye to those ideals, welcome the western ideals, and adapt them modifying them so as to be in unison with the hybrid mode of life we are leading.

4. *The Old System*:—Education has been given to us on western lines for over fifty years, and all our present national leaders are the products of such education; but there is much difference between the system of education that prevailed a decade and a half ago, and the system that is now obtaining in our Presidency. We had not so many complaints against the recipients of education under the old system as we have now against those under the present system. There is no denying the fact that an educated man of to-day is decidedly inferior, in culture as well as in morals, to the one under the old system.

5. *The Present System*:—In our eagerness to improve the old system of education we have lost sight of fundamental principles, and have encumbered our present system with too

many rules and regulations calculated to make an *ideal* teacher but an *idle* student.

It is grossly misconceived that a teacher trained in the most up-to-date methods of teaching, and made to work with the utmost regularity and punctuality of a clock by the supervision of an Argus-eyed headmaster having no other work to do, would automatically produce a perfect student; perfect in erudition, perfect in morals, and perfect in what not. Alas! what a gross misconception of fact it is! The best method of teaching is what suggests itself to the teacher of experience at the time of handling the subject; the best work is turned out, only when the teacher is given full liberty and judged by the result in the end; no special police watch of the headmaster need be set upon the teacher, and he may be trusted and held responsible for his work at the end of the year but not at the end of every hour as is the case now. The teacher should be expected only to guide the student in his work, but not to overwork himself as in the present system leaving the student entirely idle. All this was obtained in the old Matriculation system, and its efficacy was amply justified by the results.

None are so happy in our society now as the student under our present system of education. The parent at home even half-starving himself supplies the student with all the money required for his education; the teacher in school overworks himself to early death, and provides him with all the information necessary for his examination; the direct method of teaching lays no tax at all on his memory and imagination; the system of awarding marks to his work has provided ample scope to get high marks with very little labour. Even the Inspector of Schools is prepossessed in the student's favour, and

does not disturb him with a question during the period of inspection; perhaps, he supposes that the student under the present system cannot be otherwise than perfect, and only examines the teacher with a vengeance in all the up-to-date methods of teaching to damn him to death, if he is not able to please him. And when the results are out and the student is ploughed, even then there is sympathy for him everywhere. The whole blame will be laid at the door of the teacher who taught and of the examiner who examined him. Such is the glory of our existing system of education, and what wonder that it produces men of a very low calibre in every respect!

Our anxiety to produce an educated man of a very high standard of efficiency has also led us to make the curriculum of studies as elastic as possible so as to be able to give the student all round information; but alas! the result of it is that nothing of the information sticks to the mind of the student, which is consequently as barren as ever. Experience tells us that a good single book read over and over again a number of times teaches us very much more of what will be lasting in us than a host of books gone through with a view to getting up summaries and passing examinations. We are enamoured of quantity rather than of quality, and are having neither in the end.

6. *Vocational Education*:—I do not understand the rationale of combining vocational education with cultural education and drawing up a combined scheme. The term education has been understood to mean only cultural education and nothing else. To incorporate into any scheme of education some vocational course of study is only aspiring too much in too short a time, and justice can never be done to either. I do not mean that there

should be no vocational training; any vocational course should be taught separately in a different institution, after the student has attained a tolerably good standard of cultural education. What our country needs at present is the institution in every important town of a number of vocational schools (technical, industrial, etc.) side by side with the existing Arts schools so as to be within easy reach of every student. The Arts schools must first be perfected and then a number of vocational schools started side by side according to the needs. But how to perfect the Arts schools? It is said, 'Slide back when going on is to your detriment'. Let us therefore, slide back to our old Matriculation system and perfect it by removing the few defects of it and infusing into it a few new virtues most essential for the speedy growth of the student.

7. *Reforms Suggested*:—What are then the reforms to be adopted in providing our students with a good minimum standard of cultural education? These reforms are of a two-fold nature:—(1) External, (2) Internal.

The external reforms relate to the period, the curriculum, and the method of study. As suggested by the Sub-Committee appointed by the last Madras Provincial Conference, the school course may be of eight years' duration. Four full years are wasted now from 1st standard to 4th standard; they may be reduced to three years and the course can be easily taught during that period. Again three full years are wasted from 1st form to 3rd form; these also may be reduced to two years without any detriment to the course. Thus the present seven years' duration can be conveniently reduced to one of five years without any detriment to the course of study. The 4th, 5th and 6th

forms require each a year as we have now. Thus after a study of eight years commencing from his sixth, a boy will be in a position to have obtained a tolerably good standard of cultural education which will qualify him to take up further, either a vocational course, or an Arts course, as he may choose.

As for the curriculum of study we may adopt the one drawn up by the above-mentioned Sub-Committee with a few modifications. The Sub-Committee proposed that the following should be the subjects of study in the school course:—

(a) Vernacular, (b) English, (c) Elementary Mathematics, (d) History of India and Civics, (e) General Geography, (f) Drawing, Manual Training and Music, (g) A second vernacular or a classical language, (h) Religion.

In the above list of subjects there is no place for English History. I am of opinion that it is very essential for an Indian student who is likely hereafter to give up his cultural course of study, after he has attained the Matriculation standard, to have an elementary knowledge at least of the history of our rulers. We can dispense with English History after Mr. Gandhi has brought us Swaraj, but so long as we live under the British Government our boys must have some knowledge of the History of the British Nation. So, I propose that the subject 'music' which is not very essential to life may be scored out and 'An Elementary History of England' may be put in its place. Again in item (g) of the above list, we have only 'a second vernacular or a classical language.' I should like to add 'Sanskrit is compulsory for all Hindu students'. We are all convinced now of the value of the knowledge of Sanskrit to a Hindu student and so the topic requires no further dilution.

With these few modifications the curriculum drawn up by the Sub-Committee may be adopted *in toto*.

Regarding other external changes, the Sub-Committee proposes that there need be no specialisation of studies in the school course, and that the medium of instruction in non-language subjects shall be entirely the vernacular. I quite agree with these proposals, but I can never close with the startling proposal made by the Sub-Committee, namely, that there need be no public examination at the end of the school course.

There should be a public examination conducted by a competent Board of Examiners; otherwise the whole work done in the school will be a mere farce. A few years ago it was left to the discretion of the heads of institutions to admit a S.S.L.C. holder into the Intermediate class, and we had bitter experience of such a concession. Both external and internal pressure will be brought to bear upon the headmaster and his assistants to issue certificates of pass to all candidates deserving and undeserving alike. It is a matter of every-day experience what amount of pressure is brought to bear upon the headmaster in the matter of mere selection of a student to be sent up for examination. God forbid that we should have no public examinations for our students!

The internal reforms relate to the teacher, the student, the marks system, the inspection, etc. The present teacher is made to do a lot of useless work in correcting hundreds of note-books and exercise-books which the students never care to look into, and to keep a number of other note-books containing notes of lessons to be shown to the Inspector. This work alone consumes all the leisure of

the teacher both in school and at home, and he has no time to devote himself to further studies on his subjects. The result of it is that a teacher of even ten years' standing is no better than what he was at the beginning and he even becomes worse. This is really a disastrous state of things. The teacher should be given more leisure both in school and at home to improve himself in every way. He should be enabled to devote some of his time to think on the problems of the day and offer his views on them, to take part in the administration of his municipal and other local affairs and to contribute his quota of service to his country at large. Alas! what is the status of the present school-master? He does not even form part of his society as it were; he has become a detached being from all active public life, and is looked down upon by the other influential members of society. And his half-starving salary aggravates his condition further. The days of 'passing rich with forty pounds a year' were over long ago. The most essential internal reform in secondary education is, therefore, the improvement of the teacher, and all facilities must be provided for such improvement. As long as this feature of reform is ignored, we cannot expect better teachers in our schools, better candidates for our examinations, and better citizens and leaders for our country.

I already mentioned above how the state of a student is under the present system of education. All the defects pointed out must be remedied, if we want to produce a type of efficient student. The teacher should be made only a guide to the student and not his clerk as at present. The sham direct method of teaching should not be laid too much stress upon; adequate provision must be made to

give exercise to the memory, intelligence, and imagination of the student; only one or two good books must be prescribed for study in each subject, and the so-called non-detailed study should be abolished. Time was when no text-book was prescribed for Matriculation examination and candidates were then decidedly better than now. There should also be no B Group subjects for sham study. All the subjects must be studied in detail as far as the course permits, and candidates must be examined in all of them. The course of study in non-language subjects must be general and elementary, and must not be burdened with unnecessary detailed portions.

The marks system that is in vogue now must be thoroughly abolished, as it makes both the teacher and the student dishonest. The knowledge of the student can be sufficiently tested in a public examination, wherein a wide choice of questions on each subject should be given, and sufficient time allowed for answering the questions. The old system of exchanging of places in class must be adopted in lower forms to create emulation in boys and encourage them for diligent study.

It is quite unfortunate that the Inspector of Schools should be an unwelcome guest in the school. His work must be more of construction than destruction. He need not examine a Licentiate in Teaching once again and pronounce his judgment on him. There are several other ways of testing the work of a teacher, and it is impossible for the Inspector to have a correct estimate of the work done in a school during the short period of his inspection. It should be enough for the Inspector to see if a school possesses all the educational requirements, such as a good building, a good play-ground, a good library,

an adequate science laboratory, etc. This simple work does not need then so much costly Inspectorate as we have now; it may therefore be cut short from top to bottom and the funds so gained may be distributed over the salaries of teachers in order to attract efficient men into the field.

Another most important internal reform is the setting right of the relation between the headmaster and his assistants. The headmaster exercises undue influence over his assistants who are in many cases his equals in every respect and even his betters. The term 'assistant master' has lost its meaning and has come to mean a petty subordinate to the headmaster. This is really a pitiable state of things, and as long as it remains unremedied no good work is possible to be turned out in any school. A way of remedying it may be the following:—

A teachers' committee may be formed from among the important assistants of the school, and all the internal management of the school such as the drawing up of time-table, the enforcing of the rules of discipline, etc., may be left in the hands of the Committee. The headmaster should be guided by the opinion of the majority of members on the Committee, and on no account should he act in defiance of that opinion. The supervision work may be distributed among the headmaster and his senior assistants, so that all may work jointly in the interests of the institution. What is required after all is that the headmaster should not be an absolute ruler over his assistants as he is now.

8. *University Education.*—As for University education, I have no faith in the efficacy of the Intermediate Colleges proposed by the Sadler Commission Report. The time

allotted for that course will be a sheer waste. Our aim must be to minimise the period of education as much as possible. A boy cannot conveniently afford to spend more than twelve years of his life-time over his education. The Matriculation course as sketched above takes up eight full years, the University or any vocational course should not therefore extend to more than four years. After passing the Matriculation a boy may choose a vocational or University course, spend not more than four years over it, and give a finishing stroke to his education.

With this end in view we may retain the present Intermediate and B.A. courses undisturbed, and abolish the so-called Honours course. Post-graduate course in University education may be studied privately, or in some special classes attached to a college, by candidates who are specially interested in some subjects.

I shall deal with this subject of University education more at length in a separate article.

For the present I hope that the reforms suggested above may commend themselves to some thoughtful persons at least, and I rest satisfied that I have done my duty.

CLOUD MESSENGER.

A Critical Appreciation of Kalidasa's *Meghasandesa*.

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THE FUNDAMENTAL UNITY OF MATTER.

NOTHING could be more perplexing and at the same time interesting to the human mind, than the great problem of the Unitary Theory of Matter. Man, with all the resources at his disposal, has until now discovered nearly two hundred-thousand compounds and several are being discovered every year. With such a variety of distinct chemical compounds, how far shall we be right in our hypothesis, that all the different forms of matter in the universe are derived from one and the same primordial, fundamental element?

The question of the ultimate forms of matter was engaging the attention of the greatest men thousands of years ago. It has indeed been one of the greatest world problems, 'constantly attracting man's attention and as frequently eluding man's research.' (F. P. VENABLE: *The Development of the Periodic Law*). From the earliest times, we notice men evincing an unflinching interest in the question. The Greek philosophers, Hippocrates and Aristotle attacked the problem with considerable vigour and finally originated the great four-element theory of matter, which enunciated that earth, air, fire and water were the fundamental bases of all matter in the universe. The Hindu philosophers had previously added a fifth element which they called *akasa*, the modern ether. Aristotle in the fourth century B. C. independently suggested this fifth element and his theory of matter held sway throughout the great period of alchemy of the middle ages to the dawn of modern chemistry under the hands of Lavoisier.

In the question of the theory of matter, the work of the alchemists is of considerable

interest and importance. As is often misrepresented, their sole aim was not the discovery of the philosopher's stone, which like the touch of Midas, could convert every material into gold. Their problem was of more scientific importance. In the words of Prof. Millikan, they sought, 'to find the great secret of the combination of the elements, not alone so that they may become rich, but so that they might learn to control matter, to prevent disintegration when they wished—that is, to prevent death and disease.' This far-reaching theory of theirs led them to the assumption of several ingenious practical results, in the realisation of which they failed to a miserable extent.¹ They assumed the four-element theory of matter of the Aristotelian philosophy and argued that by a proper combination of any two or three of the primordial forms, all known substances could be derived.

The question naturally arises whether their investigations and scientific enquiries led them to any result of importance and whether they supplemented satisfactorily the theory of transmutation. Though their writings on the subject do not state their own views, their experiments lead us to the inference that they clearly recognised the fact, that the old conception of matter was utterly inadequate to

explain the various chemical combinations and decompositions. They realised that the theory of transmutation had no experimental basis. Their practical skill aided them in controlling certain chemical transformations but several others baffled all their attempts. The work of the alchemists was the origin of modern chemistry and the earliest of modern chemists conjectured rightly all the possible interpretations that could be ascribed to their works and styled those substances which resisted further decomposition, by all known means, elements.

It was in this way that the Aristotelian theory of matter was exploded. The new school of chemists originating in Jean Rey and others and flourishing in the hands of Lavoisier, Sir Humphrey Davy and their contemporaries, collected all such elements and attempted at a classification. The greatest impetus in the direction was given by the historic inauguration of the Atomic theory, which had done more to change the course of chemistry than several other similar theories put together. But because of the great uncertainty in the values of the atomic weights of elements as given initially by Dalton, all efforts at a classification were seriously hampered. Later on when a consistent system of atomic weights was worked out by chemists, there was a marvellous advance in the field. Dobereiner, as early as in 1820, noted 'certain regularities in the atomic weights of closely related elements.' Nearly forty years passed away before J. A. R. Newlands published his famous law of octaves. About the same time, the Russian scientist Mendeleeff and Lothar Meyer, quite independently attacked the problem with greater vigour and interest and obtained a clear vision of the law,

"... It (alchemy) did a vast amount of harm during that period for it crippled the usefulness of many able men who would undoubtedly have advanced science had they not been influenced by chimeras of an exciting nature; as it was, they were led away into the most tortuous paths."
—Ernst Von Meyer's History of Chemistry, translated by George McGowan.

Nevertheless it should be said to the credit of the alchemists that they never meant any harm and their one guiding principle undoubtedly was an unflinching search after knowledge, which is truth.

enunciates that the properties of elements, both physical and chemical, are periodic functions of their atomic weights. Mendeleeff arranged all the elements into a table in the order of their atomic weights and vindicated in a marvellous way the accuracy of the law of octaves. Relying entirely upon the accuracy of his classification, he proceeded to predict the existence of certain elements, stating their physical and chemical properties. Within a few years of his prediction, all those elements were discovered and to the great astonishment of the scientific world they were found to possess all those properties assigned to them by the great Russian chemist. Despite certain discrepancies here and there, the periodic classification is of the highest scientific interest and importance and consequently, it may rightly be styled as one of the greatest achievements of modern genius.

We may rightly ask ourselves what bearing the periodic law has upon the problem of the unitary theory of matter. To quote Prof. Millikan once more, 'does not the classification of elements according to atomic weights point in an unmistakable way to the conclusion that the elements have a common origin, that they are built up from a common material; and that our world is indeed at bottom, as Aristotle thought, something less complex than a compound of eighty different, independent things?'

In 1816, Prout observed that the atomic weights of all the elements were multiples of the atomic weight of hydrogen and thence propounded the famous theory that 'the elements are different aggregates of the atoms of primordial hydrogen.' The idea, being at once singular and plausible, was hailed by the scientific world with great triumph. The ardent works of the great chemist J. S. Stas

gave more accurate values of the atomic weights; and these results completely contradicted the ingenious hypothesis. Subsequently many tried to justify Prout's hypothesis by lowering the standard of reference to half an atom of hydrogen; but this process of sub-division having no end, soon brought the hypothesis into disfavour.²

As a consequence of the periodic classification, we may rightly question ourselves that if the elements are distinct and independent of one another, how it happens that we observe so many groups of elements common amongst them. Again how is it that closely related elements are found associated together in Nature? As examples, iron, cobalt and nickel often occur together and similarly gold and silver also. Scientists are of opinion that 'when these ores were formed from their primordial element, variations of conditions led to the conjoint formation of such related elements.' Consequently, it is distinct that there is every possibility of the existence of a fundamental basis of all matter, that the universe is indeed at bottom not a chaotic assemblage of entirely different and dissimilar substances, that certainly there ought to be a unit, a beginning we may style

² More recently, Mosely conducted a brilliant experiment on the relations existing between the several elements. His method consisted in the determination of the frequencies of the X-rays given off when several elements were placed, one by one, in the way of the cathode rays, by the use of the crystal grating. He found that the square roots of their frequencies could be arranged in an Arithmetic progression, in which the value for hydrogen was the first term and also the common difference between any two adjacent terms. If this regularity indicates that all elements are formed by the successive addition of the fundamental basis of the hydrogen atom, then Prout's hypothesis is come to life again with a vengeance.

it, from which all matter in this universe finds existence.

We shall now enter into the extensive developments which have been carried on, in the region of physics with an aim to split up the atom and study its formation. The question of the constitution of the atom was a puzzle to scientists, till a vigorous impetus for advance was given by the discovery of the cathode rays in 1879 by Sir William Crookes. These rays are detected in a highly exhausted tube, when an electric discharge takes place inside it; and consist of particles called corpuscles proceeding in straight lines from the cathode. The sides of the tube are found to glow with a bluish green phosphorescence. These cathode rays travel in straight lines, normally to the surface of the cathode, produce mechanical motion and have the power of making the minerals exposed to them phosphorescent. Sir J. J. Thomson showed that these rays, as pointed above, consist of tiny particles, each having a mass equal to $\frac{1}{1700}$ th of the mass of an atom of hydrogen. It has also been discovered that these corpuscles have the same mass and properties, no matter from what sort of elements they are formed and also possess an identical electric charge. These corpuscles could be obtained in several other ways; they are emitted by almost all metals when heated red hot, by certain bodies when exposed to light and by radio-active substances.

A full discussion of the corpuscular theory will certainly carry us far beyond the limited space and the reader is referred to the excellent treatise on the "Corpuscular Theory of Matter" by Sir J. J. Thomson. We shall however rest satisfied with the fundamental points given by the great worker.

The corpuscular theory receives the strongest support from the broadening of the spectral lines as a result of a very strong magnetic field. This phenomenon of the change of frequency of vibrating corpuscles by magnetic influence, was observed by Zeeman and subsequently explained by Lorentz on the basis of the theory of corpuscles. The close agreement between the theoretical deduction and practical results is a strong evidence of the theory on which the whole development rests.

It is not yet clear whether the corpuscles of the cathode rays are really small portions of matter or whether they are merely charges.³ But nevertheless a considerable advance has been made since the discovery of the electrons; and now it is almost significant that the corpuscle forms the ultimate basis of all matter or at least occupies a very important part in the structure of atoms.

On the assumption of the existence of corpuscles in all matter, several interesting conclusions concerning the several physical properties of substances, have been deduced and verified experimentally. Taking for example, the thermal conductivity of metals and considering electrons as the carriers

³ "The corpuscle is, then, nothing but a disembodied electrical charge, containing nothing material, as we have been accustomed to use that term. It is electricity and nothing but electricity....The electron is then, a disembodied electrical charge, containing no matter, and is the term which we shall hereafter use for this ultimate unit, of which we shall learn that all so-called matter is probably composed."—Prof. H. C. Jones: *The Electrical Nature of Matter and Radio-activity*, p. 22.

"We have good reason for assuming that the negative electron is nothing but a disembodied electrical charge and that its inertia is wholly of electric origin."—Prof. R. A. Millikan: *Lecture on Twentieth Century Physics*.

of energy, it could be shown that the ratio between the thermal and electric conductivities for any metal obtained theoretically is the same as that obtained practically. Also thermo-electric and Hall effects could be easily accounted for by the electron theory. The most significant verification is given by the ingenious arrangements of corpuscles and the consequent determination of the electro-positive or electro-negative nature of certain such arrangements. Thus the variation of valency from element to element in any of the horizontal rows in Mendeleeff's classification could be justified. Equally impressive is the explanation which the corpuscular theory gives concerning the famous theory of Abegg that the sum of the positive and negative valencies of any element is always equal to eight. Hence there is a fairly strong evidence of the fact that all elements consist ultimately of corpuscles.

A marvellous impetus has been given to the theory of corpuscles by the wide researches conducted within recent times in the field of radio-activity, thanks to the wonderful application and untiring labours of Becquerel, M. and Mme. Curie, Rutherford, Ramsay and Soddy to mention only a few. In 1896, Becquerel discovered a remarkable phenomenon, wherein a photographic effect was produced by a double sulphate of uranium and potassium, even though the salt had not been exposed to sunlight. An explanation was forwarded subsequently that this strange behaviour of the salt was due to the emission of certain rays continually from it. These rays known after their discoverer, Becquerel's rays, were found to possess the remarkable property of ionising the gases through which they passed. Subsequently several other elements were discovered bearing

a close resemblance and exhibiting the remarkable property inherent to uranium. M. and Mme. Curie, while experimenting with pitch-blende, separated from it for the first time an element possessing the most remarkable and enormous radio-active power. They called it radium. Other similar elements discovered subsequently and derived from the same substance are polonium and actinium. Sir W. Crookes with his ingenious and wonderful instrument, the spinthariscopes, examined a very small particle of radium-bromide placed behind a screen covered with a thin layer of zinc sulphide with a powerful lens arrangement and demonstrated to an admiring world that the fluorescence observed with a radium compound was nothing but a shower of sparks projected from the surface. Here then radium was observed in its actual state of disintegration, a continuous stream of particles arising out of it.

Now the emission of such particles from a radio-active element is accompanied by a series of changes not only in its physical but also in its chemical properties. Ramsay and Soddy conducted an experiment in which they collected and purified the emanated gases from a radium solution and the resulting substance obtained was believed by them to be helium. Also what are called the α (alpha) particles, expelled during many radio-active changes are considered by some to be atoms of helium with certain changes in the electric charge. Thus it is seen that helium might be one of the disintegration products of radium. Scientists are of opinion that lead is the ultimate product of the disintegration of radium, which in itself is but a transformed product of uranium.⁴

⁴ According to Prof. Richards, each atom of uranium loses three atoms of helium and is converted into radium; each atom of radium loses five atoms of helium and is converted into a certain variety of lead.

These remarkable discoveries attending researches in radio-activity have shattered to the very foundations the theory of the impossibility of transmutation of matter. Here we see elements, changing one into another, characterised by a continual metamorphosis. No longer then, does the world consist of eighty or so different elements. The possibility of transmutation, so fostered by the old alchemists of the mediæval ages, hails acclamation and support.⁵

Does not the transmutation of elements so exemplified in practice, point out in an unmistakable manner, the fact that there is one primordial basis, out of which all matter is constructed? The chemist left us at the atom as the smallest particle of matter. The physicist has proceeded further. He has analysed the atom and arrived at the corpuscle. It may be that until the nature of the corpuscle is distinctly understood and until the exact relation between matter and energy is known, science could not boast of having the last word on the subject. So, much remains to be done but nevertheless a great truth has been revealed. After a dark groping for ages, an outlet has just been discovered. The goal may be far but the way is clear. The answer to the question propounded at the beginning is almost plain. And it is left to the future to complete the

⁵ "Thus the dreams of the old alchemists have almost come true. For centuries they had endeavoured to transmute the chemical elements thus to produce the precious metals, such as gold and silver. In this they had always failed. But nature, that powerful alchemist, had now revealed its secret that the chemical elements are not immutable but may be transmuted one into the other."—Dr. C. G. Abbot: "The Discovery of Helium and what came of it," The Annual Report of the Smithsonian Institution, U. S., America, for the year 1918.

solution or recast the whole mode of procedure to suit the increasing inventive ardour of the day.

The whole question of the unitary theory of matter is a brilliant exemplification of the truly wonderful powers possessed by nature. The idea that all matter in this universe is made up ultimately of the same fundamental basis is truly romantic. There is undoubtedly a charm embodying the whole conception. Finally we cannot better close the essay than by subscribing to the eloquent and laconic statement of M. Sendivogius, written so early as in 1650, 'Simplicity is the seal of truth. Nature is wonderfully simple and the characteristic mark of child-like simplicity is stamped upon all that is true and noble in nature.'—J. W. Mellor: Modern Inorganic Chemistry.

S. RAMACHANDRA RAO.

⁶ As one writer remarks: 'Nature is not a soulless interaction of atoms, nor life a paltry misery closed in the grave.'

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HISTORY AND CIVILIZATION.

HISTORY is a record of events which have occurred among mankind. It is an account of the rise and fall of nations, and of other great changes affecting the political and social condition of the human race. In short, History is a record of the progress of mankind in civilization. It therefore deals especially with those nations which have performed great achievements and exerted a commanding influence upon the fortunes of the human race.

History is generally divided into three great epochs—ancient, mediæval and modern. Ancient History begins with the first appearance of historic records, and ends with the fall of the Western Roman Empire, A.D. 476; Mediæval History or the History of the Middle Ages extends from the Fall of Rome, A.D. 476, to the Discovery of America, A.D. 1492; Modern History embraces the period from the Discovery of America to the present time.

Generally there are three sources of History—written records, architectural monuments, and fragmentary remains. All these point to Asia as the cradle of the human race. It is believed that mankind spent its infancy in the region between the Indus and the Euphrates, the Arabian Sea and the Jaxartes. The exact location of the Garden of Eden or Paradise, is not known. The Oriental nations reckon four Paradises in Asia—one near Damascus in Syria; another in Chaldaea; a third in Persia; and a fourth in the island of Ceylon, where there is a lofty mountain called Adam's Peak.

Mankind is ordinarily classified into five divisions—the Caucasian, or white race; the Mongolian, or yellow race; the Ethiopian, or

black race; the American, or red race; and the Malay, or brown race. Of all these races, it is only the Caucasian race that has figured in history. The history of the civilized world consists of the history of the Caucasian race. To this race have belonged the great historical peoples of the earth. Outside this race, first the nations of the Mongolian race such as the Chinese, Japs and Tartars, and next the peoples of the Red race such as the Peruvians and Mexicans, have alone played any considerable part in history. The Ethiopians and Malays have had no place in the history or civilization of the world.

The exact origin of nations has been involved in obscurity and till very recently was a vexed topic in history. However, the diligent researches of philologists have helped us to divide the Caucasian race into three great branches—the Aryan, Indo-European or Japhetic; the Semitic or Shemitic; and the Hamitic. The Aryan or Indo-European branch embraces the Brahmanic Hindus, the ancient Medes and Persians, and all the European nations except the Fins, Laps, Magyars, Basques and Turks. It also includes the Americans and Australians of European extraction. To the Semitic branch belong the Hebrews, the Arabs and the ancient Syrians, Assyrians, Babylonians, Phœnicians and Carthaginians. The Hamitic branch comprised the ancient Chaldees, Egyptians and Ethiopians.

The Aryan branch is called Japhetic because it is supposed to be derived from the loins of the great Japheth; while the Semitic branch is regarded as the posterity of Sham, and Ham is reputed as the ancestor of the Hamitic race. The name Aryan means *Tiller of the Soil*. It is in this characteristic that

this race differs from the Turanian or Nomadic races of Central Asia. The pre-historic Aryans dwelt about the ancient city of Bactria, the modern Balk, in Turkestan. Here this primeval race lived and attained to a considerable degree of civilization. They practised agriculture and cattle-raising, and also some mechanical arts such as weaving and sewing, and the manufacture of vessels from metals and earth. They were also skilled in architecture, navigation, mathematics and astronomy. To them marriage was a sacred contract; and they avoided polygamy from the very beginning. Children were regarded as the light of the family. They domesticated the cow, the sheep, the horse and the dog. They were monotheistic in religion and worshipped a personal god. Their system of government was of the patriarchal type, and the father was the head of the family. He was subject to the seven elders of the tribe, the chief of whom was the king. There was generally an appeal from the decision of the king to Heaven in the ordeal of fire and water. The Aryans followed their leaders and kings, and fixed the distinction between right and wrong by laws and customs. All these facts have been fixed for us by eminent philologists of the type of Maxmüller and others.

The increase in the Aryan population led to their division into three branches. One division crossed the Hindukush and overran Iran and developed into the great Median and Persian Empires. Another branch moved into the plains to the east of the Indus and became the forerunners of the Hindu polity and civilization. The last branch wended its way westward and migrated into the plains and peninsulas of Europe. There they gave birth to the foremost of the modern European nations.

The Indo-European part of the Caucasian race has always played the leading part in the civilization of the world. It has been the most active, enterprising and intellectual of all the races on the surface of the earth. The Aryans have always been the race of progress. They have surpassed all others in the development of civil liberty, the perfection of law and social advancement. They have beaten all other races in their progress in art, science, literature, invention and mode of living. To the Aryans is due the credit of originating, developing and perfecting constitutional, representative and republican government. They represent the highest type of human development and to them belong wholly the past and present developments of the world's culture and civilization.

The Semitic branch has been noted for its religious development. It is they who gave rise to the three great monotheistic religions of the world—Judaism, Christianity and Islam. The Hamitic race was famous for its development of architecture. To them we owe the monumental structures of Egypt and Chaldea. Both these nations, the Semitic and the Hamitic, attained to a certain degree of progress and then became stationary, with the result that eventually their civilization has utterly perished.

After the dispersion of mankind into the various quarters of the earth, men chose different occupations and modes of living according to the diversities of their places of residence. The inhabitants of the Steppes and Deserts became shepherds and roved from place to place, thus becoming Nomads. Those on the side of the ocean took to navigation, commerce and fishing. The dwellers upon the plains adopted agriculture and turned to peaceful occupations; while the rude moun-

taineer gave himself up to the chase and moved by a violent impulse for freedom, found his delight in wars and battles.

Commerce was a mighty factor in the development and civilization of the human race and the intercourse among nations. The men of the interior carried on trade along land-routes and the course of streams; while those along the sea-coast became sailors and developed a maritime commerce. At first they simply bartered and at a later age they agreed upon a specified standard of value. The dwellers in towns engaged in mechanical occupations, while those in the country-parts betook to agricultural pursuits. The former made rapid strides in arts, sciences and other refinements. The latter remained stationary and inert.

In the course of time men became divided into civilized and uncivilized, as either they advanced in talents and intellectual pursuits or remained dull cramped by isolation. Uncivilized nations are either hordes under an absolute ruler of unlimited powers or Nomads under a powerful leader famous for strength and daring. These primitive hordes exist in almost every region of the earth. But, they find no place in history. History deals only with those nations who have attained to some degree of civilization and have from similarity of customs and for mutual advantage engaged in peaceful intercourse with each other and who have made considerable progress in the science of civil government and the development of political institutions.

The world's oldest civilizations were those found in the valleys of the Tigris, Euphrates and the Nile, in the Peninsula of Hindustan and in the plains of China. Their exact origin is lost in the dimness of their remote antiquity and the entangled webs of fables and legends. These regions were richly endowed by nature with the resources neces-

sary for sustaining a dense population. Accordingly they formed the cradles of the oldest and richest empires and civilizations of the ancient times.

Historical Asia is South-West Asia. There the great Hamitic and Semitic Empires rose, flourished and fell. There the great religions of the world were evolved and spread to all the corners of the known world. The region to the north of the Altai was comparatively unknown in antiquity. Barren and bleak, it was occupied by a few roving bands of uncivilized Nomads whom history ignores except for the Mongols who overran and conquered the civilized empires of the South.

Egypt was the only exception of a powerful and civilized empire outside South-West Asia. The fame of Egypt spread abroad long before that of Assyria or Media. When Egypt was flourishing in the hoary past, India, China and Japan with their riches and profound philosophy were unknown and unheard of. Not until the days of Alexander of Macedonia did the nations of the Mediterranean know anything of these Eastern empires.

The only historical part of Africa was in the North, i.e., that part of the Continent bordering on the Mediterranean and watered by the Nile. The only great nations of ancient Africa were the Egyptians, Ethiopians and Carthaginians. The rest of the continent was a dark region unknown to the civilized nations of the ancient world.

Southern Europe was the seat of the two greatest nations of antiquity, the Greeks and the Romans. The Greeks have set a model to the world for all times in literature, philosophy and political freedom; while the Romans have influenced the whole course of modern civilized life and governments by their laws and political institutions. The other nations of Europe were barbarians,

Most of them fell before the Romans and were either partially or completely civilized by them. America and Australia were totally unknown to the ancient world and have come to light and prominence only very lately in modern times.

History then deals only with civilized man. It begins therefore with the origin of civilized peoples and with the commencement of historical records. Accordingly, the cradle of civilization was Egypt in the fertile valley of the Nile, where with the dawn of civilization flourished a mighty empire. History begins therefore with Egypt the oldest of historical nations.

Civilization and human progress have in the main followed in the wake of the sun. In the East arose those great nations and cities from which other lands have derived models for their civil institutions, their religion, and their culture. In the East originated trade—at first land-borne by means of caravans. These commercial journeys of merchants gave rise to many cities and centres of trade and to intercourse among nations and to interchange of goods, religious ideas and social customs. In the East were evolved all the great religions of the world and their full development. In the East were born the first forms of orderly government either patriarchal or despotic. The East, however, never went further in the direction of the development of the people's rights and liberties. The Orient has been essentially slavish and only too ready to submit to a despot, native or foreign.

Thus by disposition the Orientals became more inclined to contemplation, ease and enjoyment than to activity or serious exertion. This accounts for their lack of zeal for freedom. Having attained to a high degree of civilization they turned to the easy pursuit of pleasure, and thus by sheer stagnation became slothful and effeminate. Polygamy is

also a chief factor in the degeneration of the Eastern nations. Even their architecture though gigantic and imposing evinces their slavish mentality in that they do not possess the symmetry and harmony of the buildings of the free Western nations. Slavery paralysed every outward manifestation of Oriental life. It is only after long centuries of stagnation that the contact with the West has once again dispelled the charm of darkness and ignorance from off the clouded brows of the Orient.

Europe on the contrary, inhabited by the progressive Aryan race, has carried on steadily her development of civil, political and religious institutions. In particular, she has attained to the zenith of the development of her political institutions. Asiatic civilization has been stationary, while European civilization has been progressive. The Asiatics are passive, contemplative, easy-going and lazy; while the Europeans are active, vigilant and aggressive. The Europeans have colonized almost every available inch of ground throughout the world. The Asiatics on the other hand, do not colonize except in rare instances.

In the pre-historic ages the Patriarchal form of government prevailed. Since the formation of nations various forms of government have existed such as Autocracy, Aristocracy, Theocracy, Democracy and Republicanism. Monarchs existed in all the ancient States. Certain ancient countries were marked by peculiar social organisations according to which the people were grouped into classes called castes. The caste was an exceptional feature of both ancient Egypt and India and for a very long time retarded the growth of civil liberty which was a main characteristic of the progressive Aryan race.

Man is essentially a religious being and long before the dawn of the political horizon he made many manifestations of his religious

sentiment. Priests have existed among all communities from the very beginning of their existence and have exercised a profound influence on the life and thought of the communities. The religions of the world are grouped under three heads—Monotheism or the belief in one god; Polytheism or the belief in many gods; Pantheism or the system by which the whole universe and all its laws and creations are regarded as the Supreme Being. The Polytheistic and Pantheistic nations of the world have been idolators and are also indifferently called Pagans or Heathens. The great Monotheistic religions have been Zoroastrianism, Judaism, Christianity and Islam. The religions of the ancient Egyptians, Chaldeans, Assyrians, Babylonians, Phœnicians, Greeks, Romans and Scandinavians were all Polytheistic. Hinduism and Buddhism have been the chief pantheistic creeds.

There is a general belief that originally Monotheism was universal. It was only after the migration of mankind into different quarters that most nations fell into Polytheism and idolatry. Even Polytheists accept a Supreme Being who is superior to and above all the other deities. In this sense all religions may be considered to be monotheistic. Even Monotheism turns out to be polytheistic as in the belief in angels. The Hebrews and Medo-Persians were the only truly Monotheists among the ancient peoples.

Among the Polytheists the custom has always existed of making idols or images of wood, stone, metal or clay to represent their deities. Temples and altars have been erected for their worship, wherein sacrifices have been offered either to appease the anger of the gods or to win their favour. From the offerings of the fruits of the earth by the Hindus, Greeks and Romans, sacrifices have ranged to the slaughtering of goats,

oxen and buffaloes by less civilized tribes and even to the horrible and blood-curling rites of sacrificing human beings by the Dravids, Syrians and Phœnicians. At first the idol or image was only a visible symbol of a spiritual conception or of an invisible power; but this higher signification often gave way in the progress of time to the worship of the inanimate image itself. The only set of people who were conscious of any deeper meaning were the priests. They kept away from the people all knowledge of religion, for selfish purposes of their own.

To further delude the masses, the priests invented legends, fables and myths about their gods, clothed them in poetic fancy and thus originated mythology or the science of their gods. Enigmatical allusions, allegories and figurative expressions were freely made use of to give the fables a colour of supernatural dignity. These stories of the gods incited the people's superstition. A feeling of veneration and awe was imposed on them by solemn and dignified worship in groves and temples with mysterious ceremonies and symbolical usages. To inspire the people with a feeling of the divine presence sacred places and temples were instituted. Oracles were organised so that the superstitious multitude might get light into the future in obscure and ambiguous language. Thus and by similar means the priestly classes governed the masses in most countries. They secured power, honour and wealth for themselves by enslaving the people through ignorance, credulity, superstition and fear.

K. KRISHNASWAMI.

VOCATIONAL EDUCATION.

1. "The capital of a country does not consist in cash or paper, but in the brain and bodies of the people who inhabit it."
2. "The training of hand, eye, ear and voice supplement the older and central discipline of literature, opening new windows into the world and quickening the senses into new forms of happy exercise."
3. "What is it that we desire, in a broad way, for our people? That they should be citizens, reverent and dutiful, sound in mind and body, skilled in the practice of their several avocations and capable of turning their leisure to a rational use."

A. L. FISHER.

Time was when it was sacrilegious to raise the question of vocational training in all seriousness in England and elsewhere; Oxford and Cambridge were the strongholds of classical learning; the professors and the students were for a literary education. Even so late as the last century, Huxley had to cross swords with Matthew Arnold on the utilitarian and moral aspects of education. The need for the development of the sense for beauty and of the sense for morality was the plank on which "the classicists" held their ground against the attacks of their "enemies."

Time, however, justified the reasonableness of the "utilitarians"; the establishment of the new Universities of Leeds, Birmingham and London proved beyond a shadow of doubt that they were in the right and that the so-called "classicists" were only defending a lost cause.

Mr. Arnold and his class laid stress on the cultural and spiritual points of view of education; it is true, no doubt, that food, drink, clothes and shelter don't constitute life but it is equally true to say that without them, there is no life.

As such it will go hard against a nation if it should fail to introduce into the school curriculum such subjects as would fit a citizen in later life to win bread for himself and his family.

To provide for all the needs of man—spiritual, æsthetic and physical—some such scheme as the one given below may be adopted with advantage for the time-being.

SCHEME:

For Elementary Schools: Period—30 minutes each
50 periods in the week.

1. Literary	1. Vernacular	...	8
	2. Mathematics	...	6
	3. History	...	3
	4. Geography	...	3
	5. Civics	...	2
	6. Hygiene	...	2
	7. Moral	...	2
			26
2. Vocational	1. Garden work and Nature study	...	8
	2. Manual work	...	10
			18
3. Aesthetic	1. Music	...	2
	2. Drawing	...	2
			4
4. Physical	1. Drill	...	2

For Middle Schools: Period—50 minutes:
30 periods in the week.

1. Literary.			
1. English	...	...	5
2. Vernacular	...	...	3
3. History, Geography, Hygiene, Moral and Elementary Science	...	...	5
4. Mathematics	...	...	5
			18

2. Vocational.			
1. Garden work and Nature-study	...	...	4
2. Manual work	...	...	4
			8

3. Aesthetic.			
1. Drawing	...	...	1
2. Music	...	...	1
			2
4. Physical. (1) Drill			
	...	...	2

For High Schools, an alternative course is suggested as outlined below:—

Vocational Course.

1. English	...	...	5
2. Practical Chemistry, Practical Physics, Practical Mathematics and Vernacular	...	12	3 periods each
3. Physiology and Commercial subject	...	4	2 periods each
4. Drawing, Drill, Music	...	3	1 period each.
5. Vocational subject	...	6	periods.

(Agriculture or Shorthand or Soap-making or Printing or Weaving or Dyeing or Type-writing, etc.)

Literary Course.

1. English	...	...	5
2. Vernacular	...	...	3
3. Elementary Mathematics	...	...	4
4. Elementary Science	...	...	4
5. History of India	...	...	2
6. History of England	...	...	2
7. Geography of the World	...	...	2
8. Hygiene and Physiology	...	...	2
9. Drill	...	...	2
10. Commercial subject	...	...	2
11. Drawing	...	...	1
12. Music	...	...	1
			30

I may as well give a few words of explanation on my choice of the vocational subjects. India being an agricultural country and having most of its schools in rural areas, it is but fair that agriculture should be taught in a scientific way so as to help the future generation of farmers to derive the maximum benefit from their lands. It is well-known that in India no marked improvements have been introduced either in the way of the introduction of the labour-saving appliances

or in the way of improving the cattle-breed or in experimenting with a variety of manures. India has much to learn from America and the sooner that she learns, the better will it be for her and for the world.

Fortunately the foresight of the Government has made it possible for us to indent upon the services of a trained body of experts who may as well be asked to discontinue their propaganda work for the present and devote themselves in instructing a large section of the teachers to conduct garden and agricultural work on the most up-to-date lines. And if need be, courses may be instituted, preferably in the holidays, to coach up the teachers to handle this subject efficiently; a selected few may be sent to the Agricultural College itself. And to have facilities for practical work, the co-operation of the farmers of the locality may be sought till the school is in a position to have an experimental farm of its own. However, I believe that the system of co-operation as outlined above, if worked out in the right spirit and without friction on both sides, will prove of great value to the student, the school and the community.

The teaching of manual work is as important, if not more, as the teaching of agriculture itself. It will enable a pupil to choose a profession for himself, to be self-reliant, patient and careful, to imbibe a genuine love for manual labour for its own sake and to develop his powers of observation. To express the same idea in technical language, in the words of Mr. Legge, "We find manual work invaluable as a means of intellectual development, invaluable as a means of self-expression, invaluable as a means of keeping the individual in touch with life."

It also offers a wide range of subjects (both for boys' and girls' schools) for selection—paper, cardboard and clay-modelling, sand-building, flower-making, book-binding, weaving in cane, wood-work, toy-making, tailoring, knitting, sewing, cookery, laundry-work, house-wifery, spinning and weaving.

Such a wide choice may be perplexing but a few subjects—modelling, wood-work and weaving for boys and knitting, sewing, house-wifery and laundry-work for girls—may be introduced as an experimental measure. The choice has this advantage that it will not entail a heavy outlay except in the case of the weaving section; even here, the expenditure will not be in undue proportion of the benefits that will accrue. To start with, a demand to the extent of Rs. 4,000 may have to be met with as per a rough estimate given below:—

	Rs.
1. Improved pit-loom (plain-weaving) (1) ...	60
2. Do. (superfine warps) (1) ...	60
3. Do. with circular box slay (1) ...	60 + 25 = 85
4. Spare drop box slay... ..	25
5. Improved pit-loom with special tape slay	60 + 35 = 95
6. Frame loom with 100 jacquard machine	140 + 200 = 340
7. Do. 200 do.	140 + 400 = 540
8. Frame loom with honeycomb	140
9. Damask	150
10. Turkey towel	160
11. Coir	300
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13. One complete set of winding, warping and sizing apparatus,	500
14. Reeds, shuttle, ropes, etc.	600
15. Winding machines (10)	150
Total	3,280

It is just possible that my scheme may not appeal to many; it may be that it may not

satisfy even a few; be that as it may, the teaching of English as a language in the second stage of education, the alternative courses proposed at the very commencement of the High school stage and the inclusion of music, hygiene and a commercial subject in the list of compulsory subjects common to all (at certain stages) may call for a few words of comment.

The outcry in certain circles against the teaching of English is silly in view of the fact that a great agricultural and industrial country as India will be cannot hope to ignore a language which is spoken by large sections of the civilised world. On the other hand, I would urge that the study of Sanskrit and other classical languages should be dropped as that would involve a flagrant misuse of time which we could ill-afford to spare in the hurly-burly of this world; Sanskrit is a luxury for the few and not for the many.

As for the alternative courses of study, it is but fair that such courses should be offered during the third stage—one for those who wish to enter life after the completion of the course or wish to take up higher courses of study in agriculture, commerce and technology and one for those who wish to qualify themselves for the "liberal" profession.

The compulsory study of physiology, music and of a commercial subject at various stages will have its justification on more than one ground. To have a knowledge of the first aids, of the sanitary principles and of the human organism is to aim at the study of the useful; to tune our soul to the harmony of the spheres, to pass an idle hour in the company of the immortal singers and to do homage to Apollo, one may as well learn music; and to pick up the rudiments of Short-

TEACHERS' ASSOCIATIONS AND THEIR FUNCTIONS.

THERE are many teachers who are no better than dumb-driven cattle. They never question themselves whether they are teachers at all. Such questions as the following never occur to them:—"What is the work I am doing? Why am I doing it? How am I doing it? How am I expected to do it and by whom?" To them life is a burden and they shun society and social work. There are others, on the other hand, who take an earnest and living interest in the work they do and are divinely discontented with the actual condition of things which falls short of the ideal aimed at. The former class of teachers are the bane of the teaching profession in particular and humanity in general, while the latter class are the salt of the earth. The one does more harm than the other does good.

The necessity for teachers' associations is keenly felt by the latter class alone. They have found that action in a corporate body is more effective than individual action. They have also found that much work in life for the sake of humanity cannot be done by individuals, however gifted they be, except in association with others. The feeling of this necessity is the direct and ultimate cause of the foundation of teachers' associations.

This short study of the genesis of teachers' associations leads us to the primary or vital function they perform. It is the justification of their existence. It is the fulfilment of the objects for which they strive. It is an association cannot, by internal or external causes, carry out its decisions or act up to its ideals, then it ceases to be. To enforce one's decisions one must have power. The first and

hand or of Commercial correspondence, even when one takes up a literary course, is to guard oneself against non-employment.

To sum up. The times demand that vocational training classes should be instituted at the earliest; the Government through the Minister and the Director of Public Instruction are prepared to do their best for the country. It only remains for the people to bestir themselves and to shoulder ungrudgingly the financial burden in their own interests and in the interests of their children.

K. SRINIVAS KINI.

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AND
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foremost thing for teachers' associations to strive for is power—power vested in them by willing humanity—power absolute and uncontrolled due to the confidence of humanity that a teacher or teachers' associations cannot abuse power. Power, to a teacher, means only opportunity and facility to serve mankind.

Another equally vital necessity is absolute independence. Exercise of freedom and self-determination thus forms another function of teachers' associations. Freedom means the liberty to feel nobly, act nobly and think nobly. It means the abolition of slavery—imposed by the self as well as by the not-self.

Granting these vital necessities which make for the bare existence of teachers' associations, what is their organic function? Do they merely live or live to do something?

There are two kinds of functions that they discharge (1) the educational and (2) the administrative. The first is the main function and the second secondary.

The educational function is characterised by a keen sense of the value of the work of teachers. They are the living links connecting the past with the future. They are the custodians of the best part of human achievement and the directors of humanity along channels of nobleness and virtue. They are the makers of knowledge. They are the judges of knowledge. In fact they are omniscient. This is possible only when man identifies himself with the universe and sees the wonderful oneness of knowledge itself. Thus the work of associations lies in their rising equal to this standard. They must be true teachers, the real and eternal kings of the world.

The secondary function—the administra-

tional—is characterised by a keen sense of the fact that man is more than the instrument he wields. All educational machinery so far as it is organised, such as Universities, colleges, schools, Inspectors, text-books, syllabuses and examinations, the timings of schools and examinations, the seats and accommodation of pupils and teachers, the pay and work of teachers and pupils and a host of other things, must be valued at its true worth as the servant of man. It should never be allowed to sacrifice the man for its sake.

Granting that a teachers' association lives and functions, how does it affect the world? How does its non-existence affect the world? These are questions that naturally arise from what has been said in the preceding paragraphs. To answer them is not so easy as it first appears to be, for herein is involved the vast question whether man's work in the world, as revealed in man's history which is the sum total of all the different particular-man's histories that we have, is after all co-operation with or antagonism to God's design. Man's impact on the vegetable, animal and mineral kingdoms has been running counter to the process of evolution. At its best man's influence on his environment has been selfish in purpose and killing in its effect. Is there no retribution to man's trespasses? Does not his own perfected machinery for education carry him farther and farther from reality and nature till at last the product of the system is certainly not human but something else? The mind shudders to pursue the thought.

Another way in which the world may be affected may be seen in the following way. The easy means of communication, the arial services, the wireless telegraphy and a thou-

sand other features of the modern civilisation, all of them capable of annihilating the barriers of time and space between man and man, seem to be in bad need of something that destroys difference between man and man. The various agencies that have contributed to make the big world look like a city with countries for its streets and cities for its houses and continents for its wards, have only succeeded in bringing man and man nearer but not in making them love one another or each see his own reflection in the

other. It is given to teachers' associations, far and above associations of other kinds of human beings, to hasten the advent of the millennium. Teachers alone have recognised the solidarity of the human mind. They alone realised that the whole world is one family. Thus another function of the associations is the laying of the foundations of the parliament of man for the establishment of a true fellowship of humanity transcending the barriers of race, clime and time.

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DICKENS' TALE OF TWO CITIES.

[A Study in Plot Construction.]

THERE is a large consensus among critics in urging that Dickens is not a consummate literary architect. In fact his technical art as a novelist is not quite equal to the real force of his genius. A great story-teller, a wonderful creator of character, and a popular humorist, he disappoints us, however, as a literary architect; for in the mechanism of his plots there is little for us to admire, but much to condemn. The most serious fault is an almost incredible absence of form in his novels. It is indeed unjust to deny them a plot, for we feel an absorbing interest in the evolution of the story. But the books appeared in serial parts, and the plot became diffuse and consequently inorganic. The sub-plots developed themselves out of all proportion to the main theme and sometimes even usurped the chief place in the story. A signal instance in point is the episode of the Brasses in *The Old Curiosity Shop*. Again, as in the case of *Pickwick* and his friends, the story is prolonged beyond a point where the interest in the main plot ceases. Such limitations certainly mar the artistic beauty of his novels.

But *The Tale of Two Cities* is distinctly a departure from Dickens' usual method. Far from being a disjointed series of droll sketches like *The Pickwick Papers*, or a rambling and loose story like *Dombey and Son*, *The Tale of Two Cities* is a remarkable triumph in plot-construction. Everything in it has its due place in the development of the main plot, and the action moves swiftly on to its thrilling conclusion. In short Dickens presents to us in this novel a plot which cannot but argue his skill and secure the interest of the reader

throughout. There are indeed few novels in English which give the reader so high a sense of perfect workmanship. A detailed consideration of the plot-construction of our novel leads to this conclusion.

The first element which contributes in a great measure to the perfection of plot-construction is unity, which is secured by concentrating the interest upon one main story and bringing everything else in due subordination to it. Thus the main plot of our novel is the love story of Charles Darnay and Lucie Manette on whom the novelist lavishes almost all his attention. All other incidents are only so many tributaries to the great river, which is the main theme. In this way the author secures unity to the plot. For once in his literary career Dickens does not forget the forest in the trees.

But no less important than unity is coherence. The various incidents that compose the story should be so welded together as to preserve a necessary or logical connection among themselves. Thus the rescue of Doctor Manette from 'One Hundred and Five, North Tower', Charles Darnay's arrival in England, his trial at Old Bailey on a trumped-up charge of treason, and a host of other incidents, even such a trifle as Jarvis Lorry's drive in a stormy night,—all these are so knit up that they seem not as isolated incidents, but as continuous parts of a whole action. This is one of the many proofs which attest to Dickens' skill in workmanship.

A third element which along with others makes for the perfection of plot-construction is the dramatic curve. In fact there is no story more interesting than that in which interest is gradually enhanced up to the crisis by the process of entanglement caused by the operation of conflicting forces upon

the same characters. We are not to seek far for illustrations of this point. The recovery of Doctor Manette brings a lost parent to Lucie, and the presence of Charles Darnay on board the ship which takes the Manettes to England gains for Lucie the admiration and support of another besides her father. Thus fortune smiles doubly on Lucie. But this is soon followed by the trial of Charles Darnay. That this trial is as much a trial to Lucie and her father as to Charles Darnay is clearly borne out by the Court scene. This then is a reverse in her fortunes and in those of her future husband. But this reverse is soon overthrown by the acquittal of Darnay, and once more fortune smiles on Lucie when she and her father settle happily at Soho. Our interest in this alternation of fortune is kept up till we reach the climax in our novel with Darnay's return to France. ●

It is a general feature of some novelists to be warm and interesting till the climax is reached and to get chilled and mechanical when once the disentanglement begins. They narrate the rest of the story or make the characters do it for them. But Dickens does not fall into this error in his *Tale of Two Cities*. Thus Darnay's return to France in answer to the earnest solicitation of his faithful valet, Gabelle, his imprisonment and trials there,—all these serve greatly to the accumulation of interest. Not till the hero is released from the jaws of death by the heroic self-sacrifice of Sydney Carton does our interest in the tale diminish.

Moreover no plot is sufficiently complex and interesting without some episodes grafted on to it. But these episodes should not be developed for their own sake, but should be dovetailed together as integral components of a definite plot-pattern so as to enable them

to contribute their quota to the main plot by enhancing the interest aroused by the story. Thus the episode of "the Lion and the Jackal" may at first sight seem unnecessary; but the omission of such a picture of Carton before we come to know of his final self-sacrifice will not satisfy the principles of true art. This episode brings out by way of contrast with Stryver the substratum of gold latent in Carton's character, thus preparing us for his sublime self-sacrifice. A second episode in our novel is "the fishing of Jerry Cruncher," which has a vital bearing on the main plot inasmuch as Cruncher is able later on to give the lie direct to John Barsad and thereby secure the means of obtaining access to Darnay at the black prison of the Conciergerie. Yet another episode is the picture of Sydney Carton and the little French seamstress ascending the guillotine hand in hand, thus accentuating by contrast the happiness of Lucie and Darnay. The other episodes in the novel can be shown likewise to be quite pertinent and necessary for the working out of the main plot.

Further, in the evolution of the plot the motives which prompt the characters to act as they do must be in keeping with their nature. If for the sake of plot a character is made to take a line of action in contradiction to the whole bias of his disposition, then the art is faulty. It is therefore Dickens' glory to have represented Charles Darnay throughout the novel as a hater of inequity and a vindicator of justice. His self-imposed exile from France in detestation of the callous oppression of the French aristocracy to which he belonged, his uniting himself with Lucie Manette as an atonement for the grievous wrongs that her father had suffered at his

father's hands, and his hastening to France in response to his valet's appeal at a time when his person was in imminent peril,—all these emphasise his essential humanity. Again Jarvis Lorry is the business-man all through the novel. All Paris may be in revolt. Her streets may run with blood. But Lorry's business cannot suffer and he goes to Paris as if nothing uncommon has occurred. Above all, Madame Defarge remains to her last moments the bloody, ravenous, and blood-thirsty amazon of the novel. It is in consonance with this phase of her character that she is represented as desiring the cold-blooded murder of an innocent mother and tender child for no fault of theirs. A more striking instance cannot be cited to exemplify Dickens' skill in consistent character-portrayal.

To crown all, Dickens stops the story where reason and art require it should stop. The end has been worked out and there is a sense of finish when we reach the sacrifice of Carton. The Manettes are out of the zone of

danger. The various episodes have had their share in working out the main plot. We are no more interested in the fortunes of the characters. But had Dickens liked it he might have tacked on to this at least a note where he might give us the later fortunes of the characters. He might tell us how Darnay settled in England, how Stryver felt the need of the 'Jackal' and the punch-bowl, and how Cruncher was again present at the entrance to Tellsons' Bank with his rusty fingers twisting the straw. These indeed will be information to us. Perhaps it may be conceded that they will be in some sense interesting information too. But after the sublimity of Carton's divine self-sacrifice things earthly can not but grow worse than insipid to us. If Dickens then had really told us about the later fortunes of Charles Darnay and party, there would have been a distinct climb-down from the loftiness of the position he has attained in his last chapter. After God has spoken, it is not up to Man to brag.

V. SUNDARESA IYER.

B. A. DEGREE EXAMINATION, 1923.

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A PLEA FOR COLLEGE.

(By MR. SHRI KRISHNARAO VAIDYA,
H. E. H. the Nizam's Educational Service,
Aurangabad.)

WE cannot be oblivious of the fact that once there was a college in this ancient city (Aurangabad), which served as a beacon to all parts of Maharashtra portion of H. E. H. the Nizam's Dominion and that it did yeoman's service to the youths of this part of the State, who looked to it as the *ultima-thule* to their educational endeavours before proceeding either to Hyderabad or Bombay for completing their degree. We are sorry we are deprived of this light at present and we feel as though darkness envelopes us. We feel this want all the more because of the presence of a few teachers in the Government High School, Aurangabad, who in our opinion, constitute a real basis for re-establishing the College and thus reviving higher education that was once carried on in this country with the able collaboration of that devoted and enthusiastic teacher, Mr. Govind Ramachandra Kale, whose memory is even green here, on account of the splendid work he carried out in this part of the country.

We further state that the old college was abolished on the consideration that the results at the old Matriculation were poor but now

instead of ten or twelve Matriculates that the institutions in the Dominion were able to turn out in the past, we are now able to be proud of at least two hundred which is twenty times the old number. So we beg to submit that this great improvement in the High School education demands the revival of the College department which would serve as the cope-stone to the educational edifice so slowly and steadily built during the last forty years.

The schools flourish only when there are rivals to them and colleges form no exception to this rule. In addition to this we think that one college for the whole Dominion cannot satisfy the demands of the whole Dominion. As there is the *Nizam's College* for Telingana portion, so do we require one for Maharashtra. We further beg to submit that a college like this will obviate the necessity of boys travelling long distances in search of their intellectual food and put a stop to all the anxieties of the parents incidental to their enforced isolation.

We hope that the University of Madras and the authorities of H. E. H. the Nizam's Educational Department will ponder over this our request and will make necessary arrangements to carry on higher education in this part of the State.

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XXVII—75

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THE CHANCELLOR'S ADDRESS.

His Excellency the Chancellor, in addressing the Convocation, said—

Mr. Vice-Chancellor and Members of the Senate of the University of Bombay :

Since I last had the privilege of addressing the Convocation, we have been some of us actors in and others spectators of the most interesting drama that history can ever present to its students. There is nothing in the whole of the world's history that so fascinates the mind and captures the interest alike of the contemporary writer and the future historian as do the later stages in a nation's growth to political manhood ; and it seems to me that the reason lies in the essential sameness that pervades each renewal of this world-old struggle.

As each successive nation has drawn nearer to its goal, it has inscribed upon its banner the ancient devices and adopted for its war cry the old watch-words that throughout the centuries have inspired the march of progress. These devices and these well-known watch-words have performed a great service to mankind, but like all faithful servitors they have not escaped the fate of being abused or forced into performing duties naturally abhorrent to them. Many reactionary movements have been disguised under the cloak of progress, and not a few nations have undergone terrible punishments for following those who cried the names of liberty, equality and fraternity, but stood in reality for anarchy and bloodshed.

To-day we in India are enrolled under the banner of political progress, and are answering to the cry of liberty. Events are moving fast, faster than many of us realise, so fast that we have hardly time to see and to tell each other whither we are going. Indeed the time has come when we are in danger of being mesmerised into headlong obedience to strange doctrines irrespective of the tests of experience or of their

real credentials. The historian can multiply instances of the danger of unreasoning response to such calls. He would tell us, I think, that there comes a time in the history of every nation when it is imperative that it should examine the real meaning of the ideals at which it aims, and convince itself that it is not being misled into an acceptance very different from that which all experience has shown to be the true one. And I, as I anxiously examine the tendencies of our present times, am more than convinced that in India that time has now come. Liberty is the cry we hear around us. Are we sure that we know what liberty means, have we paused to consider whether what we call liberty is the same in conception as the great ideal that has inspired all the noblest advances in the progress of mankind? I suppose that every nation, ever since the time when Cicero wrote that "*populi Romani res est propria libertas*," has claimed liberty for its own child: and Rome perhaps could support that claim against the nations that were its contemporaries. But I hold it true that of modern races the Anglo-Saxon may lay claim unchallenged to have attained an earlier perception of the moral advantages of liberty and a better understanding of its right uses than any other race upon the face of the earth.

Long before other races had begun to awaken to political consciousness, Englishmen were entering upon the long struggle in which the first victory was the signature of the Great Charter and the Declaration of Right perhaps the most significant. "Liberty, Liberty," cried Madame Roland, "what crimes have been committed in thy name": but the story of the Anglo-Saxon struggle for liberty contains hardly a crime that can be pilloried at the bar of history. Men were found in plenty to fight for liberty, to suffer and to die for it—there was no lack of courage in the followers of that banner. But it was in the hour of victory that they showed their real worth, showed also that true liberty—nothing more and nothing less—was the ideal that inspired their every effort. They knew from the first that the journey before them

was long and difficult, that each step forward must be deserved before it could be made, and realising this they never lost patience or turned to autocratic or vindictive methods but remained true to their ideal. They accepted negotiation when they could, and fought only when they must, and so for centuries generation after generation took up the struggle where their predecessors had left it and went forward with unflinching perseverance till the goal was won. The liberty for which they fought and suffered was the model upon which every nation that has struggled successfully for freedom has based its ideal, it was no spiritual state, no self-sufficient rule of life laid down by school-men. Pericles may have been right when he wrote that a good conscience is liberty: but the liberty our ancestors fought for was a liberty that extended to every phase of life, freedom to work and freedom to develop—a secure practical heritage that they could bequeath to those that come after them, and we who to-day enjoy that heritage are very sure that the liberty they have bequeathed us is the true liberty. The liberty we prize, the liberty we have fought for all over the world, the liberty which once again after four years of struggle we have re-secured for the world, is not expressed in the decision of a committee, is not found in the fiat of this ephemeral leader or that, is not buttressed by intimidation or supported by clamour. It is a liberty to think, speak, touch, move and profess what we believe and hold, subject only, but subject always to laws whose structure rests on the experience of centuries and which are sealed by the sanction of civilised opinion all over the world.

It is a corporate liberty belonging to each one of us not as an individual being but as a member of a community and the privileges it confers are bound up with the responsibilities it entails. So in our social relations we render homage to true worth and to constituted authority, securely confident that no other power on earth can force us to other obedience. In religion we hold ourselves free to believe what our heart and reason teach, but not free to suppress or to jeer at the

beliefs of others: in business free to reap the fruits of our own industry, but not free to rob others of their just due. For our liberty depends upon the just fulfilment of our responsibilities towards our fellows.

It may be objected that the claim which the Anglo-Saxon races put forward to the truest knowledge of the meaning of liberty, is a claim that exists only in the racial mind that each race is prejudiced in judging its own history.

Let us test it then by results, which are the only incontrovertible evidence. At the end of the 18th century when the French nation fell into that fever for free government, the infection of which was not stayed until it had touched almost every nation on the Continent they aimed at converting their constitution in one step from an absolute monarchy to a broadly enfranchised democracy. They were led to think that liberty might be had by rooting out at once and for ever every vestige of the form of government under which they and their forefathers had lived for so long. What did they gain by this undisciplined and vindictive impatience? The answer is best given in the words of a contemporary writer:— "France when she let loose the reins of legal authority doubled the license of a ferocious absoluteness of manners and of an insolent irreligion in opinions and practices..... France has bought undisguised calamities at a higher price than any nation has purchased unequivocal blessings: France has bought poverty by crime!"

And if more were needed, to-day before our eyes is being enacted a drama of crime that has purchased poverty—a drama which teaches us in equally striking fashion that hatred and vindictiveness are autocratic masters, and that the law is the only barrier that saves each man among us from the tyranny of those stronger than himself. Disregard and trample down the law and there follows the tyranny of anarchy that is worse than any restraint of authority—a tyranny under

which no man knows what chance whim may direct his life: under which he lives in perpetual fear lest the fruits of his labour, his property, his land, even his life be taken from him, and dares hardly move abroad, or open his lips in speech. France 100 years ago and Russia to-day were alike persuaded that they were on the road to liberty: the same road that England had been treading for so many years. How was it then that England and the nations who modelled their efforts for freedom upon hers escaped the dreadful catastrophe that those two nations underwent? The reason of their salvation is not I think far to seek. In short it lies in discipline and in the respect for constituted authority which discipline ensures. It was thus that those old stalwarts who drafted the famous Petition of Right were saved from mistaking anarchy for freedom: it was because, in the words of Burke, "they preferred the positive recorded hereditary title to all which can be dear to the man and the citizen, to that vague speculative right which exposed their sure inheritance to be scrambled for and torn to pieces by every wild and litigious spirit." In other words, they had inherited and received the inculcation of a spirit of discipline, and therefore they were imbued with a strong respect for constituted authority and they realised that respect for law and order is vital to political progress. This is no *otiter dictum*, but a principle widely accepted both by statesmen and political scientists. Plato, the father of political philosophy, has pointed out in the *Republic* that excess of freedom, whether in politics or individuals, seems to pass directly to excess of slavery, and there has survived a line of the poetry of a later Greek writer which gives us what must have been every Greek statesman's definition of liberty. "Every free man", it says, "is a slave to one thing only, the law." Why did the Athenian polity at its best procure for its citizens so wonderful a condition of contentment and prosperity—simply because the whole of

Athenian life was based upon self-discipline and therefore upon moderation.

The statesmen of the Roman Republic knew that its greatness rested upon the same foundation, and that the freedom of its citizens was bound up with a disciplined respect for law and order.

To what conclusion does this comparison of modern and classical instances lead us? Surely, to one conclusion only—that liberty does not mean every man having the power to do what he wants; rather liberty is only present in a state when every man realises that the only giver of his freedom is the law which shelters and protects him from the interference of his neighbours: and that upon his disciplined observance of the law depends his continued existence. Should it continue, there is no limit to the progress that the individual or the nation may achieve. The individual is free to develop to the utmost in every phase of life; while by the gradual expansion of trade and commerce the nation may establish widely and upon secure foundation, and by the acquisition of wealth may acquire international power, and its internal organisation can gradually so perfect itself that every man is in effect at once a landowner, a scholar, and a Cabinet Minister.

"There only liberty" said Burke, "that is valuable is the liberty connected with order: that not only exists along with order and virtue, but which cannot exist at all without them. It inheres in good and steady Government as in its substance and vital principle." That is a phrase that every reformer should learn by heart and remind himself constantly of its meaning. If his achievements are consistent with the principle it enunciates, then they will be great achievements, noble and enduring. If he deserts that principle of design or in a rash moment of impatience, he must expect at no distant period of time to see all he has fought for and all he holds most dear flung into the cauldron of anarchy and hence there to be irretrievably destroyed.

First of all then to appreciate and understand the real nature of liberty, what it is and what it is not, and then to fashion your conduct in deference of the real principles of true liberty, is the first duty of those of you who to-day are on the happy threshold of your working life. If anything I have said to-day may help you to that understanding I shall have achieved not only my own object, but that of this great University whose sons you are and whose reputation is always in your keeping.

EDUCATIONAL TOPICS.

Female Education.

A writer in *The Indian Education* (for Aug.), discusses three important questions with regard to female education—syllabus, finance and teachers.

Of these the first is by far the best treated and we take the following interesting extract:—

It is enough for our purpose to state that as marriage is the normal aim in a woman's life, the question of woman's economic independence does not really arise. It is never contended in India that a woman lives on the bounty of her husband. The question really becomes important when a woman becomes a childless widow. Even in this case it may be pointed out that, excepting for the Brahman class, re-marriage is allowed by custom. Brahman widows follow generally the profession of cooking. In these circumstances the only honourable careers open to women are the professions of nursing and teaching. Then again in fixing the syllabus we must not ignore the physiological and biological differences between boys and girls. Girls require more rest when they reach the 12th year. During the years of secondary education they appear to be more susceptible to injury through nervous strain. We must also take into consideration the fact that the average age for girls to marry ought to be 18 at the most. In the west it is 27 and therefore women there can continue the education till that age.

All these considerations lead us to the conclusion that the education of a girl must be over by the time she is 17. This means that female education can have only two stages—primary and secondary. The primary stage will be from the sixth year to the tenth and the secondary stage will cover the period between 11 and 16. The vernacular should be the medium of instruction. After they have studied elementary mathematics, higher mathematics should be voluntary. Sanskrit or any other dead language need not be compulsory. They must obtain sufficient mastery over the English language. They must be familiar with the teaching of their ancient literature. While welcoming western culture, their education must be founded on a reverence for their own culture. They

should also have special training in mothercraft, child-culture, domestic science and domestic sanitation and first aid. It is our opinion that unless the syllabus is radically changed in the manner shown above, female education will not become popular in our country. Accordingly, we suggest the formation of an advisory board consisting of members representing different shades of opinion with regard to female education.

Education in China.

The Pedagogical Seminary, an international record of educational literature, institutions and progress (for June), describes the general condition of modern education in China, the work of the Education Ministry, the provincial and local authorities in education, etc.

The School System:—The aim of education was conceived by the first Minister of Education under the Republic, Tsai Yuan Kai, to be the cultivation of moral character in the young, supplemented by an industrial and military training and rounded out by an æsthetic education. With this aim in view the whole system of education has been established on the inauguration of the Republic. It may be briefly indicated by the following outline:

Ages	Schools	Length of Course.
7-10	Lower Primary...	... 4 years, meant to be compulsory.
11-13	Higher Primary...	... 3 years.
	or	
	Industrial of Class B ...	... Same.
	Middle ...	... 4 years.
	or	
14-17	Normal ...	... 1 year preparatory plus 4 years.
	or	
	Industrial of Class A ...	... 3 years.
	University ...	... 3 years preparatory plus 3 or 4 years collegiate work.
18-22	Higher Normal ...	... 1 year preparatory plus 3 or 4 years collegiate.
	Professional School ...	... Same as above.

Going into the details of the system we have the following information:—

Graduates of the higher primary may enter

either the middle school, or the industrial school of class A or the normal school. The course of the middle school is four years; that of the industrial school of class A is three years; and that of the normal school is four years plus one year in a preparatory class. In case children cannot enter either one of these schools, a continuation class of two years is again provided for them. The responsibility of establishing these schools was assigned to the provincial authorities, and all the expenses are paid from the provincial treasury. In case a district or a combination of several districts is financially capable of establishing a middle school, it is encouraged in every way to do so.

Graduates of the middle school may either enter the professional schools or the preparatory department of the Universities or the higher normal schools.

The professional schools may be established by the central government, or provincial authorities, or private enterprise, while the Universities and higher normal schools are supported from the national treasury.

The education for the girls has not been neglected by the framers of the present educational system. In the primary schools the girls and boys may be equally admitted, although they are usually required to be separated in classes. Special middle schools for the girls are provided for on the same basis as those for the boys. Girls' Normal Schools had been established even before the Republic. At present, many Universities, both government and private, have admitted girls to their classes. Generally speaking, the education for girls is about ten or fifteen years behind that for boys, but we have come to realize the importance of women's education and we can entertain a hope that before long the girls' education will be placed on an equal footing with that of the boys.

Curricula: The most noticeable feature of the curricula of the different schools is their uniformity and rigidity. In view of the immensity of the territory and of the most diverse conditions of the different parts of the country, one would naturally expect a great variety in the courses of study in order to make the subject matter of instruction more suitable to the local conditions and to make the schools more serviceable to the community. But, on the contrary,

the curricula for the Primary and Middle Schools have been drawn up by the Ministry of Education for the whole country without any variation whatever. Furthermore, the text-books of all these schools, particularly those used in the higher and lower primary schools, must be approved by the Ministry of Education. Since the publishing companies in China are very few in number, there is not very much choice in selecting the text-books, even if one wishes to do so.

School Discipline: Besides the various problems stated above, there is another disturbing feature in our modern education, that is, the tendency toward insubordination on the part of the students. During the recent years student strikes and even riots are not of infrequent occurrence. The chief reasons for these are the wrong conception of liberty, the mismanagement of schools, the spirit of unrest during this transition period and the bad training of home and school.

Thoughts on Examinations in English.

The Investigators appointed by the Secondary Schools Examination Council of England hold in their report issued in 1919 that English should be considered under the headings of composition and literature. Under the former they group essay, precis, reproduction of passages and questions in grammar and composition. Under literature they group set-books and a general literature paper which may come at a late stage. They are afraid of wide syllabuses combining intensive with general study. They of course frown on literary criticisms and the mere getting up of notes.

"Now the report holds, very wisely, that the essay should avoid abstract subjects. The warning is still needed. A short Russian story, written, I think, by Gorky, records how an exasperated parent interviewed a teacher who habitually set abstract subjects for his essays. The story ends by describing how the parent hanged the teacher in his cravat. As far as I am aware no one in the world was any the worse for it, except the teacher."

"Further, the report suggests that the essay paper should include one subject in which imagination, and another in which a practical bent, should be allowed free scope. But in regard to precis-writing and reproduction of a given passage read aloud, it may be remarked that the speed, as well as the power of grasping points, is important. And here again distinct directions should be given before the papers are distributed or the passage read. Of all papers, the reproduction of the sense of a passage read is the most difficult to arrange with any fairness; for one reader will be semi-audible, another will give too much voice-help, another none at all. Perhaps the telling of a story by an expert is the safest form that a reproduction paper can take."

"In regard to set-books, we have sharply to distinguish between those read intensively and those read generally; and most teachers would agree in this: that a book intensively studied cannot be known too well. If this be true, the book chosen must be short and the intensive plan must be clearly mapped out. Here again, as in the grammar and composition, the examiners may make it clear by a manifesto, which surely they are permitted to publish at the beginning of the school year, that they are not going to ask questions on the derivation of words or on literary criticism. The teacher has plenty to do, and the class has plenty to do, without reverting to methods which some think antiquated. But any book chosen for intensive study becomes at once a type, and the Tenth Satire of Juvenal, the Fourth Book of the *Aeneid*, the Book of Ruth, one book of Malory, "Reynard the Fox," the Parables of the New Testament, half a dozen of Bacon's essays, "Adonais" (I cite these as short "books," not as works suitable for the age of sixteen), at once land us in the wide domain of literature."

"The truth is, that, under the present system, examiners are at their wits' end to find questions which will defeat the crammer, encourage the

well-read and interested teacher, and afford scope for original treatment by the young candidates. The weariness of the examiner is revealed in his questions: "Illustrate," "Examine," "Support," "Comment on," "Criticize," are his exhortatory words—words that mean nothing at all to the person taking the paper. Nor do examiners always remember that a bad question, if it attract thought, is better than a good question that no one can answer, and that these candidates are crammed with things they want to say if only we will let them. Any one who doubts the truth of this has but to conduct an oral examination of a class in the "Merchant" or in "A Midsummer Night's Dream," or even in "Sir Roger de Coverley." Question suggests question, and faces light up, and when faces light up over literature the game is won. Perhaps, though, it is not our object to win the game. I am not so foolish as to think I have here set down anything new or much that will recommend itself as an old friend in a fresh domino. The examiner who manages to get good results out of his papers may be found every year and in every examination; he does, at any rate, please his candidates. But to please any large number of teachers by your examination papers is not given to man."

Inspectors and their Critics.

The Journal of Education and School World (for August) puts forward what purports to be the views of teachers working in Secondary schools in Great Britain regarding the prevailing system of inspection and the true functions of Inspectors. In the first place they say, it is contended in some quarters that Inspectors are occasionally appointed who have not had a sufficient variety of teaching experience. It is desirable that the Inspector should have taught for at least ten years, and that his service should have been rendered in more than one school. Moreover, since he will be mainly occupied in appraising the work of assistant-masters and

mistresses, the greater part of his school life, say seven out of the ten years, should have been spent as an assistant. As, too, conditions and methods of teaching change as time goes on, it would be well for the Inspector to return occasionally to the actual work of teaching. Only in this way can he keep in sympathetic touch with the difficulties of the class-room, and secure himself against a certain aloofness of mind which will prevent him from doing full justice to those whose lives are in his hands. Those who put forward this contention also urge that no Inspector should report upon a subject which he has not himself taught for at least five years in a secondary school.

The criticism is also made that inspections take place as a rule under conditions that are far from normal. As soon as it is known that a visit is in prospect, a feverish anxiety manifests itself. The less experienced members of the staff indulge in "window-dressing," and even the old hands begin to wonder whether sharp and undeserved criticism may not be in store for them. So much, they fear, may depend upon a fateful half-hour. At that particular time the boys may be more stupid than usual, and he may fail to secure from them that responsiveness which he knows he can usually obtain. In fact, the prevailing atmosphere is one of stress and strain. Could it not be managed that the inspection should be conducted in such a way as to approximate more nearly to normal conditions?

The reports of Inspectors are prepared and presented in a manner which leaves much to be desired. In the main the report should be framed on an inspection of the class-work of the teacher concerned and the head of the school, before being adopted by the authorities. Inspectors do not always pay sufficient attention to out-of-school-activities and are more ready to pull down than build up. Inspectors are appointed both by the Board of Education and by local

authorities as well; and there is little or no correlation between the work of these two sets of Inspectors.

There remains a not inconsiderable body of opinion in favour of the abolition of the inspectorate altogether. Those who hold this view contend that inspection does nothing to increase the efficiency of the schools. They emphasize what has been already said about the abnormal conditions under which inspections are usually held; and they maintain that it is impossible for an Inspector to form a judgment that will be of any real value in the limited time at his disposal. They urge that no one can possibly be more fitted than the headmaster to form a proper opinion of the capabilities and zeal of the staff, and that the intervention of an outside body, though it may prevent abuses here and there, does not, taken as a whole, produce any result which is worth the time, trouble, and expenditure involved. This is a hard doctrine for our Inspectors, and their supporters, and we may expect a contrary view to find expression. It may be added that a certain feeling of professional pride probably lies behind all this. Of late years the view has been put forward with greater and greater insistence that the status of a teacher should be that of a member of a learned profession, and hence, no doubt, comes the feeling that to submit to inspection is to suffer an indignity from which members of the legal and medical professions, for example, are exempt. Why, it is asked, should not the Teachers' Registration Council be entrusted with such functions as would make the profession really self-governing? No doubt there are difficulties in the way, perhaps the chief one being that most teachers are employed persons and doctors and lawyers are not—not in the same sense, at any rate. How the profession would govern itself is not very clearly indicated, but an alluring prospect is held out of comparative freedom from many of the greater and lesser worries that now oppress teachers and make them on the whole *genus irritabile*.

There is the suggestion also made that a panel of teachers nominated by their colleagues might be set up through the various associations from which panel appointments could be made to the inspectorate.

Night Schools.

An Essay on the working and the needs of Night Schools published in *The Young Men of India* (for October, 1921) gives us much valuable information.

The night school must be located in a good place and the time of work must be fixed according to the convenience of the taught.

The hour of commencement of the work of the school should coincide with the hour of return of the workmen, so as to make them go straight to the school instead of resorting to objectionable pastimes at undesirable places. The work for the first period must be somewhat light and interesting, as the condition of the pupils after a day's hard work would not be conducive to serious mental work. So it is that in the night schools under the supervision of the writer of this article, the first period, known as the STORY HOUR, is devoted to telling the pupils stories of an instructive and humorous nature. To avoid monotony, the programme for the first period may be varied by short musical entertainments, giving of fruits, sweets, coffee, etc. This will foster the pupils' punctuality also.

The working hours should be of short duration—never more than about an hour and a half—as the labourers, after a hard day's work, would find it inconvenient to be under confinement for two or three hours. Consideration must also be taken of the different seasons of the year. When night soon sets in, the classes must be held earlier and the pupils sent home earlier. During harvest seasons or during important festival days, the school must be closed.

The next thing that we ought to attend to in ensuring the efficiency of a night school is that

concerning the subjects that ought to be taught. To all the pupils, old and young, boys as well as girls, the Three R's must be taught. A knowledge of English is not very essential to all, even though it may be of great help to some, particularly to compositors. There must be a difference in the teaching of different pupils. It must be varied so as to interest pupils of different occupations. For example those who are compositors must be taught more of English and vernaculars than the others. They must also be made familiar with some account of the printing press, etc. Merchants should be made familiar with arithmetic more than any other subject, and so on.

The teacher above all must be a very capable man; the text-books should be cheap and adapted to the pupil's requirements, the teachers must visit the pupils at home as well as at their work and the completion of the course should be determined by progress and not by months of attendance. A personal cleanliness class may be very well instituted.

The Rangoon University.

Mr. J. C. Rolfe, Editor, *The Mysore University Magazine*, writing in the issue for July stresses on the unitary idea of the Rangoon University and refers to a few details of the scheme.

The University Council, "the supreme governing body of the University in administrative matters," differs very much from ours both in size and in composition. Its number is not fixed precisely, but it may have as many as forty-eight members. Of these, twenty are elected by various bodies. The Senate elects eight from among its own members (four of the elected must be professors), registered graduates four from among themselves, non-official members of the Legislative Council three from among themselves; and one member each is elected by the Rangoon Bar Library Association, the Burma Medical Council, the Burma Chamber of Commerce, the Rangoon Municipal Committee, and the Rangoon Trades

Association. There is a strong religious element : both the Bishop of Rangoon and the Roman Catholic Bishop of Rangoon are *ex officio* members, and five other religious bodies engaged in educational work are represented. It is a remarkably strong and representative Council, but somewhat unwieldy for executive work, and a special Executive Committee is therefore formed. This consists of the Vice-Chancellor, the Director of Public Instruction, the head of each constituent college, and six members elected by the members of the University Council from among themselves. The Senate (if we estimate rightly the number of professors in the University, all of whom, with not fewer than ten lecturers in constituent colleges, are members of the Senate) is considerably smaller than the Council, but there is no tendency to assign to the Council functions which usually belong to a Senate. The Senate itself has a small Standing Committee.

There are for the present to be two constituent colleges, University College and Judson College. Both are situated in Rangoon, and their ultimate amalgamation is contemplated. The unitary idea is rigidly enforced. Other colleges may be recognised as constituent colleges in regard to courses other than those in Arts, Science, and Law, but only if they are in, or close to, Rangoon, except that a college providing courses, in Mining, Agriculture, or Forestry may be thus recognised if it is situated anywhere in Burma.

Among the details of the curricula we find the following :—

The literature studied need not be English literature, though that has peculiar claims. But a course without a compulsory literature-element is as an Arts course, an inferior thing.

It is noteworthy that of the three historical "optionals" in the B.A. course—Indian History, European History (with special reference to England), and Ancient History (that of Greece and Rome)—only one may be taken. Similarly, while courses in Chemistry, Physics, Zoology,

Botany, and Geology are provided, no combination of these is allowed. There is, however, a B.Sc. degree for those who wish to specialise in Science.

While degrees in Arts, Science, Law, and Medicine are provided for, both Teaching and Commerce have to be content with diplomas. Finally there is to be an oral as well as a written examination for every degree in Arts and Science—an admirable provision, though one that will no doubt be very expensive and difficult to work.

The New Education Fellowship Congress.

We take the following account from *The Journal of Education* and *School World* (for September, 1921) which may be of considerable interest to our numerous readers.

The International Congress of the New Education Fellowship at Calais, which opened on July 30, was a great success. The English contingent numbered over 150, and no less than sixteen other nationalities were represented. The inaugural meeting was held at the Collège Sophie-Berthelot, in which more than 150 of the visiting members were accommodated, the Congress being opened by addresses of welcome by the Mayor of Calais and the Rector of the University of Lille, which were replied to by Mr. Clondesley Brereton. On Sunday a devotional meeting was held, at which an eloquent address was delivered by Mr. Baillie Weaver on the rôle of education in the League of Nations; and in the evening an excellent start was made with the conferences proper by Major Haden Guest, of the L.C.C., who, in his address on the liberation of the creative faculties by education, mentioned the interesting fact that in the Russian schools he had recently visited the only thing that had struck his attention was the attempt to teach the various crafts under actual workshop conditions. Mr. Clondesley Brereton's paper on "The French Child" found cordial acceptance both with the English and

French Congressistes. One of the most remarkable papers at the Congress was that of Mr. Henry Wilson, on "The Arts and Crafts." It provoked such an interesting debate that a further meeting had to be held in the evening, at which the various nationalities gave chapter and verse on how far its ideals had been realized in the different countries.

Reforms in the education of the child and the adolescent were the keynote of the succeeding papers. Such experts as Dr. Decroly, M. Nassbaum, and Dr. Ferrière provided most suggestive expositions of foreign experiments; while Mr. Craddock, Miss Pagan, and Mrs. Ensor set forth the contributions of England. The various claims of the Montessori system, of psycho-analysis and intelligence tests, were ably explained by Mr. Claremont, Dr. Young and Miss Walters. The two official languages of the Congress were French and English, and the English section was unusually to the fore in supplying interpreters when the "conférencier" was unable to supply his own résumé. The congressistes were lucky enough to find their visit coincided with "La fête de la dentelle," a veritable eye-opener to many of what a comparatively small French town like Calais can do in the way of organizing illuminations and processions. The various visits to French schools, to Boulogne and the battlefields around Bailleul, were a great success. Special thanks are due to M. Beltette, who acted as an indefatigable liaison officer between the Congressistes of the different nations; to Mrs. Ensor, to whom the conception of the Congress is largely due; to Mr. Hawliczek, the untiring Secretary; to the Directrice of the Collège, whose admirable arrangements for her guests were widely appreciated; and last, but not least, to the musicians, whose opening contributions at each meeting had much to do in producing the right *Stimmung* in the harmonious proceedings that ensued. So great was the success of the Congress that it is proposed to repeat it at Geneva two years hence.

"THE MUSIC OF INDIA."*

This is the latest contribution to the Heritage of India Series that seeks to do good work in the way of bringing the East and the West to understand each other better. This is the first systematic work by a westerner on Hindu music. Raja Sir M. Tagore's *Universal History of Music*, Pingle's *Indian Music*, Kumarasami's *Indian Music*, Shahinda's *Indian Music*, Clement's *Introduction to the Study of Indian Music*, Fox Strangway's *the Music of Hindustan*, Bhatkande's *the Music of Upper India* and such like works deal chiefly with the Hindustani System of Music in a more or less detailed manner. Captain Dey's "Music and Musical Instruments of South India" is not a regular treatise upon the subject and is more a series of sketches. "Oriental Music in Staff Notation" by Chinna-swami Mudaliar is but a collection of pieces with English notation. The lengthy preface, though it deals with the salient points of Carnatic Music is not a regular manual upon it and does not touch upon the other systems that prevail in India at present. Mr. Gangadhar has, in his "Theory and Practice of Hindu Music" given but a very elementary and superficial account of Carnatic Music and deals especially with the instructions for playing upon the Veena. Mrs. Maudmann, in her "Some Indian Conceptions of Music," lightly brushes the subject and nothing more. Mr. Krishna Rao of Mysore confines himself solely to the psychological and emotional aspect of the notes and their combinations. Mr. Tirumalaiya Naidu has taken a bird's-eye view of Carnatic Music in his English introduction to the "Gana Vidya Sanjeevini." The biggest work upon the subject *Karunamrita Sagaram* by Rao Sahab Abraham Pandithar of Tanjore is, in spite of its monumental proportions, directed towards criticising the theory of 22 Srutis from Sarangadeva downwards and trying to establish his new school of 24 Srutis. It cham-

* By H. A. Popley, B.A., Published by the Oxford University Press, Madras.

pions the Tamils as against the Aryans in every department of life, and strives to prove that the present civilization of the world, musical and otherwise, is derived solely from the Tamils of 12000 years ago.

Now, Mr. Popley's "The Music of India" has the advantage of a comparative study and review of the Dravidian, the Munda, the Aryan, the Muhammadan, the Greek and the European systems of Music that have combined to make what is loosely known as Hindu Music; he has travelled through India from the snowy Himalayas to the lonely shores of Cape Comorin. He has tried his very best to get into touch with the representatives of the various schools of music and study their theories, styles and practice; he is a better Tamil scholar than many of his class; he sings and plays both Western and Eastern music, so far as is useful to him in his Kalakshepams; he has taken the trouble to consult the authoritative works on Hindu Music in Sanskrit, Tamil, Marathi, etc.; and above all he brings a very sympathetic and impartial attitude of mind in studying and expounding the music of a foreign people. In this booklet he has managed to condense a world of information, rare and valuable, the legend and history of music from the hoary Vedic period; a comparative and clear statement of the note-signatures and nomenclatures of the north and the south; the correct determination as far as possible of the disputed Srutis; the gradual development of the scale from the dim past when the Vedic Samans were chanted, and the equally distant Dravidian times when an indigenous system of music prevailed in the land. He traces

the course through the Saman the jatis, the gramas down to the time of Sarangadeva when the Margi music was but a name and the Desi system was in swing. The raga and the tala have received ample treatment at his hands and bear the stamp of his comparative study of the northern and southern schools. The chapter on the musical compositions and musical instruments of India is a revelation to even a large number of professionals and amateurs and in his last essay upon the Indian and Western music, he reviews the conclusions of such experts as Captain Dey, Strangway, Mrs. Mann, Tagore and others. He has almost succeeded in creating a sympathetic interest in Indian music on the part of the Western savants.

But with all this it has to be confessed that Mr. Popley has not yet heard in full the real music of India as expounded by its traditional experts. He has to hear much, to learn more and to modify his views and conclusions. No one, we are sure, could tend to write with real and correct knowledge and authority upon Hindu music unless he has studied first-hand the authorities upon the subject in Sanskrit and the vernaculars; he should have moved in close intimacy with the representatives of the art, men and women and heard them in public and when they are at home; above all he must, and there is no shirking it, be himself a singer or at least a player of the music that he wants to study and expound to others. We are sure that Mr. Popley has time and chances before him of perfecting himself and avoiding some mistakes of fact and opinion that are to be found in his work here and there.

O. R. SRINIVASA AYYANGAR.

Reviews and Notices.

THE VILLAGE GODS OF SOUTHERN INDIA, BY THE RIGHT REVEREND HENRY WHITEHEAD, D.D., BISHOP OF MADRAS. (THE OXFORD UNIVERSITY PRESS).

There has been a very honest attempt in recent decades on the part of Christian Missionaries to interpret foreign religions in a spirit of sympathy and understanding, without resorting to the old practice of blind denunciation. The series of books entitled *The Religious Life of India*, edited by the Rev. Farquhar and the Rev. Macnicol, of which this is one, is indicative of the new spirit in the Christian Missionary. The Bishop of Madras is thoroughly familiar with the subject on which he is writing, having lived in this part of the country for a long time, and the volume will therefore be studied with considerable interest by all interested in the subject. The book deals mainly with the gods of the lower classes and it is only necessary to sound the warning that these aspects of religious life must not be considered typical of Hinduism in Southern India. It must at the same time be confessed with shame, that the religious life of the lower classes in India is marred by a number of barbarian rituals and it must be the endeavour of the Hindu reformer to purify the faith. There is such serious divorce between the educated and the lower classes in India that much of the information contained in this volume will be found new to the educated Indians themselves. The volume has a number of illustrations which considerably enhance the value of the book.

SELF-GOVERNMENT AND THE BREAD-PROBLEM, BY CAPTAIN PETAVEL. (THE UNIVERSITY OF CALCUTTA).

Captain Petavel has been delivering some lectures at the University of Calcutta for some time past on the subject of Self-supporting Schools as well as on the subject of Co-operative Production. This publication embodies the latter course of

lectures and should produce a number of new ideas in the minds of those concerned with problems of post-war reconstruction in India. The lectures are aptly styled *Self-Government and the Bread-Problem* thus showing the real bearing which *Self-Government* has on material development. Schemes of Self-Government cannot be productive of great good unless they are accompanied at the same time with attempts at increasing the material wealth of the country. We commend the book to the attention of all students of Indian Economics and public life.

(1) ENGLAND IN HER DAYS OF PEACE; (2) COUNTRY-SIDE RAMBLES; (3) THE NEW ERA IN EDUCATION. (THE NEW ERA LIBRARY: GEORGE PHILIP AND SON, LTD.).

Quite a valuable body of literature has been springing up on post-war reconstruction and an attempt is being made by Messrs. George Philip and Son to draw attention to several aspects of it in a new series of volumes.

Miss Eleanor Dooley writes on *England in Her Days of Peace* drawing attention to the peaceful progress of the country during several centuries of her history, not that she has enjoyed uninterrupted peace through several centuries of her history, but attention is confined here to a history of progress and it is not a narrative of battles and sieges into which the average history is apt to deteriorate. The volume throws valuable light on the social history of the land and should be read by every student who wishes to interpret history in its most comprehensive sense. The development of the past recorded here is intended to be a guide for the work of the present.

Mr. W. S. Furneaux writes on *Country-side Rambles* and the volume is an admirable introduction to Nature-study. It is a pity that knowledge of subjects like Botany and Zoology should often be confined to professed students of the subjects and there should be phenomenal ignorance of them in the mind of the average layman. Mr.

Furneaux's book should serve as a handy manual on the subject for those who have not had the privilege of regular instruction in the subject.

The New Era in Education is a collection of essays on a number of new educational subjects edited by Mr. Ernest Young and deserves to be read by all students of educational problems in the country. Each essay relates to a novel idea in educational matters. One is on the education of the children of working-men; another relates to an experiment in class-teaching through partnership; yet another is on a scheme of self-government in the school-room and so on. We should consider it an admirable book for special study by teachers under training in India.

MEASURE YOUR MIND, BY M. R. TRABEN AND FRANK STOCKBRIDGE. (HARRAP & Co.) INDIAN AGENTS: P. T. I. BOOK DEPOT, BANGALORE.

We are informed by an eloquent advertisement on the cover: "By these mental tests employers can determine in advance the ability and adaptability of employees and the kind of work in which they will be successful. They can eliminate the costly and inaccurate 'guessing' at the suitability of applicants. The potentialities of psychological tests are now admitted." This statement and our knowledge of the results achieved by the application of mental tests will not make us endorse absolutely all the demands made in this announcement in favour of the utility of mental measurement. But the most adverse critic cannot deny the possibilities of the subject and the book therefore deserves the careful study of educational reformers and even the lay public generally. It presents the case for the utility of mental measurement with great ability and the book is full of experiments and illustrations on the subject.

THE INTELLIGENCE OF SCHOOL CHILDREN, BY LEWIS M. TERMAN. (HARRAP & Co.) 8s. 6d. INDIAN AGENTS: P. T. I. BOOK DEPOT, BANGALORE.

The volume is exactly similar to the one

reviewed above, the only difference being that while the former is on the subject of mental-tests generally, this is on mental-tests in relation to the school-room. Very few experiments have been carried as yet in India in this direction and we hope that some enthusiastic Indian teacher will try to apply these methods of investigation to Indian children and let the public know the results.

THE PRINCIPLES OF LANGUAGE-STUDY, BY HAROLD E. PALMER. (HARRAP & Co.) 6s. net. INDIAN AGENTS: P. T. I. BOOK DEPOT, BANGALORE.

One of the curious results of the war has been the impetus given to the study of languages. The contact with foreign people and the need for communication with them in the various theatres of war as well as places like prisoners' camps have drawn the attention of people keenly to the principles of foreign language-study. The titles of some of the chapters will convince the reader of the scientific principles underlying the book. Attention is drawn in the beginning to the natural capacity of man for the acquisition of language and the supreme importance of the initial stage. Then there are chapters on the principles themselves, Accuracy, Gradation, Proportion, Coherence, Interest, etc. The book must find a place in all schools and college libraries in India especially as considerable time is spent in our educational institutions in the acquisition of languages.

THE DEVELOPMENT OF AN INDIAN POLICY (1818—1858), PP. vii & 179. BY G. ANDERSON AND M. SUBEDAR. (G. BELL & SONS.) 4s. 6d.

This is the second of three volumes of a source-book of Indian History covering the last days of the Company's rule, the first of which traced the political and military expansion of the British power in the period. The first chapter of the present volume treats of the foundations of an Indian policy by such men of combined statecraft and scholarship like Bentinck and Munro, Elphinstone and Metcalfe. The policy was 'an abstention

tion from interference in the natural development of the people on the one hand and a burning desire to eradicate all that was harmful and inhuman on the other." The Charter Act of 1833 and the Despatches of Lord William Bentinck fixed these ideals and the powers of the Executive and the Legislature; and shortly afterwards the laws were codified. Elphinstone was one of the first to recognise the obligation which lay upon Government and the rulers "to raise the Natives by education and public trust to a level with their present rulers," and consequently to provide facilities for Indians qualifying themselves for employment. The development of the educational system receives a chapter for itself; and the freedom of the press another. For every subject there are exhaustive extracts taken from first-hand sources. Taking the chapter on the suppression of inhuman customs, we have extracts from William Carey, Lord William Bentinck's Minute on Sati, J. W. Kaye on Thuggi, and Sir William Sleeman on the Thugs. To illustrate the development of the educational policy, there are presented extracts from Ram Mohun Roy's letter to Lord Amherst, Macaulay's Minute of 1835, Metcalfe's Minute of 1855, W. Adam's Report on Vernacular Education and the Despatch of the Directors of 1854. In the last chapter on the vanishing of the Company's rule, we have got the Petition of the East India Company, Palmerston's Speech introducing the Government of India Bill, Mill's Considerations on Representative Government, and Bright's Speech in the Commons.

The documents and extracts are arranged topically and chronologically and bring together in a short readable compass a variety of information taken from numerous and varied sources.

CAMBRIDGE GEOGRAPHICAL TEXT-BOOKS, JUNIOR, PP. xi, & 284. BY A. R. CHART LEIGH. (CAMBRIDGE UNIVERSITY PRESS.)

This book is one of a series of three geographical text-books on the concentric system and is

suited for the use of Secondary School pupils. The first three chapters treat of the earth, the atmosphere and of life on the earth; and the editor of the series suggests that these may be made the basis of an introductory course of practical work and observation by the pupils. "Thus the study of contour maps in Chapter I, the plotting of isotherms and isobars in Chapter II, and the study and compilation of maps showing the distribution of plants, animals and population will enable the teacher to revise in a practical form the work of earlier stages in the subject." The study is by regions, and special prominence is given to the British Empire and to the effects of the late war. India gets very scanty treatment. Physical features, fauna and flora and industries in the various regions receive good treatment and are well-illustrated. There are exercises and questions at the end of the book which will be very useful to the students and may improve the powers of expression.

ELEMENTARY ALGEBRA, BY C. V. DURELL, G. W. PALMER AND R. M. WRIGHT. (G. BELL AND SONS.)

This is a text-book in Algebra written mostly for the use of the non-specialist pupils in English schools. The authors have deviated from the conventional method of writing text-books in that they have inserted in an Introduction all explanations meant solely for the use of the teacher. This introduction is followed by a series of exercises 'with a few simple cautions, certain definite instructions and illustrative examples.'

The book is issued in two forms: (a) with Introduction, and (b) without Introduction. It is also published in two parts of about 250 pages (crown 8vo.) each, Part I as well as Part II, being issued separately in forms (a) and (b) above. The pages of the Answers are perforated so that they may be removed if desired.

Part I of the book deals with Symbolic Generalisation, Graph-work, Negative Numbers,

Problems involving Equations of one and two unknowns, Factors and Multiples, Quadratic Equations, Square Roots, Fractions and Identities. Part II of the book deals with Indices and Irrationals, Logarithms, Ratio, Proportion and Variation, Functions of a Variable, Limits and Gradients, Differentiation, Integration Series, Permutations and Combinations, Binomial Theorem, Empirical Formulae and Nomography. At the end of each part is given a chapter containing further developments of previous chapters for the use of the specialist pupils in English schools.

The book appears to be written in conformity with the notion that the function of Algebra should be to enable the pupil to become acquainted with the fundamental ideas of Trigonometry, Mechanics and the Calculus. A too elaborate treatment seems to have been specially avoided lest it should induce the pupil to regard the subject as a useless tyranny of 'x' and 'y'. We appreciate the plan but still suggest that if in the chapters on further developments for the specialist pupils the following had appeared, *viz.*, more of book-work on Permutations and Combinations and the Binomial Theorem, Interest and Annuities in greater detail and Harmonic Progressions the book would be meeting the needs of our Intermediate students.

The get-up of the book is good as also the method of presentation of most of the topics. The problems and illustrations are very interesting and teachers who are new to the profession would find a perusal of them highly useful. The chapter on Nomography deserves special mention, considering that results of astonishing accuracy have been obtained by skilled draughtsmen by using line-charts for commercial and engineering purposes. We heartily recommend the book for the use of teachers in this Presidency handling Algebra in the preparatory stages.

THE FUTURE OF THE INDO-BRITISH COMMONWEALTH, BY J. C. WEDGEWOOD, D.S.O., M.P., WITH A FOREWORD BY VISCOUNT HALDANE. (THEOSOPHICAL PUBLISHING HOUSE, ADYAR). Rs. 3-8-0.

This is a little book of sixteen chapters, in which the gallant champion of the oppressed, Colonel Wedgewood, projects the facts of history, and his own views, of the British Commonwealth as it is at present and as it should be for the future. Having travelled much through the British Empire with a keen eye and an open mind, the author is able to understand much that is not visible on the surface and hardly seen by those that should see. The Colonel feels, as so many others do, that the old order of things is gone past recall and a new order of things has to be ushered in. On the wisdom with which this latter is done depends the future prosperity of the world. This little book is composed of sixteen chapters, in the first two of which the author deals with the financial position of Britain and America respectively. He comes to the conclusion from a careful study of the facts that these are the only two countries at present that have anything like satisfactory credit organisation. Most, if not all, of the other States' participants in the war are either bankrupts actually or in the position of hollow sham credit that only precedes bankruptcy. In the following chapter he points out how the League of Nations, which was to have ushered in peace in the world has failed because of the withdrawal of America which has much that is common with Britain so that a British American alliance will conform a good family party and be the best guarantee for peace. He then discusses the various obstacles that exist for the giving of a commonwealth to English-speaking peoples and the other peoples under English influence for a world union which could guarantee peace by economic influence alone.

The following eight chapters are devoted to the consideration of the various members that go

to constitute the present British Empire. He considers in regard to each one of them their position before the war, the services that they rendered during the war, and the state of travail in which several of them are in the course of a new birth to bring about a stable order. He has knowledge and the intuitive insight to put the finger on the right spot in respect of most of these, and point out that which is actually amiss. It was Lord Bryce that said "it is experience more than speculation that has contributed to the growth of democracy." Colonel Wedgewood, therefore, believes that "the only basis of union that has not been tried yet is democratic union." This union he wants to bring about in the British Empire taking America as an equal partner. He sees that Europe dominates in economic power and in material resources, but he spies great danger in the passive resistance and boycott that is assuming visible proportions in India. With the rapid rise of population in Asia and with the birth-rate standing steady in Europe, the possibility seems to him not remote that Asia sent forth an avalanche on Europe again. The only safety as against this seems to be to make India the centre of an Asiatic cluster of States forming a voluntary union with the British Empire. The best way to achieve this according to him would even be by giving India a more equal voice in the Imperial Councils by allowing her representatives for each one of the major provinces. Burma would come in of its own motion, so Mesopotamia and Palestine, and

so later on Persia and Afghanistan. The accession of these would be the only way of getting rid of the Khilafat agitation as it would satisfy the ambitions of the Muslim world that the Khilafat actually rests with a Muslim State like Afghanistan. Such a growth of a free union of States is possible only by a rapid advance of education without which democracy would be impossible within a State, and a union on equal terms of these democratic States is the best guarantee against war as no seceding single State could afford to set up as a rival to the rest. The book affords very interesting reading and offers a reasonable solution of an urgent problem worthy of consideration by every responsible citizen. The advance from narrow nationalism to the more human super-nationalism would readily be admitted as a desirable step. In the words of Lord Haldane who contributes the preface, "rule by the sword is progressively becoming impossible. The military failure of Germany in the world-war is the last and most convincing demonstration of this. Understanding and power are now seen to be closely allied. The lesson has not yet been adequately assimilated. But it is being learnt rapidly. The author of this book seems to me to be preaching this gospel. That is why the book attracts me much irrespective of questions of detail. The large outlook is apparent throughout its pages. It is for this reason a valuable book." We say amen, and commend the book to those that are interested in politics.

NANDANAR CHARITRAM IN EASY TAMIL PROSE

BY

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Price As. 10.

SRI NIVASA VARADACHARI & CO., TRIPPLICANE, MADRAS.

THE MADRAS UNIVERSITY SENATE MEETING.

By AN EDUCATIONIST.

THE Agenda for the last meeting for the University Senate was a very heavy one, the bulk of which was got through, a few of the items being left over to be taken up at the next March meeting. Among the motions that came in for discussion at the last meeting, the great bulk were motions of the Syndicate of a business character, several being reports of Committees appointed by the Senate in connection with the Calcutta Commission Report and some others of quite a routine character. Among the matters that were debated upon, two seem to us to be of particular importance: the question of two examinations in a year and connected with it the division of the year into terms, vacation, etc.; the other, a constitutional question, regarding the membership of the Syndicate. In regard to the first question the points at issue were:

Whether there should be two examinations in a year and which of the University examinations should be two. There was unanimity of opinion in regard to the holding of a second examination in all final examinations. A few of them like the Engineering examinations were excluded not because a second examination is undesirable, but because the second examination in these cases would be prohibitively expensive, having regard to the very small number of candidates concerned. There was some division of opinion in regard to the Intermediate, but on the whole there was a fair unanimity that even the Intermediate should be held a second time. We are not so thoroughly convinced that this is for the good of the students generally. In

connection with this motion and one or two others on the agenda, the chief complaint was the low percentage of passes at the examination, to enquire into which even a special committee was proposed in one of the agenda. One argument on which great emphasis was laid was that students were students after all, and would read for the examination only a short-while before the examination. In other words, all serious preparation for the examination is made only during the last month or two of the examination and therefore it was argued a second examination would be desirable as the students will have a sufficient interval between the examinations to give them time enough for this kind of preparation. This is an argument which certainly has some attraction for students and could be indulged in by those that speak to the gallery and not address a University Senate. The new regulations were framed in the opposite sense. The present tendency in education is, as the School Final System clearly indicates, to pay more attention to the actual work of the student rather than judge of his work by the results of an examination at the end of his course. Educationally it is impossible to question the soundness of the principle. Sound education requires this as an indispensable necessity. We are educationists still in the stage that the opposite arguments could be used without any qualms of conscience. The Intermediate students are hardly the class of students whose preparation in the great bulk of cases is on the margin of rectification by an additional few months. Apart from the recognition of the vicious principle, those that have experience of the examination will endorse the view that one patent cause of the large number of

failures is the want of time to digest that which is read. Where a whole system gets based on the understanding of a preparation of a student through the year to say that their preparation in the last few months is the all that is necessary for a successful performance at an examination is the most vicious argument infallible from the point of view of real education.

It is on the same argument that was built the imperious necessity to change the chief examination of the year from March-April to December. Except merely pandering to a craving for change it is open to very grave doubt whether there is any part of the Madras Presidency where the climatic conditions in March and April are so detrimental to hard work. If preparation for examination has to extend through the year in some intensity the longer the more pleasant period for hard work is, the better. October to March affords a better and a longer period for such a preparation than October to December. If, as was urged, the University should lend itself to sanction the notion that students have to work hard during the last month or two, there may be some shadow of a justification for the position, but no University can afford to do that.

The next question to which we would draw attention is that which related to University servants being on the Syndicate. These naturally fall into two sections one of which had reference to the Registrar and his staff whose position rests on the regulations contained in a particular chapter. The movement against such started when the Syndicate appointed Mr. Ramunni Menon, one of their body, to act as Registrar during the absence of the permanent incumbent. The

Registrar attends all meetings of the Syndicate, but is not a member. It is not likely that any one of his staff would become a member of the Syndicate. We are aware that there are Universities in which Registrars are members of the Syndicate. But that is a matter of minor importance. The Registrar is always there and his knowledge and experience are at the disposal of the Syndicate on any matter in regard to which they might be useful.

The motion, so far was not intended to apply to others who may be regarded as servants of the University in a different sense. That is the teaching staff standing entirely upon a different footing both in regard to the principle underlying it and as a question of practical convenience for the working of the University. We take occasion to point out that the Universities the world over regard their professors as the mainstay of the University. Several of them happen to be of course teaching Universities. Indian Universities, with the exception of Dacca, are more or less affiliating Universities. Calcutta has thrown out a teaching branch which is in vigorous growth. It is in response to the Government of India's request for developing on teaching lines that the Madras University created a few professoriates, of which at present only one happens to be working and another chair is just vacant for lack of a suitable candidate. Recognising as a fact that the Madras University is essentially an affiliating University, the position reduces itself to this. Whether the teaching part of it, such as it is, should or should not be represented on the Syndicate. The Syndicate, as it is constituted at present, discharges the functions of both the

Academic and Executive Councils proposed by the Calcutta University Commission. The Syndicate is elected on the principle that the interests controlled by the University have their representatives on it. As the administrative powers of the Syndicate have reference to the affiliated colleges in great bulk, a representation of the affiliated colleges and a special representation of the mofussil colleges has been recognised as a necessity. Notwithstanding the fact that the Syndicate is a so-called administrative body it has been recognised, and recognised rightly in the new regulations, that it should have a large number, if not a preponderant number, of educationists on it. Since the University Syndicate does not deal with questions of University finance only, these financial questions do not form the major portion of their work and are never without intimate connection with matters educational, it is desirable that University teaching should have its own representation on it. And this representation cannot be secured except by the appointment of University Professors. This is nothing novel. Other Indian Universities have some of their Professors on the Syndicate. Some of the Universities have made specific provision for this in their acts, and nobody seems to have ever thought there was anything strange or

irregular in the procedure. Not to speak of other Universities elsewhere it ought to be enough to point out that the Calcutta University Commission in their recommendation for constituting their Executive Council, not the Academic Council, would have among a body of seventeen members "*three University Teachers*" appointed by the Academic Council, one of these to be a Mussalman; the term "University Teacher" to include teachers of constituent colleges giving public instruction in the University as well as teachers paid wholly by the University."

It would seem very strange ignorance indeed in the champions of purity in University administration that their views should be so diametrically opposed to that of the Calcutta Commission. It is just possible that the views of these champions are educationally more sound than those of Sir Michael Saddler and his colleagues. We feel bound to point out here again it is not educational interests which receive any consideration. It may be the mere hankering after popularity or worse, but we do not wish to make uncharitably insinuations. It is matter for regret that the University representative on the local Legislative Council should have made himself party to these preposterous views.

UNIVERSITY OF MADRAS.

THE SENATE MEETING.

The Senate of the Madras University met on Friday, the 21st October 1921, with the Hon'ble Mr. K. Srinivasa Aiyangar, the Vice-Chancellor, in the Chair. Over 40 Senators were present.

On the recommendation of the Syndicate, Mr. C. P. Ramaswami Aiyar moved for the sanction of certain items of expenditure in excess of the amounts allotted in the Budget for 1920-21. The additional expenditure, he said, was due to the heavy printing charges and other fluctuating charges which could not be estimated accurately at the time of the Budget. It was also due to such unusual items as travelling allowance to the Professor and Reader of Economics to go to Allahabad to attend the Economic Conference.

Mr. C. Ramalinga Reddi seconded the motion.

Mr. K. B. Ramanathan observed that the printing expenses were on an extravagant scale and needed looking into for effecting any reduction.

The motion was carried.

Mr. C. P. Ramaswami Iyer further moved for the sanction of additional allotments amounting to Rs. 8,500 outside the Budget for 1921-22. The extra expenditure, he said, was in the main due to the revision of the salaries of the Registrar's Office and to the creation of four new posts in the permanent establishment and the appointment of six additional clerks in the temporary establishment to cope with the increase of work especially in connection with the Second Intermediate and B.A. Degree examinations to be held in December 1921. The increased expenditure was due to the fact that the period of tenure of studentships had been extended to the fourth year in the case of two studentship-holders and to the Syndicate's proposal to give Rs. 1,000 to the Indian Science Congress towards its expenses in connection with its forthcoming meeting at Madras.

Dr. Chandrasekar seconded the motion.

Mr. K. C. Desikachari in rising to a point of order stated that such motions for the sanction of future expenditure should not come under Regulation 8 of Chapter XIII.

Mr. K. V. Rangaswami Aiyangar and Mr. T. V. Seshagiri Aiyar supported the motion, which was put and agreed to.

THE TAMIL LEXICON.

Mr. S. Krishnaswami Aiyangar proposed on behalf of the Syndicate:—

"That the Government of India Recurring Grant of Rs. 65,000, the allocation of which for various purposes was adopted by the Senate at its special meeting held on the 29th November 1912 and approved by the Government in G. O. No. 565 (Educational), dated 14th June 1913, together with the interest of about Rs. 20,000 realized on the accumulated balances kept in Government securities, may be re-allocated temporarily so as to make provision for the Department of Economics in this University for 5 years from December 1920 and for future expenditure on the Professorship of Indian History and Archaeology and on the Tamil Lexicon."

Mr. K. Ramunni Menon seconded the Resolution.

Mr. S. Satyamurthi moved to substitute the words "development of the study of South Indian languages" for the words "on the Tamil Lexicon." He said that it was really the white-elephant the Senate had committed itself to, when it undertook the scheme of publishing a Tamil Lexicon; and that every one of the anticipations in respect of this matter had failed in its achievement. He reminded the assembly of the circumstances under which, what he called the ill-started adventure was started and read relevant portions from the official correspondence on the subject. He laid stress on the opinion expressed by the Secretary of State as early as 1912 that schemes of this character often exceeded the estimates and mentioned the fact of the Senate having had to expend nearly twice as much as the estimated amount of Rs. 1 lakh considered at the time to be amply sufficient for the completion of the whole work, while yet not much progress had been made in the preparation of the dictionary. Further allotments were being asked for and there was no knowing when the work would be finished. Even if the Lexicon was completed, after so much expenditure of money, there was no doubt of its causing serious disappointment both to the students of Tamil literature and of language. It was high time

they cried a halt to the Senate not to throw away their good money in continuing the work of the Tamil Lexicon indefinitely. If somebody, however, would give the assurance that at least within three years from then and with Rs. 3 lakhs, the Lexicon would be made ready, he was perfectly willing to withdraw his amendment. He proposed that the amount asked for should be utilized towards the development of the study of the South Indian languages. For no higher purpose the amount could be utilized by a University which really cared for national culture. Tamil was only one of the five or six South Indian languages and the Tamil Lexicon should not be made to consume the whole of the recurring grant. All the South Indian languages should be given equal opportunities to share the grant.

Mr. S. Srinivasa Aiyangar in seconding the amendment expressed his emphatic disapproval of the policy pursued in respect of the Tamil Lexicon. The only way in which he could give expression to his feeling was, he said, by voting for Mr. Satyamurthi's motion. He supported the amendment also for the reason that it was the only way open to them to bring pressure on the Government to find moneys for the Lexicon scheme. It was at the instance of the Government this venture was undertaken by the Senate; the Secretary of State knew the original estimate might be exceeded; the Government were liable to meet the additional expenditure; and the only business-like way of persuading the Government to pay for the Lexicon was for the Senate to vote for the amendment.

Mr. T. V. Seshagiri Aiyar opposed the amendment. As Chairman of the Lexicon Committee he was acquainted with the details of the Lexicon preparation. The dictionary would on the whole contain 1,00,000 words and be printed in four volumes, 23,000 words had already been defined and the first part was expected to be printed and published in February or March next. The second volume would be issued within the end of the year and the third and fourth volumes before December 1923 or the middle of 1924. The question was whether the Senate was prepared to sanction the money to carry on the work. He would strongly advise the House to sanction the additional expenditure. There was

no doubt they wanted a good dictionary that would do credit to the Senate and the Tamil literature. The delay in the preparation of dictionaries was quite a common feature and that was extraordinary in the case of the Tamil Lexicon. He thought that it would be an ill-considered step to stop the work at that stage. He differed from Mr. S. Srinivasa Aiyangar in his view that the amendment was the only way of compelling the Government to pay for the Lexicon. They knew what the attitude of the Government was. The Government might say if the Senate did not care for the Lexicon, they also did not care for it. He emphasized that the money and energy spent already on the Lexicon might be made fruitful by the voting of necessary moneys in the future also. He took the opportunity to express his appreciation of the enthusiasm and single-hearted devotion of Rev. Mr. Chandler in the task of editing the Tamil Lexicon.

The Hon'ble Mr. Justice Coutts-Trotter suggested the desirability of inviting expert opinion as to whether the Lexicon work on the present lines should be pushed through or not.

Mr. K. B. Ram-nathan said he had no sympathy for the amendment.

Mr. K. V. Raagaswami Aiyangar pointed out the necessity for an up-to-date dictionary. He said as a body of business-men, the Senate was not entitled to withdraw from the scheme, having expended over a lakh of rupees, having had opportunities of ventilating their discontent in regard to the manner in which the Lexicon work had hitherto proceeded and having also understood that their criticism had been fruitful.

Mr. A. Krishnaswami Aiyar said that while the character of the Lexicon was vague and was in dispute, it was wrong on the part of the Senate to provide for an indefinite allotment for the future. By accepting the amendment of Mr. Satyamurthi the Senate was thereby suspending the judgment as to whether the expenditure was called for. If after enquiries it was found that the character of the Lexicon was such as to command the acceptance of the Senate, there was nothing to prevent the Senate from spending the amount reserved under South Indian languages. There was the authority of Sir P. S. Sivaswami Aiyar who said that the Tamil

Lexicon as it was being prepared, was not of high value. Mr. Seshagiri Aiyar could only say that some improvements had been made. The speaker doubted whether it was possible to remedy the defects in the Lexicon at this stage of its progress.

Mr. G. A. Natesan said that though the debate was a source of advantage, the Senate should not go the length of stopping the completion of the Lexicon work by refusing to vote the necessary expenditure. He was of opinion that a fair trial should be given to the Lexicon Committee in the production of the work.

The amendment was put and lost.

Mr. Krishnaswami Aiyangar's resolution was carried.

SYNDICATE REPORTS.

The Syndicate placed before the Senate reports regarding the change in the date of commencement of Part I of B. A. Degree Examination and of the B. A. Honours Preliminary Examination of 1922 from April 3 to April 4. (2) the appointment of Mr. K. C. Ramakrishnan, M. A., as a Reader in Indian Economics in the place of Mr. S. Vaidyanathan, M. A., (3) the question of the institution of a degree in Economics and Commerce, (4) the formation of the University Committee to frame the necessary courses of study for the Intermediate examination in Arts and Science; and (5) the desirability and possibility of encouraging the study of Geography in the University.

INDIAN SCIENCE CONGRESS.

Mr. P. V. Seshu Aiyar moved that a sum of Rs. 1,000 be given to the Indian Science Congress from the Fee Fund towards the expenses of its forthcoming meeting to be held in Madras. Duly seconded, the motion was carried.

Mr. H. S. Duncan moved for a new regulation in Chapter XII to provide for the conditions and terms of University studentships. After some discussion on an amendment brought forward by Mr. K. C. Desikachari, who eventually did not press it, the motion was passed.

On the recommendation of the Syndicate, Mr. Duncan further moved to insert the following clause in Regulation 4 of Chapter XIV—"that, in the case of colleges for women, the staff will be wholly composed of women, and that ample space will be provided for games and physical exercise."

The Rev. Mr. Zumbro in objecting to the proposed provision, remarked that the young women

in colleges where male members were on the teaching staff, had the advantage of coming in contact with them and getting the men's way of looking at things. But before he could proceed to say more, the Vice-Chancellor on a point of order raised by Mr. Duncan ruled that Mr. Zumbro could not go into the merits of the resolution, inasmuch as the principle underlying had been accepted by the Senate at its last March meeting. Mr. Zumbro could, however, object to the form of the Resolution.

The Rev. Mr. Zumbro—I am discussing the principle.

The Vice-Chancellor.—I am afraid you cannot.

UNIVERSITY LECTURES.

Mr. P. V. Seshu Aiyar moved:—

"That sanction be accorded for a course of six Special University lectures on "Recent Progress in Physics" to be delivered in Madras in January 1922 by Prof. C. V. Raman, M. A., Palit Professor of Physics in the University of Calcutta, the cost of the lectures being defrayed from the annual recurring grant of Rs. 65,000 by the Government of India."

Mr. Satyamurthi in seconding the motion was glad that Madras after all had begun to recognise the talents of its old graduates. While the Calcutta and other Universities were encouraging research and founding research scholarships, he added the Madras University was examining and re-examining, valuing and re-valuing.

FURTHER AFFILIATION OF COLLEGES.

The Senate then accepted the recommendation of the Syndicate for the further affiliation of the Venkatagiri Rajah's College, Nellore, in Sanskrit, Urdu and Tamil under Part I B. and Part II, Group III of the Intermediate Courses of Study; of the Government College, Mangalore, in Group III, Natural Science, of the Intermediate Courses of Study; of the Maharajah's College, Vizianagaram, in the same group; of the Nizam's College, Hyderabad, in Branches I, II and III of the B. Sc. Degree and in Groups II-A and II-B—Physical Science—of the B. A. Degree courses; and of the Queen Mary's College, Madras, in the L. T. Degree course.

A RESOLUTION RESCINDED.

Mr. G. A. Natesan moved on behalf of the Syndicate:—

"That the resolution of the Senate adopted at its

meeting held on the 5th March 1920, accepting an endowment of Rs. 1,500 offered by Mr. K. Rajagopalachariar, F. C. I. for the purpose of founding a gold medal to be called 'The Lady Willingdon Economics Gold Medal' for encouraging the study of Economics by female students of the University, be rescinded."

The motion was carried.

ENDOWMENTS.

The Senate then agreed to the recommendation of the Syndicate to accept endowments to the value of Rs. 16,900 from Mrs. K. P. Padmanabha Menon of Ernakulam to found a prize for the encouragement of post-graduate research work, to the value of Rs. 6,000 from Messrs. Ardeshir Jamshedji Chanji Mistry and Hormusji Jamshedji Chanji Mistry for a prize for the candidate in the Intermediate Examination securing the highest marks in Group III; of Rs. 1,000 from Mr. K. P. M. Appiah for a prize for a student of the Coorg community topping the B. A. Degree Examination in Part I; and of Rs. 1,500 from Mr. Sarajuddin Saheb and two others for a medal for the best Muhammadan candidate in the B. A. Degree Examination.

DOUBLE EXAMINATIONS.

The Syndicate placed before the Senate the report of the Committee on the question of holding the Intermediate and the B. A. Degree Examinations twice a year and made the following recommendations:—

1. That the Intermediate, B.A. Degree and B.A. (Honours) Preliminary Examinations be held twice in the year.
2. That the ordinary examinations be held, as at present, in March-April and that the second examinations be held in October-November.
3. That, if the University finds that the foregoing examinations cannot be held twice in the year without financial loss, the loss must be avoided by the raising of examination fees or by the reduction of rates of Examiners' remuneration or by both measures.
4. That the academic year be divided into three terms; that the terms for which attendance certificates will be required from a candidate for examination shall ordinarily be consecutive, but that discretion may be allowed to Principals of Colleges to give such certificates in respect of terms which are not consecutive, provided they are satisfied that the candidate has during those terms completed the necessary courses of study.

5. That the revision of the regulations be taken up only after the Senate has expressed its opinion on the foregoing recommendations of the Committee; and that the Syndicate may be requested to undertake the formal revision.

Mr. C. P. Ramaswami Aiyer moved that the recommendations 1 to 4 be accepted. He said that opinion was fairly unanimous that examinations in regard to the Intermediate, B.A. and B.A. (Hons.) preliminary should be held twice a year. In the matter, however, of the dates of these examinations, opinion was divided. The argument that weighed with the Syndicate was that the academic year should commence after the main examination was over and after sufficient time was allowed for the valuation of the answer papers.

Mr. F. S. Davies seconded the motion.

Mr. S. Srinivasa Aiyengar moved to amend the first recommendation so as to include the B.E. degree examination. He, however, withdrew his amendment, on Mr. Cartwright and Mr. K. R. Ramaswami Aiyengar explaining that there was no necessity for a second examination in respect of the B.E. degree, as the candidates did not number more than 40 for a year and there was no hardship for the failed candidates, their number being less than 10.

Mr. K. C. Desikachari moved to include the L. T. Degree Examination.

Seconded by Mr. Satyamurthi, the amendment was carried.

The first recommendation as amended was put and carried.

At this stage, the Senate adjourned to meet again at 3.30 p. m. the next day.

The Senate of the University of Madras met again on Saturday, the 22nd Oct. 1921.

TWO EXAMINATIONS A YEAR.

The consideration of the recommendation of the Senate Committee "That the ordinary examinations be held as at present in March-April and that the second examinations held in October-November" was resumed.

Mr. C. P. Ramaswami Aiyer who had moved the resolution on Friday said a few words by way of a resume of his remarks already made. What actuated the Committee to come to that conclusion was (1) the convenience of the long vacation (two months) for examiners to correct papers and for students to enjoy rest and (2) the inconvenience

at would otherwise arise in the matter of shifting various dates and the alteration of the vacation.

Mr. K. Ramanujachari seconded the resolution.

In the absence of Mr. Satyamurthi, who came a little late, Rao Bahadur K. V. Rangaswamiengar moved to substitute the words "in November-December" for the words "as at present in March-April." He said that the old system served the interests of the students best. The alterations were rushed through the Senate along with the new Regulations, the reason for the alteration being that it would be convenient for I. E. S. men to go on furlough in continuation of the long vacation for 3 months. They were made hastily. The objection to revert to the old system was not superable. It would involve a certain amount of adjustment and possibly an extra term to the next batch of students. If a reference was made to students themselves 90 per cent. of them would vote for a change. Rainy months were most suitable for preparation for examinations.

Mr. Alladi Krishnaswami Aiyer seconded the amendment and reserved his remarks.

Mr. Gardiner opposing the amendment said that November-December was the unhealthy time of the year. Those days being rainy, students leaving an examination hall would get drenched in rain. Further after passing the Intermediate or B.A. degree examination they would have no time to rest. Classes would not form regularly and general work would be disorganized. March-April the healthy time of the year and the weather could be relied upon.

Mr. Corley said that there were advantages on both sides. It was a matter on which the opinion of the Indian Members of the Senate rather than that of the European Members should carry weight. The thing to be considered was that colleges could be kept open for three terms instead of two unless there was corresponding income. Mr. S. Srinivasa Iyengar in his minute of dissent wrote "there must not be said to be an overwhelming body of opinion against the proposal to change the date." (the speaker) would say there was no over-

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whelming body of opinion in favour of a change of date.

Mr. Satyamurthi in supporting the resolution said that he did not know why Mr. Corley should say that he would leave the matter to be decided by the Indian members of the House when the Christian College had expressed itself in favour of December. Students generally worked hardest two or three months before the examination. March-April examinations were really April examinations. April is hotter than December. Twenty-three colleges were definitely for the change, including the Madras Christian College. Only 14 colleges were definitely against the change. Other colleges were divided; in some cases Principals were of one view and Professors were of the opposite view; and in certain other cases Principals had given their own opinions. A large majority was in favour of the change. Further the opinion was divided on other than racial grounds. They were really writing on a clean slate. The primary consideration for the change was the health of the students. If fifty examiners could not correct the answer papers in one month, a hundred could do it.

Rev. Pennipilly opposing the amendment said that the majority of the staff of his college were in favour of the present system. The health of the students was better in hotter months. Under the present system students could work hard in January and February, just before the March-April examinations. The Regulations were not rushed through the Senate in 1911. It took 2 years before they were brought into operation.

Mr. Alladi Krishnaswami Iyer in supporting the amendment said that no great question of policy was involved in the matter. Students found it hard to work in April, a hot month. April was a proverbial month for cholera in most places.

Mr. Davies would prefer September-October for the correction of papers. Anyhow one examination was to be in hot weather.

Mr. K. B. Ramanathan was in favour of holding the chief examination in December. If two examinations were accepted who should have better climatic conditions for examination purposes? He would say that those who appeared for the examinations first should have better facilities. The amend-

ment was lost and the original proposition was carried.

MEANS TO AVOID FINANCIAL LOSS.

Mr. C. P. Ramaswamy Aiyar moved and Mr. K. V. Rangaswamy Iyengar seconded:

"That if the University finds that the foregoing examinations cannot be held twice in the year without financial loss, the loss must be avoided by the raising of examination fees or by the reduction of rates of examiners' remuneration or by both measures."

Mr. T. V. Muthukrishna Aiyar moved that the consideration of this resolution be put off till actual necessity arose. He said that there was a large income by way of examination fees. After payment of remuneration for examiners and after meeting the printing charges there was a balance of a lakh of rupees. The examination fee was already high and Indian students could not afford to pay more. Examiners' remuneration was not by any means too high.

Mr. K. C. Desikachari accepted Mr. Muthukrishna Aiyar's amendment and seconded it.

Mr. Natesan in supporting the original proposition said that the enhancement of fees and the reduction of examiners' remuneration were the only two ways of finding the money, if money was wanted.

Mr. T. V. Seshagiri Aiyar in supporting the amendment said that students should no further be fleeced. If more expenditure was incurred, examiners would have to forego part of their remuneration.

Mr. Justice Coutts-Trotter also supporting the amendment asked why the University should tie itself down to only two ways.

Mr. K. B. Ramanathan asked if the University had done anything in the way of retrenchment so that they might not press hard either upon the examiners or the examinees.

Mr. Corley was in favour of only one examination. It was entirely in the interests of the examinees that a second examination was proposed to be held. If it was a luxury and indulgence it was not to the examiners but to candidates. That being so, they should pay for the luxury.

Mr. C. P. Ramaswamy Aiyar, opposing the amendment, said that if it was carried and if the second examination led to a deficit, the Syndicate could neither go backward nor forward. There would be financial 'impasse.' There were only four ways of finding the money—(1) retrenchment; (2) reduction of examiners' fees; (3) enhancement of examination fees; and (4) benefactions and endowments. The Executive might for the time being be permitted to work out the solution of items 1 and 2 in one or the other of the methods. The hands of the Executive ought not to be tied by an amendment of this description.

Mr. K. V. Rangaswami Aiyangar said that the amendment was unnecessary.

Mr. S. Srinivasa Aiyangar said that the examiners' remuneration should be reduced in the first instance. If even after that it was not possible to cover the deficit, examination fees should be enhanced.

Mr. S. Krishnaswamy Aiyangar pointed out that there were several sundry items of expenditure which worked out to a very large sum. They should also be taken into account in balancing the expenditure.

The amendment was lost.

Mr. Satyamurthi then moved to remove the words "by the raising of examination fees or" and the words "or by both measures" from the resolution, so that in case of deficiency examiners' remuneration might be cut down. He said other Universities were paying only 50 or 60 per cent. of what this University was paying to the examiners. There was no question of obliging the examinees or the examiners.

Mr. Muthukrishna Aiyar seconded the amendment.

Mr. Wrenn, opposing the amendment, said that if the examiners' remuneration was reduced they would be reducing the efficiency of the examinations and would be going to the level of the other Indian Universities. The standard of education in this University was a great deal higher than that in any other Indian University. A University which looked best to the interests of the examiners also maintained a high standard of education. Intermediate boys of Madras were far superior to M. A.

students in Calcutta. The examiners were getting the value for the work they were doing. In Calcutta there was deterioration of the work of examiners and also diminution in their remuneration.

Mr. T. V. Seshagiri Aiyar was surprised at the speech of Mr. Wrenn. He did not believe that any respectable man would behave in the manner suggested by Mr. Wrenn. Ten years ago the fee paid to examiners in Calcutta was less than the fee paid in Madras. The Syndicate should not be placed in a false position by passing the resolution.

Mr. S. Srinivasa Aiyangar, in supporting the amendment, did not agree that the standard of education here was higher than the standard of education in other Universities. Speaking better English was not the test of the standard of education. In many matters the standard of education was higher in other Indian Universities. Even if the standard was high here it was not so much due to the examiners as to the linguistic facility which the Dravidians had compared with other peoples in Upper India.

Mr. Natesan said that the examination fee could not be raised without the sanction of the Senate. If the Senate was not in favour of raising the examination fee the only alternative was to cut the examiners' remuneration. Their intentions would be best carried out by allowing the resolution to pass.

Mr. K. Ramanujachari supporting Mr. Satyamurthi's amendment said that they had not been told that the Syndicate could not effect economy. They had not been told what the exact loss would be by holding the examinations twice. They must understand that it was not for the pittance of remuneration, examiners did their duty.

Mr. C. Ramalinga Reddi moved that the House do pass on to the next item on the agenda. He was of opinion that both the resolution and the amendment were unnecessary.

Mr. S. Srinivasa Aiyangar seconded the motion.

The Vice-Chancellor said that they were not at liberty to do so, at that stage.

The amendment was lost and the resolution was carried.

ACADEMIC YEAR THREE TERMS.

The following resolution was unanimously adopted:—

"That the academic year be divided into three terms; that the terms for which attendance certificates will be required from a candidate for examination shall ordinarily be consecutive, but that discretion may be allowed to Principals of colleges to give such certificates in respect of terms which are not consecutive, provided they are satisfied that the candidate has during those terms completed the necessary courses of study."

A resolution requesting the Syndicate to undertake the formal revision of the regulations was also carried.

BACHELOR OF SCIENCE IN AGRICULTURE.

The recommendations of the Syndicate for the Degree of Bachelor of Science in Agriculture were referred back to the Syndicate.

ENTRANCE EXAMINATION.

The resolution of Mr. Satyamurthi seconded by Mr. Hodgson at the adjourned meeting of the Senate on 5th March to rescind Regulation 1 of Chapter XVI and to omit the word "other" in regulation 2 the debate on which was adjourned to this meeting was considered.

Regulation (1) says that holders of Completed Secondary School Leaving Certificates issued under the authority of the Government of Madras or such other authority as may have been accepted by the Syndicate may be admitted by the head of an affiliated college to University courses of study and when so admitted shall be registered as Matriculates of the University.

Regulation (2) says that other candidates for Matriculation shall be required to pass either the Matriculation examination of this University or some other examination accepted by the Syndicate as equivalent thereto.

Mr. K. Ramanujachari in opposing the resolution said that it aimed at a radical change of the present system of education altogether. On the face of it, it was unsound. Regulation 1 referred to admission to the college. That was now regulated by the S. S. L. C. examination. If that was rescinded the only other way was the passing of the Matriculation.

examination. The resolution really aimed at the abolition of the S. S. L. C. scheme and the restoration of the old Matriculation in some form or other. That would be going back to the old days when thousands of students failed on account of the high standard of the examination. In the old days Colleges admitted a very small number of students. In the S. S. L. C. scheme there was generous admission to all colleges. The final examination and the work of the students during the three preceding years were taken into consideration—a higher and more honourable test. The proposition was revolutionary and would reduce admissions into colleges and the quantity of liberal education Indian students were able to receive.

Mr. Hodgson said he did not intend to abolish the S. S. L. C.

Mr. Satyamurthi also expressed the same view.

Rev. Meston said that if the resolution was carried, the Secondary School Leaving Certificate would be of no value for admission and admission would be by means of the Matriculation examination or some other examination which the Syndicate approved. He did not know what it was. The public examination should be a more incident and the record of school work should be considered.

Messrs. Swaminatha Aiyar (Kumbakonam) and A. C. Pranatharthihara Aiyar also opposed the resolution.

Mr. Natesan said that the Senate ought not to have abdicated its control over the entrance examination. A great deal of money which ought to have gone into the coffers of the University was going into the coffers of the Government. The University should also be able to fix the essential subjects for a student entering the University. The University should have direct control of the examination. At present the results were given by another body after modification or moderation. They might very well go back to the old Matriculation. It was quite legitimate for the Syndicate to fall back upon the results of the examination.

The Vice-Chancellor said that the result of the resolution would be that candidates for admission to colleges would be required to pass either the Matriculation of this University or some other examination accepted by the Syndicate as equivalent

thereto. On the other hand there was no question of pass or failure in Secondary School-Leaving Examination. If the resolution was carried it would be beyond the powers of the Syndicate to the accept Secondary School-Leaving Certificate as enabling any student to come up for admission.

Mr. K. B. Ramanathan was prepared to accept a college certificate better than examination results. It was the education that counted, not the examination.

Mr. Hodgson said that when he seconded the resolution he had in his mind the London examination or the Bombay examination.

Mr. Ramaswami Aiyar said that the resolution involved a far-reaching radical change in the system. They should arm themselves with the opinions of persons competent to express opinion. There were certain advantages in the S. S. L. C. The University should also regulate the whole educational system from the beginning. He would therefore refer the matter to a committee composed of the members of the Syndicate to enquire into and report on the resolution.

This was duly seconded and carried.

UNIVERSITY PROFESSOR TO BE EXCLUDED FROM THE SYNDICATE.

Mr. Satyamurthi moved "that a University Professor shall not be a member of the Syndicate". He said that a University Professor appointed and controlled by the Senate and responsible to the Senate should not be a member of the supreme executive body of the University.

Mr. S. Srinivasa Aiyangar seconded the resolution.

Mr. K. V. Rangaswami Aiyangar in opposing the resolution said that on any matter affecting his personal interest the University Professor would keep aloof and allow other members to deliberate. Such circumstances would be few and far between. Why should they exclude from the Syndicate the best ability or talent in administrative matters. The same principle might also apply to the Board of Studies. Members of the Board were very often examiners.

Mr. Hodgson asked how they could debar any member of the University from being elected as a member of the Syndicate whether he was a University Professor or not.

Mr. Muthukrishna Aiyar asked why they should elect a man as member of the Syndicate if they had no confidence in him.

Mr. Satyamurthi replied that if a man was a good

administrator, he should be a Syndicate member. If a man was a good professor, let him be a Professor. If they believed it to be a sound principle of public morality, they should adopt it whether there had been abuse of trust or not.

The resolution was lost.

REGISTRAR NOT TO BE ON THE SYNDICATE.

Mr. Satyamurthi next moved that "no officer or servant of the University shall be a member of the Syndicate."

Mr. K. Ramunni Menon seconded the resolution.

In answer to one of the Fellows of the University the Vice-Chancellor said that he could not say whether a University Professor, or Assistant Professor was an officer or servant of the University or not.

Mr. Satyamurthi said that his resolution would refer only to the Registrar and Assistant Registrar and quoted the regulation (17 of chapter XV) in support of his statement. His resolution would not govern any officers or servants not covered in the chapter.

Rev. Gardiner:—Is the Vice-Chancellor of the University an officer or servant of the University?

The Vice-Chancellor:—I cannot answer the question.

Mr. S. Srinivasa Aiyangar said that if a person was a servant of the University he should not be on the executive body.

Mr. K. B. Ramanathan said that conflicting duties should not be imposed upon University officers. They should not be on the Syndicate if that principle was to be observed.

The resolution was carried.

UNIVERSITY PROFESSOR NOT TO BE A FELLOW.

Mr. K. B. Ramanathan moved that no officer or servant of the University mentioned in Chapter XV of the regulations shall accept nomination or election as Fellow of the University, which is a controlling body.

Mr. Satyamurthi seconded the resolution.

Mr. K. V. Rangaswami Aiyangar moved that this should apply to salaried officers only. Mr. Ramanathan accepted the amendment.

The resolution as amended was carried unanimously.

MODERATION OF MARKS IN UNIVERSITY EXAMINATIONS.

Rev. Zumbro moved a resolution to the effect that the college record of students should be taken into account in determining his success in the University examinations.

Mr. A. C. Pranatharthihara Aiyar seconded the resolution.

The Vice-Chancellor said that the resolution was unworkable.

Mr. K. B. Ramanathan said that he was in favour of some kind of combined test. There need not be elaborate regulations.

Mr. K. V. Rangaswami Aiyangar said that their experience of the School Final Scheme did not justify them in adopting the resolution.

Mr. S. Srinivasa Aiyangar in supporting the resolution said that it would be accepted sometime hence if not at once. Time had come to relax the rigidity of public examinations and to devolve the function upon college authorities who would be better able to judge of the efficiency of students than examiners who were not actually in touch with the college work. If that was done, students would pay far more attention to their work in college. He was opposed to the present system of examinations. The heroic attempt of Mr. Zumbro was quite welcome to him. The resolution merited searching examination. A committee ought to go into the matter. It was the nearest approach to anything like a workable solution of the vexed question of the inefficiency of public examinations.

At this stage Rev. Mr. Gardiner moved that the House do dissolve.

This was objected to on the ground that the rest of the agenda would drop and notice of the resolution had to be given afresh.

The meeting was then adjourned to 8rd March 1922 at 4-30 P.M.

THE MADRAS TEACHERS' GUILD.

ANNUAL CONFERENCE.

The annual Educational Conference of the Madras Teachers' Guild was held on Saturday, 22nd October, 1921, in the Kellett High School, Triplicane, Madras. The attendance was poor and among those present were Messrs. R. M. Statham, Lobo, Rev. D. G. M. Leith, P. V. Seshu Iyer, Rao Sahib R. Krishna Rao Bhonsle, and Sister Subbalakshmi Ammal.

In the unavoidable absence of the Hon'ble Mr. A. P. Patro, the Education Minister, who was to have opened the Conference, Rao Bahadur A. C. Pranatharthihara Iyer was proposed by Mr. Statham to the chair.

Mr. Pranatharthihara Iyer wished to know the sense of the meeting whether it should go on or should be put off on account of the absence of Mr. Patro, and the general sense of the meeting was against putting off the meeting.

Mr. Pranatharthihara Iyer in declaring the Conference open, said that he was sorry that their activities, much as they were, had not been very much encouraging. They had to struggle as usual for want of accommodation which handicapped their progress. Anyhow they were able to hold 8 general meetings of the Guild and 10 meetings of the Council of the Guild. They discussed several subjects on educational matters; the more important of which related to Provident Fund, private tuition and better treatment of aided schools. They placed their grievances before the Government, and the Education Minister, on whom they waited in deputation, said that he would do his best for them. But whatever cry was raised, it was a cry in the wilderness so far. No doubt something had been done by the Government towards teachers in Local and Municipal Board Schools. But 63 per cent. of Secondary Schools were under private management and 75 per cent. of the pupils received their education in those schools. Even in the matter of Elementary schools 75 per cent. of them were under private management. Thus they would find that in dealing with education the Government had largely to deal with private institutions. The most important factor in the spread and improvement of education was the teacher. The prices of foodstuffs had risen, the railway-fares had been enhanced, but the salaries of the teachers had not yet been proportionately increased.

There were three ways of giving relief to these distressed teachers:—One was by raising the fees of the

pupils, the second was by asking the management to pay more from their resources and the third was a better system of Grants-in-Aid. The fees of the pupils could not be raised any more, nor were many of the managements in a position to meet these demands. The Grant-in-Aid system alone must go. The best way would be to go to the system on salary grant. He appealed to work with more rigour and perseverance, and they should go on working till they get what they desired.

GRANTS-IN AID TO SECONDARY SCHOOLS.

Rev. D. G. M. Leith next addressed the audience on the subject of the Grant-in-Aid to Secondary Schools. He said that the present policy of the State was to encourage and develop Secondary Education not by opening schools but by aiding bodies who would do so, whether these were private or public. There were 16 Government schools, 141 Board schools and 255 Aided schools. There were altogether 74 per cent. of boys and 8 per cent. of girls in Secondary Schools by private aided bodies. The State therefore owed a great debt to these schools. But these schools were insufficiently recognised. If 107,486 pupils of Aided schools were to be educated by Government, the cost would be Rs. 35 lakhs. Now the cost to the State was 4½ lakhs. This could not be done without crippling educational administration and preventing development. Hence the public alarm whenever schools were taken over by the Government. There was no reason why a school started by Government should have a claim on the funds of the State prior to that of another body equally serving the State. From the point of view of the State, Government and Aided schools stood on a perfect equality. It was also necessary to realise that the backbone of Secondary Education was the aided system, by which the State lived and worked in happy co-operation with men who were labouring to do what the State as a whole corporate body was unable to do. Private aided schools should not be considered from the point of view of competition but partnership, not subordination and control but mutual helpfulness must be the watch-word. Consequently relationships in all grants, etc., must be clear and open on the basis of equal partnership. The present system in theory was a simple one but in practice the net cost was not divided in exact halves. Sometimes it was more, usually it was very much less. No reason was assigned for the reduction; it must be the fiat of the Department. No doubt the final authority must be somewhere, but he did not admit the acceptance of a fiat without reason. It was a time for a reconsideration of the business relationships between the two partners. The cost of education was increasing due to salaries,

equipment, etc. There were also some advantages for Aided schools over Government ones. They were not hampered by constant transfers and they were not elastic and more able to experiment.

A discussion then ensued in which Mr. Statham observed that it was wrong to say that the Department of Public Instruction was partial towards the Government schools, to the detriment of private and aided institutions, that the Department was only a medium through which the money sanctioned was distributed, and that the Legislative Council was the proper place where they should ventilate their grievances, so that the Department might be allowed to give more.

VOCATIONAL TRAINING.

Mr. Porrett of the Teachers' College, Saidapet, read a paper on "Vocational Training in Schools". In his paper Mr. Porrett observed that, while types of schools were springing up in response to public demands and modern sides were being added to old foundations in other countries, it was time that vocational training was introduced on some scale in Southern India. He warned against the introduction of vocational training at too early an age and advised manual training in pre-vocational schools. An industrial survey of the country must precede the introduction of vocational instruction. A comparison, besides, of the English, German, French and Scandinavian systems was found to be both fruitful and useful. There, abundant provision was made for technical, textile, arts and crafts schools and for continuation classes for vocational purposes. He then detailed the various subjects that come under a scheme of vocational training.

The proper field for experiments on such subjects was the Higher Elementary Schools where provision should also be made for commercial and industrial subjects. He recommended the formation of evening, continuation and works schools for carrying on vocational education. The system, in South India, should be a modified form of the European system. He concluded that the system of vocational training would improve the lot of the working and poorer classes and would supply a band of foremen and workmen to carry on the industrial work of the country efficiently.

A discussion followed and on the suggestion of Mr. P. A. Subramania Iyer, it was resolved that the whole question be referred to a Committee of the following gentlemen:—Messrs. Porrett, P. A. Subramania Iyer, Sektapathi Naidu, Veeraragavachari, P. V. Seshu Iyer, Ramanujachari and Ramaswami Iyer, who would submit a report to the Guild.

NATIONAL EDUCATION.

The last subject was then taken up by Mr. A. Pancharajam. In the course of a lengthy disquisition on

National Education, he observed that well-informed people both in the East and West were unanimous in condemning the existing system as uncongenial, antiquated and unscientific. It had failed to fulfil the main object of all education, if, by the term, they meant the drawing out of the latent faculties and powers of those for whom education in any form was intended. The system, as it now obtained, was not calculated to benefit all, but only a negligible few who had exactly the aptitude that the system by its very nature demanded. But it had sown the seeds of knowledge broadcast for the benefit of men and women of all castes and creeds and had contributed not a little to bring about a new awakening unheard-of in the previous centuries of the political history of India. The numberless material comforts that India now enjoyed consequent on the spread of scientific knowledge in its various departments was due to the opening before the mental vision of India, a new world as it were as the result of the culture that had come from the West. Yet it could not be said that it had fulfilled all the objects that an ideal system of education was intended to fulfil. The root cause of the failure was to be sought for not in any weakness in the system itself, but in the fact that it had been transplanted without suitable modifications on an uncongenial soil. The imparting of instruction through a foreign medium was only a secondary cause; in fact the indigenous foundation was not utilised for building the superstructure of higher education. The general discontent that prevailed in regard to the present system of education had given birth to a new movement known as the National Education Movement. He then surveyed the various attempts made in different parts of India to start National Schools and observed the attempts did not succeed, because they were based on the total exclusion of the existing system. He would suggest as basis for National Schools that the Primary schools should be so transformed as to have nothing in them unfamiliar to children. The aim of primary education should be to make the learners quite practical men of the world, whatever the calling they might severally choose for themselves later in life, with a strong moral backbone and permeated by the spirit of piety and religiousness. In the secondary stage he would insist upon three languages to be taught in school, English and one of the two, i.e., Sanskrit and a vernacular as first language and the other as a second language. Madras was the only province perhaps, where the classical language was more or less neglected. For this some modification must be made in the School Final Scheme. Vernacular Translation and Composition might be removed from the existing scheme and its place might be given to one of the two Indian languages. Some kind of re-adjustment should commence to be made at once if higher education should be of any value to them, for of late the higher education as it now stood had been gradually losing its attractions. It was

no more a paying concern. A Committee should be appointed by the Senate to go into the whole question in all its details as regards its re-adjustment.

After a discussion on the subject, the following resolutions put from the chair were passed:—

'The Conference recognising the large place held by Aided schools in the Secondary Educational System of the Madras Presidency is of opinion that (1) full grants calculated on the basis of half the net cost should in every case be paid this year; (2) the basis of calculation

of fee income should be fees at standard rates and not actual fees received when the fees received are higher than the standard as is the case when they are lower; (3) in the Budget for next year provision should be made for making grants to Secondary schools on the basis of two-thirds of the net cost—in order that the scales of salaries of teachers may be permanently raised; (4) a reconsideration of the methods of granting aid to Secondary schools should take place at an early date.

The Conference then dispersed.

INTERMEDIATE EXAMINATION, 1922 SELECT ESSAYS FROM ADDISON'S SPECTATOR

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The Educational Review.

We are not disposed to shed tears over the refusal of the Imperial Legislative Assembly to sanction a grant of Rs. two lakhs to enable Lord Lytton's Committee to come to India in connection with its enquiry relating to Indian students in England. The way in which the appointment of the Committee was suddenly announced to the public and the personnel of the Committee have not been such as to make the public enthusiastic over it and this impotent enquiry may as well be stopped here without a further burden on the unfortunate Indian taxpayer. Some of the European papers in India have been maintaining that the British Universities are mainly intended for British youths and there is no use complaining that they do not admit a sufficiently large number of Indian students. We do not wish to quarrel with that position, however inconsistent it may be with all the tall talk we have heard about the inestimable privileges of belonging to the British Empire, but the radical solution seems to be to cease attaching artificial values to British degrees in India. It is absurd in the extreme to imagine that a British degree is necessarily superior to any degree and over-ride all considerations of individual merit and experience in the craze for British degrees. There are sorry spectacles of intellectual inefficiency all over the country in spite of British degrees and many of them have not been able to com-

pete at all in various walks of life with people who have never left the shores of India. No land can afford to depend eternally on the educational system of a country removed from it by thousands of miles for the training of men for its best services and the only satisfactory solution of the present trouble is to make India "self-contained" in the matter. In several directions Indian Universities can be expected to give a training as good as British Universities and divested of the artificial proppings given to British degrees the latter would cease to be much in demand in India and find their proper level. We imagine the present superstition with regard to British degrees started with the superiority claimed by the European in India and though the latter has vanished, the former is still clinging to Indian minds and we trust that that aspect of "slave-mentality" will also disappear in the near future and in the meantime Lord Lytton's Committee may be prevented from having a winter holiday in India at the unfortunate Indian tax-payer's expense.

We trust we have given sufficient proof in our columns of our desire to support the cause of discipline in our schools and colleges, but we must condemn in the strongest terms the manner in which the authorities of the Travancore State have handled the Students' Strike. Many conflicting reports have appeared in the Press, but what is acknowledged to be true by all the accounts in common, is not at all creditable

The Trivan-
drum Students'
Strike.

to those handling the situation. There seems to have been phenomenal poverty of statesmanship and it was a sorry admission of incapacity to have called on the Police and the Military to disperse the crowd of students. Many assertions of a damaging character made by persons in the State to the Press over their own signatures have not been contradicted and it will take a long time for the State to recover from the odium caused by these incidents. We can rely on the citizens of the State being able to assert themselves in the matter, though it is no easy task in Native States to resist official tyranny or even to expose it in the columns of the Press.

The University of Calcutta has resolved upon conferring honorary degrees on several distinguished persons in India, in honour of the ensuing visit of His Royal Highness the Prince of Wales. Among the recipients of the degrees will be Mr. S. Krishnasawmi Iyengar, University Professor of Indian History at the Madras University, who was recently giving a course of lectures at the University of Calcutta as Reader in Indian History, and we offer our congratulations to him on this well-deserved distinction. Other persons from Southern India will be Mrs. Sarojini Naidu, the well-known poetess of Hyderabad, who will become a Doctor of Literature; Sir M. Visweswarayya, the distinguished ex-Dewan of Mysore, who will become a Doctor of Science, and Mr. R. Shama Sastri, the well-known editor of the *Arthashastra* of

Kautilya, who will become a Doctor of Philosophy. Prof. C. V. Raman, the distinguished Physicist, now at Calcutta itself, will also become a Doctor of Science, an honour very well deserved by him by virtue of his great record of work in Science and also by his valuable services to the Calcutta University. Other noteworthy titles will be: Pandit Madan Mohan Malaviya, D. L.; Dr. Brajendranath Seal, D. Sc.; Prof. R. P. Paranjpye, D.Sc.; Prof. Abanindranath Tagore, C.I.E., who has recently been appointed Professor of Fine Arts at the Calcutta University and Rai Saheb Dinash Chandra Sen, the well-known authority on Bengali Literature, will also become Doctors of Literature. While congratulating all these recipients, may we enquire why the University of Madras should not honour at least its own distinguished alumni? Did talent and distinction become extinct within the bounds of Southern India with the conferring of honorary degrees on Dr. Miller and Sir S. Subramania Iyer? The University of Madras may think so, but it will be very difficult to persuade the world to agree with that opinion especially as its own alumni are being thus honoured by other Universities in India.

It was but a feeble attempt made by the Hon. Lala Sukbir Singh the other day, to draw attention in the Council of State to the importance of religious and moral education in educational institutions in India. He moved that Provincial Govern-

Religious and
Moral
Education.

ments be asked to take necessary steps for introducing religious and moral education in all Aided and Government schools and colleges. Raja Harnam Singh supported the resolution. The resolution was withdrawn only because the Government, while recognising its value, said that education was now a transferred subject and the elected representatives of the people may take whatever steps they liked in the Provincial Councils. The Hon. Mr. Shafi also referred to the circular to Local Governments which made it clear that the Government did not intend to impose any embargo on the introduction of religious and moral instruction in Government and Aided schools. Strangely enough it was reserved for Dr. Gangadhar Jha of Benares to oppose the resolution—he is the Principal of the Sanskrit College there, and he was apparently nominated to the Council of State as a representative of Hindu religion and Sanskrit learning! He announced to the Council that “religious education had failed all over the world, because it could be only imparted by religiously-minded teachers of whom there were few in India. Duffers could not be entrusted with the task”! In any case this representative will not have the support of any orthodox Hindu in India!

We must confess to a certain amount of sympathy with the dissatisfaction expressed in the Imperial Legislative Assembly, on the working of the Staff Selection Board, a Committee which

The Staff
Selection Board.

is supposed to advise the Government of India on the selection of people for appointments in the Secretariat. Its work during the past few months of its existence does not at all seem to justify its continuance and it is difficult to understand the principles on which the Board has recommended candidates. Deserving candidates have come within our own notice, who have found it impossible to enter the portals guarded by members of the Staff Selection Board, and it is difficult to resist the charges of favouritism made openly in the Assembly. In fact, one of the members who spoke on the resolution, Prof. Sahani of the Punjab, offered to support his charges by concrete examples, but he was somehow not given an opportunity of doing so. Sir William Vincent claimed that the Board was sound because it included “Rai Bahadur S. P. Bajpai, a man of great influence from the United Provinces.” We confess our ignorance of this mighty individual though we can claim some familiarity with the great men of those Provinces—in any case it does not silence us into an appreciation of the work of the Staff Selection Board.

In view of the present discontent in the land, it would be extremely unwise on the part of anybody to do anything which would add to it. But a circular recently issued by the Director of Public Instruction, Madras, on the subject of the *Charaka* in schools, is sure to cause unpleasantness of feeling which might very well have been avoided. The circular

The 'Charaka'
in schools.

is in these terms: "The Director notices that some inspecting officers are recommending the introduction of the *Charka* or spinning wheel into Elementary and Secondary schools. The question of vocational education in schools is receiving the attention of the Director at present and he hopes to issue a general circular on the matter. Meanwhile inspecting officers are directed to refrain from advising the introduction of the *Charka* in schools, for this, if for no other reason, namely the political significance which is at present attached to the *Charka*." We are ourselves not great believers in the absolute economic efficacy of the *Charka* and we feel that a disproportionate value is attached to it in the present political campaign but we see no reason why the Government should be so touchy about its introduction into schools. The use of the *Charka* means an interesting recreation and exercise of some value and deserves encouragement in all schools, more particularly in girls' schools, and it is decidedly a wrong step that has been taken by the Department of Education in Madras by issuing the circular referred to especially when the public rightly expect the practical sympathy of Government in the industrial development of the country on however small a scale. Cannot the Minister of Education call on the Director of Public Instruction to withdraw the circular? But we forget the Minister is among those going about the country combating the movement of Mr. Gandhi!

At the last meeting of the Mysore Representative Assembly, the Dewan gave an account of the progress of education in the State during last year. It is not very encouraging to learn at the very outset that 701 aided schools in villages ceased work during the year for want of local support. The total number on the rolls of the colleges increased from 832 to 1005. The strength of the High schools and Anglo-Vernacular schools also rose from 6193 to 6386 and from 42,501 to 49,664 respectively. There is however considerable difficulty experienced in giving effect to educational expansion owing to the financial limitations of the State. The execution of new programmes in the hands of the authorities will cost Rs. 14 to 21 lakhs in the course of the next five years. To meet this heavy expenditure Government has directed the resumption of Local Funds, General and Mohatarfa, from local bodies to whom these items of revenue had been assigned in the year 1917 for providing for education and medical relief in local areas. We are afraid this is not the proper way of giving effect to educational reform, but we notice that the resumption is being delayed and we hope that Government will give effect to the other proposal in contemplation, the levying of a local cess for educational purposes. We are afraid there is not much of driving power behind the present administration of Mysore, but we hope things will improve in the near future.

Education in
Mysore.

On the occasion of the last Convocation of the Indian Women's University of Poona, Sir M. B. Chaubal gave an interesting account of life at the University. He said:

Hingne (the area in which the University is located) is veritably a literary and University colony. There are at present 18 girls in the college, there are about sixty girls in the high school, about 50 more in the normal or training school and 75 younger girls studying the elementary standards, one to four. There are thus nearly over 200 girls living together as a joint literary family at different stages in their educational course. It is a hostel on a very large scale where the girls all take part and help in cooking, in keeping the rooms clean and in order, in looking after the garden, and supervising the sanitary arrangements; all these things are done under the intelligent guidance of elderly and advanced lady superintendents and of professors and other teachers who work in the college and other institutions mentioned above. The college students have their debating societies and their meetings are open to the advanced students of the high school, and the debates are carried on in English with one of the professors presiding at each meeting. In addition to the English Debating Society, there is the Jnanabhilashini Sabha, where similar debates and discussions are held in Marathi. In addition to the usual lecture hours and class hours, each girl is given a quarter of an hour for religious or moral study; and every day after evening meal all girls congregate in a separate building called the Gita Mandir, where there is exposition by one of the professors of a text or texts from either Ramdas or Tukaram, from the Jnaneshwari or slokas from the Gita.

We heartily endorse the remarks of the *Modern Review* on the recent innovations

A Tax on
Knowledge.

of the Postal Department in the matter of value-payable articles sent by post. They certainly constitute a tax on knowledge which should be resented strongly by all those interested in education:

The new postage rates introduced this year, coupled with the postal rule that all value-payable packets must be registered, have seriously affected the retail book trade and must in the long run tell on publishers also. Formerly a book which the Post office carried for half an anna, has now to pay one anna as postage. Formerly a book worth two annas and a half could be had by a mofussil buyer by V. P. P. for four annas. At present a mofussil buyer by the V. P. system has to pay eight annas for it. The new postal rule and postage rates are a direct tax on knowledge and education. Government ought not to have sanctioned such rates and such a rule. Members of the Legislative Assembly and the Council of State ought to have done their best to do away with this tax on knowledge and education. But they have done nothing. The people of no free country would have tolerated such a tax.

The annual Conference of the Madras Teachers' Guild took place on the 22nd inst. in the Kellett High School, Triplicane, with Rao Bahadur A. C. Pranatharthihara Iyer, B.A., I.S.O., in the chair. We are sorry we are unable to congratulate the Guild on its annual show as the attendance was poor, and the discussions lacked liveliness and enthusiasm. Of the four papers proposed to be placed before the Conference, only three were taken up, the other having been dropped for some reason or other. The most important of the subjects on the agenda was

The Annual
Conference of
the Madras
Teachers' Guild.

the one relating to Vocational Training in schools and it was not discussed at length in all its aspects. Mr. Porrett of the Teachers' College was expected to place a definite practical scheme of vocational training in Indian schools before the Conference; but he made only a few suggestions pointing out certain difficulties in its introduction in schools. This, as well as the question of National Education, was shelved to a Committee and we all know what Committees gen-

erally do. If one looks back to the days of the late Rev. F. W. Kellett, M.A., who organised this useful institution and its activities, one will have no hesitation in saying it exists only in name now. As its well-wishers we sincerely hope the Guild will shake off its lethargy and try by all means in its power to regain its former position and to better its affairs. We hope to comment at length on the papers discussed as far as available to us in a subsequent issue.

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SHAKESPEARE'S GARDEN.

OF Shakespeare's love of flowers we have the strongest testimony in all his writings. He was a poet of Nature, not a scientific student of it, but genius is born learned, and as Dryden says—"All the images of Nature were still present to him." The poet aims not, at scientific facts but the emotional expression of what is higher even than Science—Poetry. What science can explain "the light that never was on sea or land"? And in the highest ideals of life it is poetry that chiefly interprets our feelings, not scientific knowledge.

Everything was of interest to Shakespeare, who possessed a wonderful power of understanding and assimilating anything that came to his notice, and setting upon all he saw and loved the royal seal of his Muse. All sights and sounds of Nature were "unto him companionship."

His attitude towards flowers is shown in
XXVII—80

the beautiful lines of Perdita in *A Winter's Tale*—

"Daffodils,
That come before the swallow dares, and take
The winds of March with beauty."

Again—

"The Sweet South
That breathes upon a bark of violets,
Stealing and giving odour,"

Hero's charming description in *Much Ado About Nothing* of the bower—

"Where honey-suckles ripened by the sun,
Forbid the sun to enter, like favourites
Made proud by princes, that advance their pride
Against the power that bred it."

In the *Midsummer Night's Dream* the fairy says of the queen—

"The cowslips tall her pensioners be
I must go seek some dew drops here,
And hang a pearl in every cowslip's ear."

In *King John*, Salisbury refers to the lily and the violet in the following beautiful lines—

"To gild refined gold, to paint the lily,
To throw a perfume on the violet,
To smooth the ice or add another hue

Unto the rainbow & with taper light
To seek the beauteous life of heaven to garnish,
Is wasteful and ridiculous excess."

Beautiful reference is made to sedges in the *Taming of the Shrew*, when the Second servant says to Sly

"Dost thou love pictures, we will fetch the straight
Adonis painted by a brook
And Cytherea all in sedges hid,
Which seems to move and wanton with her breath,
Even as the waving sedges play with wind,"

And in the *Two Gentlemen of Verona*, Julia speaking to Lucetta, gives utterance to the following lines—

"The current that with gentle murmur glides,
Thou knowest, being stopped impatiently doth
rage:
But when his fair course is not hindered
He makes sweet music with the enamelled stones,
Giving a gentle kiss to every sedge
He overtaketh in his pilgrimage.

THE POET OF NATURE.

Shakespeare was the mouthpiece of Nature. He did not only speak from Nature, Nature spoke through him. Pope, Johnson and Dryden describe Shakespeare as the poet of Nature. He contemplated things as they really exist, and made not only the ignorant feel they were true, but made the learned see they were complete. The woodbine or honeysuckle in Shakespeare's time was regarded as an emblem of fidelity. For it twines so tightly round the stems of other plants as to leave deep impressions on them.

Titania in the *Midsummer Night's Dream* says to Bottom—

"Sleep thou, and I will wind thee in my arms
So doth the woodbine, the sweet honeysuckle,
Gently entwine the female wig so."

Rosemary also was the lover's emblem of fidelity and often given to friends. Ophelia makes a tender reference to rosemary in her speech to Laertes—

"There's rosemary that's for remembrance,
Pray you love remember,
And there is pansies for thoughts."

Shakespeare's close observation of Nature is evidenced by his description of the marigold and its habit of closing its petals at sunset and opening them at sunrise. In the *Rape of Lucrece* he says—

"Her eyes like marigolds had sheathed their light
And canopied in darkness sweetly lay
Till they might open to adorn the day."

In *Cymbeline*, when Imogen swoons and is supposed to be dead, Arviragus says:

"With fairest flowers while summer lasts
I'll sweeten thy sad grave, Thou shall not lack
The flower that's like thy face, pale primrose nor
The azured hairbell like thy veins, no nor
The leaf of eglantine, whom not to slander
Outsweetened not thy breath."

In *Pericles*, when Marina enters with flowers to strew the grave of Thaisa, she says:

"I'll rob Tellus of her weed,
To strew thy green with flowers, the yellows, blues,
The purple violets and marigolds,
Shall as a carpet hang upon thy grave
Whilst summer days do last."

MEDICINAL PLANTS.

From Shakespeare's many references to drug plants, he was credited with an exaggerated amount of medical knowledge. All the same Shakespeare always knew what he was talking about. The medicinal plant oftenest referred to by Shakespeare is the plantain, which was known to have so many virtues, that it was called "the Mother of Worts." Margaret in *Much Ado About Nothing* speaks of the holy thistle or *Carduus benedictus* which had such miraculous virtues in diseases of the heart. She says to Beatrice—

"Get you some of this distilled carduus benedictus and
Lay it to your heart; it is the only thing for a quality."

Of the poisonous aconitum or common monkshood, King Henry VI says to Clarence:

"Thou shalt prove a shelter to thy friends,
That the united vessel of their blood
Shall never leak tho' it do work as strong
As aconitum or rash gunpowder."

The Ancients considered the aconite the most violent of all poisons. Hamlet speaks of the "cursed hebenon," Macbeth of "the insane root that takes the reason prisoner," which may have been belladonna or hemlock. Many strange plants come in for their share of notice, and even the mistletoe when in *Titus Andronicus*, Demetrius speaks to Tamora in the desert part of a forest near Rome and says—

"A barren and detested vale you see it is,
The trees tho' summer yet forlorn and lean,
Overcome with moss and hateful mistletoe."

The mandrake and samphire are also referred to. Iago, having taken Ophelia's handkerchief from Emilia, says of Othello—

"Not poppy, nor mandragora,
Nor all the drowsy syrups of the world
Shall ever medicine thee to that sweet sleep
Which thou ow'st yesterday."

The mandrake is referred to by Juliet in the following lines—

"Alack, alack, it is not like that I,
So early waking, what with loathsome smells
And shrieks like mandrakes torn out of the earth,
That living mortals hearing them run mad."

In *King Lear*, in the cliff country near Dover, Edgar leading Gloucester sees:

"Half way down
Hangs one that gathers samphire dreadful trade!"

The samphire or sea-fennel with dull yellow flowers grows abundantly on rocks by the sea. It is preserved in vinegar and eaten so.

The charming old English garden at Shakespeare's birthplace, Stratford-on-Avon, is planted with most of the fruits, flowers and herbs with which we are familiar in

Shakespeare's plays. As he says in *Twelfth Night*, "the eye wanders away to sweet beds of flowers." Shakespeare's was a nature that could experience everything, and incorporate everything and so he was in turn credited with being a scholar, a lawyer, a Puritan, a Catholic, and numberless other imaginary things. Suffice it that he was the greatest poet, which fact comprehended all.

The list of plants in the Shakespeare garden as compiled by Dr. E. B. Southwick is as follows:

Aconitum	...	Second Part, Henry IV, Act IV, Scene 4.
Anemone	...	Venus and Adonis.
Bachelor's Button.	...	Merry Wives of Windsor, Act III, Scene 2.
Balm	...	Richard II, Act III, Scene 2.
Bilberry	...	Merry Wives, Act V, Scene 4.
Blackberry	...	Henry IV, Part I, Act II, Scene 4.
Brome	...	Tempest, Act IV, Scene 1.
Burdock	...	As You Like It, Act I, Scene 3.
Burnet	...	Henry V, Act V, Scene 2.
Camomile	...	Henry IV, Part I, Act II, Scene 4.
Carnation	...	Winter's Tale, Act IV, Scene 4.
Caraway	...	Henry IV, Part II, Act V, Scene 3.
Carrot	...	Merry Wives, Act IV, Scene 1.
Clover	...	Henry V, Act V, Scene 2.
Cockle	...	Love's Labour Lost, Act V, Scene 2.
Cowslip	...	Henry V, Act V, Scene 2.
Crocus or Saffron	...	Tempest, Act IV, Scene 1.
Crow Flowers	...	Hamlet, Act IV, Scene 7.
Crown Imperial.	...	Winter's Tale, Act IV, Scene 4.
Cuckoo buds	...	Love's Labour Lost, Act V, Scene 2.
Daffodils	...	Winter's Tale, Act IV, Scene 3.
Daisies	...	Love's Labour Lost, Act V, Scene 2.
Dewberries	...	Midsummer Night's Dream, Act III, Scene 1.
Dock	...	Henry V, Act V, Scene 2.
Eglantine	...	Midsummer Night's Dream, Act III, Scene.
Elder	...	Cymbeline, Act IV, Scene 2.
Gringoes	...	Merry Wives, Act V, Scene 5.
Fumitory	...	King Lear, Act IV, Scene 4.
Fury	...	Tempest, Act IV, Scene 1.

Horchall	... Cymbeline, Act IV, Scene 2.
Hawthorn	... As You Like It, Act III, Scene 2.
Hazel	... Romeo and Juliet, Act I, Scene 4.
Heath	... Tempest, Act I, Scene 1.
Hemlock	... Henry V, Act V, Scene 2.
Hemp	... Henry V, Act III, Scene 6.
Holly	... As You Like It, Act II, Scene 7.
Holly Thistle	... Much Ado About Nothing, Act III, Scene 4.
Honeysuckle	... Much Ado About Nothing, Act III, Scene 1.
Hyssop	... Othello, Act I, Scene 3.
Ivy	... Tempest, Act I, Scene 2.
Knot grass	... Midsummer Night's Dream, Act III, Scene 2.
Lark's Heels	... Two Noble Kinsmen—Introductory Song.
Lavender	... Winter's Tale, Act IV, Scene 4.
Lily	... Two Gentlemen of Verona, Act II, Scene 3.
Long Puples	... Hamlet, Act IV, Scene 7.
Mallows	... Tempest, Act II, Scene 1.
Marigold	... Winter's Tale, Act IV, Scene 4.
Marjoram	... Lear, Act IV, Scene 6.
Mints	... Love's Labour's Lost, Act V, Scene 2.
Mistletoe	... Titus Andronicus, Act II, Scene 3.
Nettles	... Tempest, Act II, Scene 1.
Oxlip	... Midsummer Night's Dream, Act II, Scene 1.
Pansie	... Hamlet, Act IV, Scene 5.
Pinks	... Two Noble Kinsmen—Introductory Song.
Pacony	... Tempest, Act IV, Scene 1.
Poppy	... Othello, Act III, Scene 3.
Primrose	... Midsummer Night's Dream, Act I, Scene 1.
Musk Roses	... Midsummer Night's Dream, Act II, Scene 3.
Damask Roses	... Winter's Tale, Act IV, Scene 3.
Province Roses	... Hamlet, Act III, Scene 2.
White Roses	... Henry VI, Part II, Act I, Scene 1.
Red Roses	... Venus and Adonis, Scene 3.
Rosemary	... Hamlet, Act IV, Scene 5.
Rue	... Richard II, Act III, Scene 4.
Rush	... Taming of the Shrew, Act IV, Scene 1.
Savory	... Winter's Tale, Act IV, Scene 4.
Strawberry	... Othello, Act III, Scene 3.
Thistle	... Henry V, Act V, Scene 2.

Thyme	... Midsummer Night's Dream, Act II, Scene 1.
Violet	... Henry V, Act IV, Scene 1.
Wormwood	... Love's Labour Lost, Act V, Scene 2.

These represent the more prominent plants and flowers mentioned by Shakespeare, not including trees, vegetables or mere weeds.

C. GORDON.

Lower Secondary Arithmetic

BY

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NATIONAL EDUCATION.*

IT is admitted on all hands that there are serious defects in the existing educational system of our country. Well-informed people both of the East and West are unanimous in censuring the system as uncongenial, antiquated and unscientific. It has failed to fulfil the main object of all education if, by the term, we mean the drawing out of the latent faculties and powers of those for whom education in any form is intended. It is too literary, too dogmatic and encourages cram to an undue extent, this last coupled with some amount of memory and intelligence being at the bottom of all success in examinations which are the highest tribunal before which all who take to education from children to young men and women have to stand to take their trial. If it is granted that there can be no child without aptitude for one or the other of the several fields of human activity, one must be sorely disappointed at the results of the existing system as it does not make sufficient provision for the development of the mind and the hand and the eye of the children whose minds are cast in moulds that are as varied as human faces themselves and are in innumerable instances entirely distinct from one another. Consequently, the system, as it now obtains, is not calculated to benefit all, but only a negligible few who have exactly the aptitude that the system by its very nature demands.

2. I should not be understood as being forgetful of the manifold benefits that the system, as it now stands, has conferred upon our country. It has sown the seeds of know-

ledge broadcast for the benefit of men and women of all castes and creeds and has contributed not a little to bring about a new awakening unheard of in the previous centuries of the political history of India. It has done much to rub off the old accumulated crust of superstition and ignorance which, like a longstanding catarrh, has made it impossible for the generality of the Indian humanity to view things in their correct perspective. International law, international politics, international commerce, and, what is more important than these, international understanding and sympathy, are ideas that have filtered down to the lower strata of the society through the agency of school and college education and through journalistic literature. The numberless material comforts that India now enjoys consequent on the spread of scientific knowledge in its various departments is due to the opening before the mental vision of India a new world as it were as the result of the culture that has come from the West. It has amply justified the expectation, its original organisers had of it when it was inaugurated. Thus instances can be multiplied to illustrate its many-sided benefits.

3. Yet, can it be said that it has fulfilled all the objects that an ideal system of education is intended to fulfil? Has it been fruitful, to the extent it ought to have been, of original works of unquestioned merit in the varied fields of arts, and sciences and literature? If not a century had passed before the supplanting of the indigenous culture by that of the West without the same being marked by the appearance of phenomenal geniuses or men of remarkable talents as evidenced by their literary or scientific works of a higher order of merit, what is it that has made India barren

* A paper read by Mr. A. Panthapagasa Iyer, M.A., L.T., Headmaster, P. S. High School, Mylapore, before the Madras Teachers' Guild Conference held on the 22nd Oct, 1921.

of production of undoubted originality during the past one century and a half? Not to speak of the ancient scholars, writers, philosophers and poets of world-wide reputation, where are the Gadadharas in the field of logic, where are the Vedanta Desikas and Appayya Dikshitas in the field of religious thought, criticism and poetry, where are the Sayanas and Madhavas in the field of literary and Vedic scholarship, where are the Minakshisundaram Pillais and poets of that type in the various vernaculars of the country except perhaps in Bengali which has been assiduously cultivated by the English-educated men of Bengal? It is only in recent times that some eminent scholars, scientists and poets have come out such as Ranade, Jagadis Chander Bose, Ramanujam, C. V. Raman, Rabindranath Tagore, Sarojini Naidu and so forth. But it must be mentioned here that these have become great not on account of the present system of education but in spite of it.

4. The root cause of the failure is to be sought for not in any weakness in the system itself which serves its purpose so admirably in the West, but in the fact that it has been transplanted without suitable modifications in an uncongenial soil. It is in fact an exact copy of the London University curricula and examinations and it was adopted in the belief that what had been found good to the West must be equally good to the East also. About the year 1857, when the first Indian Universities were established, the organisers of the new system genuinely believed that there was no literature in India and no sciences worth the name on which the superstructure of a happy medium model of the West and the East could be built. Thus Indian tradition and Indian learning were left in cold neglect

to yield the place of honour to their younger sister of the far off West. If a strawberry or a gooseberry or turnip cannot be grown in a tropical soil, how can an educational system, suited to the mental soil of the West be profitably cultivated in the uncongenial soil of the East? The traditional atmosphere, the mental and moral outlook, the inherited tendencies, the spiritual background as well as the ideal are not in this country exactly what they are in the European continent. Herein alone lies the root cause of the failure.

5. Some attack the Government educational policy as being mainly responsible for the unsatisfactory state of things. If by policy is meant the liberalisation or otherwise of the attitude of the Government as regards expenditure on education, it must be pointed out that, however much may be the amount the Government may vote for education, it will not by itself go a long way to improve matters. For money alone cannot be the healer of all ills on earth. You may pay the doctor ever so much for the cure of the chronic disease a child is suffering from, but that alone cannot cure the child unless the root cause is eradicated.

6. Some attribute the failure of the present system to the fact that our pupils and students are made to acquire knowledge through a foreign medium and that, if all subjects are taught through the media of vernaculars, the ideal can, at a single jump, be reached. There is, of course, some truth in this criticism, but the whole truth is not contained in this. The language difficulty is great indeed, but it cannot be an insurmountable difficulty to an Indian who has a remarkable aptitude for the acquisition of languages.

In a vast country like India where there are ten times as many vernaculars as there are Provinces and States, it is indispensable that English, which has spread all over the country, should be the one unifying factor and should therefore form part and parcel of any system of education that may find common acceptance. Do away with the English and you will thereby be doing the greatest possible disservice to this country. English, as is well known, is becoming the Lingua Franca of the whole world and just at this late hour of the day, if English is discarded in this country, it will be to set the hand of the clock many centuries behind.

7. The imparting of instruction through a foreign medium, is only a secondary cause, but the main cause, as already observed, lies far deeper in the fact that the indigenous foundation was not utilised for building the superstructure of higher education. A sapling was brought from the West for a graft to be grown on an indigenous plant, but, instead of utilising the parent tree for its sap to flow into the graft, it was attempted to grow the sapling by itself independently. Consequently we have been learning words, indeed more words than ideas. It would seem to have been forgotten that words and ideas are indissolubly blended in each other which blending, in the words of Kalidasa, is like that of Parameśwara and His Divine Spouse. Words cannot be learnt at one period of a child's life and ideas at another? For instance, the names Minerva, Ulysses, Alfred and so forth or the words turnip, peach, pine, oak, hay, etc., do not convey any sense at all to an Indian child, whereas the names Rama, Arjuna, Bhēeshma, Savitri and so forth or the words, lotus, jasmine, champak, mango,

etc., impress themselves on the mind in all their full significance. Moreover, the names like Ulysses or Minerva or words like turnip or oak will be equally Greek to the child whether you speak of them in English or in the vernacular.

8. The general discontent that prevails now in regard to the present system of education has given birth to a new movement known as the National Education Movement. This movement had its birth when the Benares Hindu University was started under the able guidance of Mrs. Besant and other capable workers and since then it has been gradually gathering strength and, in many parts of the country, enormous efforts are being made to establish National Schools and Colleges and Universities; but so far as we can see the new movement has not met with any measure of success. The underlying causes that militate against the success may be merely touched upon. Firstly, the aim and scope of what is termed national education seems not to have been correctly understood. Those who have pioneered the new movement seem to have been under the impression that schools and colleges started and controlled by Indians and staffed entirely by Indians and managed without any Government help or control would by themselves be the nurseries of national education. This has been found to be a grave blunder, for what is actually witnessed is that these institutions are merely duplications of Government-managed or Government-recognised schools and colleges, the same courses of studies being adopted, the same subjects being taught and similar examinations being held in the former as in the latter. The work done in these institutions being more or less

honorary, the same is bound to suffer in efficiency. Discipline also is bound to be loose as those who join them do it in their patriotic fervour and expect to be treated more or less as patrons than as students humbly and devoutly seeking the light of knowledge. Secondly, Government aid and Government control are things that are religiously avoided as though they were poisons that would badly tell upon the growth of the new-born infant. It seems not to be kept in view that, in this poverty-stricken country, no movement worth the name can prosper unless it is financed by the Government. In the absence of Government help and a central controlling authority such as that provided by the Government, the organisation will stand but on a shaky foundation and eventually collapse. Many are the tragic instances of this kind that have been already witnessed and the pioneers of this new movement will be wise in taking lesson from past instances. Such huge efforts are being made and so much money spent only to make the national institutions in which to educate our youths on the same lines as those obtaining in Government-controlled institutions or, to speak figuratively, to make them shrines for the worship therein of the Western Minerva instead of making them temples for the worship of the Indian Saraswati.

9. Curiously enough certain suggestions are now being made in all seriousness to nationalise in a way the Government-controlled schools and colleges. Though, by their very nature, they are funny, they may incidentally be alluded to here. Some would give up European drill and gymnastics and have them substituted by the Indian *bushy* and *dandal*. Some others would insist upon shirts, coats and caps being given up and

have them substituted by costumes of a simple homely fashion. Some others would begin the school work with Hindu or Islamic prayer and end the day's work with it. Still others, as already observed, would make vernaculars the media of instruction though the syllabuses followed and the subjects of instruction are still the same. From the very nature of these suggestions it will be seen that they are so puerile as not to deserve any serious consideration.

10. Before the scope of what we call National Education, *viz.*, the education that is in keeping with the tradition of the country is indicated, it will be well to say a word or two as to what its aim should be. With the Vedas and Upanishads before us and the large body of the subsequent 'ancient literature, it is not very difficult to determine the aim. The fully-developed products of the national system should approach by their talents, spirituality, physical and moral purity, the ancient sages and seers and sastra-writers, poets, dramatists and scientists. They should be marked by individuality and independence in conception, imagination and thought. Imitation, plagiarism, reproduction, which make a man a literary slave and a slave in other fields of knowledge and bring about a mental and moral degradation in the unhappy victim, should be entirely absent from the products of the new system unless it be in the teacher who has to give out what has already been discovered and the learner who has to equip himself with the accumulated knowledge of past ages before he can explore fresh regions hitherto undiscovered. The fact that individuality, originality and independence were the distinguishing traits of the writers of ancient India has been amply testified to by competent authorities. Any

one that acquaints himself with the ancient writings will readily admit the truth of this statement. The late Professor Max Muller pays a warm and whole-hearted tribute to the writings of the great men of the past on account of their literary honesty, directness and originality of thought. More than anything else what was absent from them was a slavish acquiescence in the view of another, however great he might be.

11. Our Universities set before themselves an ideal far different from that set forth above. The original founders of the Indian Universities wanted efficient men to help in the working of the Government machinery and placed before themselves this as their ideal. It is a matter of common knowledge how well this ideal has been reached. We have amidst ourselves clever English speakers and writers, good precis-writers, political and social reform orators, journalists, writers of excellent official drafts and so forth, all these so well worked out as to ably contribute to the working of one part or another of the huge Government machinery. Instead of drinking deep to begin with from the fountain of ancient lore which had flowed down through the *yistas* of ancient ages, they employed themselves in acquiring a foreign tongue with all its foreign ideas so that in the result they got words and words alone but nothing of any value in the shape of ideas. This is a defect which is fruitful of much harm and stands in need of immediate remedy.

12. To proceed from the known to the unknown is a self-evident educational axiom which in our educational system only seems to be regrettably overlooked. The more we modify our system so as to conform to the

spirit of this axiom the more productive of good will it become. Indeed, any system of National education will be welcome, provided it is a practical demonstration of this self-evident truth. All the world over, the educational system of every civilised country except that of India is 'national in character for two reasons: (1) that it is built on the bed-rock of the ancient past, and (2) that the principle of proceeding from the known to the unknown is fully kept in view. In fact the one is implied in the other. In the outline that is sketched below I shall attempt to show in what way the existing system may be so modified as to infuse into it a national spirit and invest it with a national character without revolutionising the existing order of things.

13. Our primary schools should be so transformed as to have nothing in them unfamiliar to children. The whole world itself is something new and strange to the children in primary schools, having been in the world only for a few summers and it will be to do them much mental harm to make the school atmosphere still stranger to them. Their school-life must be only a continuation of their home-life. In order to carry out this object, the vernacular must be made to take a more prominent place in our primary schools than it does now and all the subjects taught should, as far as possible, be in the indigenous method. Our ancients recognised and, I believe, correctly too, that childhood is the period for the cultivation of memory. To bring about this result, moral axioms of ever-enduring value were made to be learnt by children, by simultaneous repetition. Sthothra Pattas such as Ashtakas, whether in the vernacular or Sanskrit, were also made to be learnt by

the repetition method and these continued to have a tenacious hold on them even in after-years and went a great way to infuse into them a religious and moral spirit. Versified lexicons called Nighantus were also made to be learnt in the same way. The educational foundation should be laid in a similar manner in our primary schools. The vernacular readers should treat of nothing unfamiliar to the children. Stories from Ithihasas and Puranas should be largely included in the vernacular readers. History and Geography may be continued to be taught as they are now, but in Arithmetic alone much modification is necessary. Much of what is western in the method of teaching this subject must go and its place must be taken up by the indigenous method. For instance, the multiplication table must be very largely extended so as to include in it even small fractions; measurement of areas, calculation of cubic contents, both of solids and liquids, calculation of interest, both simple and compound, profit and loss, etc., must be on the indigenous plan, the object being to make the child quick at calculation, however complicated a sum may be. A Nattukottai boy for instance who is taught arithmetic on the old method is able to give the result by mental calculation of a given sum much more quickly, whether it is of simple or compound interest or of profit and loss than even a Mathematics graduate of our University. The aim of primary education should be to make the learners quick practical men of the world, whatever the calling they may severally choose for themselves later in life, with a strong moral backbone and permeated by the spirit of piety and religiousness. As regards non-Hindu children, suitable modifications may be made in the religious aspect of their education on the lines indicated above.

14. From the commencement of the secondary stage I would insist upon three languages being taught in schools, English and one of the two, *i.e.*, Sanskrit and a vernacular as first language and the other as a second language. If, in addition to English Sanskrit is taken as first language, a vernacular will become the second language and similarly if a vernacular is studied as first language in addition to English, Sanskrit will be learnt as a second language. I would surely give an equally important place to all the languages but, for the present, it appears to me to be impracticable in the Tamil districts at least. From the papers we learn that it has been resolved by the Bombay Legislative Council to make the study of Sanskrit and a vernacular compulsory in addition to English in the schools of that province. In fact in the United Provinces and I believe in Bengal also, two languages are made to be studied during the school course in addition to English; the reason for such compulsory provision is obvious. We require English for, among other reasons, conveying to us the thoughts of the West. Sanskrit is equally necessary as the classical language of India and as the one language that flows like a continuous current from the hoary past containing in itself the literature and sciences as developed by Indians. The vernacular also is equally necessary as the mother-tongue of the pupils. Madras is the only province perhaps where the classical language is more or less neglected. It has been universally accepted that no education is worth anything unless there is provision in it for the study of a classical language. The Fisher Committee that recently went into the question whether to retain the study of the classics or to give it up, have, after a good deal of discussion, resolved to continue the retention. In fact,

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under the English system, a pupil learns four languages, Latin, Greek, English and any other modern European language. Why should the state of things be different under the Madras system alone? It will presently be shown that a study of three languages, as indicated above, is indispensable as a necessary preparation for the scheme of higher education as outlined below.

15. In order to make it possible for three languages to be studied without much strain upon the pupils, some modifications must be made in the School Final Scheme as it now stands. Inasmuch as Sanskrit and a vernacular are made compulsory under the proposed scheme, Vernacular Translation and Composition may be removed from the existing scheme and its place may be given to one of the two Indian languages. Similarly, one of the two C Group subjects may be given up and its place may be taken by the other Indian language. I would also suggest that Indian History and Geography of the British Empire with an outline knowledge of the geography of the world may be made compulsory examination subjects and that the study of the History of England may be reserved for the University course.

16. Before I proceed to submit what I consider to be an appropriate scheme of higher national education, I must preface by pointing out that it should be prominently kept in view that all mercenary considerations should be entirely kept out of consideration when it is our object to go in for a higher University course. Though in England it is otherwise, in Germany more than in any other country, it is sought for only for the sake of knowledge. It is reliably reported that there are sage-like Professors

in Germany who are devoted votaries in the shrine of knowledge keeping out of sight all money considerations. Similar was the case with the sages of Ancient India. The question should be not what this education can pay, but what additional knowledge it can fetch. The moment this noble motive is kept in the back-ground, from that moment the main object of higher education will more and more recede from our view. But if we are actuated by the higher motive and if it is practically demonstrated that the object of higher education is knowledge for knowledge's sake, the cry that is audibly heard from some quarters to discourage, if not to do away with, higher education, will vanish. It seems to be forgotten that it is to do a positive disservice to a country to discourage higher education. A country is considered great not by the numerical strength of its literate population of a mediocre type but by the number of its creative geniuses and their creations of ever-enduring value. No one would like to dry up the Ganges or the Brahmaputra, the Indus or the Godavari and be satisfied with the narrow rivulets and brooks, however large their number, bringing in an insufficient supply of the life-giving liquid. It should be the aim of every patriotic Indian to do all in his power to spread higher education. I have introduced this observation here as highly necessary at the present moment.

17. If the scheme of studies of any European University is carefully examined, it will be found that, in every field of knowledge, it provides for the study of the gradual growth of that branch of knowledge from the earliest days of European civilisation. The discoveries made in successive stages are

fully treated in the text-books prescribed so that the student marches along the sloping road of the past discoveries connecting the past with the present. In this is implied what is figuratively called organic knowledge. What our students study in our colleges grew in the soil of the West and still continues to grow there. Take for instance, Mental and Moral Philosophy and consider for a moment how it is studied by a student of any European University. He is given a review of how this branch of knowledge stood during the days of Socrates, Plato and Aristotle and then is carried down to modern times through the ages of the schoolmen and the middle ages of monastic culture. The same may be said of every other branch of knowledge. But, in our Universities, it is entirely otherwise. The subjects of our University course are not organically developed from the ages of the Vedas and Upanishads, from the days of Vyasa, Kanada, Kapila or Buddha, but is a cinematographic exhibition of the trees of European growth with fleeting shadows of unsubstantial fruits and flowers. This weakness in the educational system of India was left to Lord Ronaldshay to discover who deplored in unambiguous terms this sad state of things in higher education as it now obtains in our country.

18. Whatever the branch of knowledge that is selected by a student for his higher course, he must first of all know all about it as developed from the most ancient days up to now in this country before he proceeds to study it as developed in the West. The western contribution must be the super-structure built on Indian foundation. It should be remembered that there is scarcely any branch of knowledge that has not been

explored by the great men of the past in the literary or scientific history of India. Whether it is Poetry or Drama, whether it is Philosophy, Mathematics or Astronomy, whether it is Architecture, Sculpture, Painting, Medicine or Music, there is much that has to be learnt from the glorious contributions of the past. For instance, what is the Philosophy provided by our University worth unless we begin it with the study of the Indian systems? What is our Architecture worth unless it is studied with the basic knowledge of the Vastu Sâstra? Of what worth is our literary criticism unless it is based upon our knowledge of the Alankara Sastra, Vyakti Viveka, Dhwanyaloka and Rasa Gangadhara? Of what worth is our medical course unless, to begin with, we learn what the Ayurveda can teach us? It is with this object in view that I suggested in a foregoing paragraph that the study of three languages should be made compulsory in our Secondary schools; Sanskrit and a vernacular as indispensable as English. The foregoing observations will make it clear why the Fisher Committee have, after going into the question in all its details, finally resolved to retain the study of the Classics in the Secondary Schools of Great Britain.

19. It being now pretty clear that knowledge to become organic in us, we should study every branch as developed from the earliest stages in the cultural history of our country, it is a matter of urgent importance that all sciences should be re-written, embodying therein, all that has been discovered and given out by Indians. At any rate, to begin with, a new chapter should be prefixed to the existing scientific and historical works and those on literary criticism. All the

European works on Indian thought and culture must be re-written from the Indian standpoint by competent Indians. To be able to achieve this object, an academy of Pandits learned in the various branches of knowledge should be established, supervised and guided by competent scholars whose duty will be to publish in a reasonable compass all that India can teach in connection with every branch of human knowledge. They should be kept above want by suitable salaries being provided for them. The business of these men should be not to discover anything new but to re-tell what has been given out already. This must surely be not a very difficult task with all the facilities placed at their disposal as just now indicated. If we really want education on national lines, this is the step that ought to be taken immediately. We should not wait to begin re-adjustment until this work is completed. Some kind of re-adjustment should commence to be made at once, if higher education should be of any value to us. A Committee should be appointed by our Senate to go into the question in all its details for arriving at a common understanding as regards the re-adjustment.

20. Of late higher education as it now stands has been gradually losing its attractions. People are realising that it is no more a paying concern owing to altered circumstances. In order therefore to make it attractive for the knowledge it affords it should be materially re-modelled on national lines. Every country cherishes with love all that is great and good which that country can give and India cannot be an exception to this general rule. If the work of re-adjustment and re-modelling is any longer delayed, I have every reason to apprehend that a very undesirable state of things will ere long prevail bringing in it

train disastrous consequences, at any rate, to the educational progress of this ancient land.

21. Gentlemen, I think it necessary to conclude this paper with a timely warning. Do not be under the impression that by non-co-operation you can achieve the object in view. At least we, as educators, should stand aloof from this new movement, our work being entirely of a non-political character. Knowledge recognises no clime or political boundary, no colour or caste, no race, tribe or party. It is by a Providential arrangement that England has come to possess India, not mainly by the force of her arms. It will be to go against what I consider to be the Divine Will to think of severing India's connection with England. The blending together of the two civilizations of the East and West, the happy commingling of the cultures of the two great countries and the mutual trust and the mutual help that Providence seems to impose on us as a sacred duty may confidently be expected to produce benefits to the whole world undreamt of in past history. Self-Government has been already granted. Further instalments are sure to follow sooner or later for which it is legitimate on our part to start constitutional agitation. We should demonstrate by our administrative capacity that we deserve further instalments of reforms. It will indeed be to set back the progress of India by many centuries to have recourse to violent unconstitutional methods. With apology to Tennyson, I may in conclusion, say :

England's cause is India's or, conversely,
India's cause is England's.

"They rise or sink
Together, dwarfed or god-like, bond or free."

N.B.—In the above, the writer of this paper

has dwelt mainly upon Hindu culture as a factor to nationalise our educational system. He has not dwelt upon the other aspects of the Indian culture as he is imperfectly acquainted with them. But, in a Committee that may be constituted to prepare a scheme of National Education, men of scholarly attainments who can speak with authority on the various aspects of Asiatic or Indian culture such as Islamic, Buddhistic, Jain and Zoroastrian, may be appointed for preparing a well-considered scheme so that the new system of education may be entirely national in character.

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EXAMINATIONS IN ECONOMICS AND OUR UNIVERSITY.

BY MR. G. SATYANARAYANA MURTI, M.A.,
Professor of History and Economics,
Findlay College, Mannargudi.

MY recent correspondence on this aspect of my inquiry has, as the enclosures show, raised very interesting and important problems. The question on which my present discussion and the appended answers are based is as follows:—

Question VI. Do you think that the Madras University will do well if it accepts the following suggestions regarding the B.A. (Pass and Honours) examinations in Economics.—[Please specify also any other suggestions] (a) Let Indian Economics be separated from the General Economics paper; (b) Let there be more provision for questions which test the research aptitudes and critical tendencies of the students; (c) Let the Madras University specially adopt the following suggestion made by the Calcutta University Commission Report, Volume V, Chapter XL, para. 6:—"In order to make the University as a whole acquainted with the actual standards enforced by the examiners, the Board should from time to time publish specimen answer papers of border-line candidates so as to give an idea of the minimum attainments implied by a 'a pass,' 'a distinction,' 'a first division,' or 'a second division,' as the case may be."

My suggestion to separate Indian Economics from the General Economics paper of the B.A. course has evoked some very valuable side-issues of a controversial nature. Apart from the advisability or otherwise of a separate paper on Indian

Economics, the very expression, "Indian Economics," has been called a misnomer and even the existence of such a distinct subject has been called in question. Pending a fuller treatment elsewhere of the idea that Indian Economics is neither a misnomer nor analogous to American Mathematics or Indian Chemistry, I hold that the special provision of a Chair of Indian Economics by most Universities and the presence of a number of manuals of Indian Economics written by standard authors form not only an eloquent plea for the existence of the subject but also show that it deserves a scientific study. A European writer in his eagerness to give this subject a hearty send-off from the University curricula of studies wishes for the day when "the very name of Indian Economics will sound as uncouth, infelicitous and as misleading to the people in this country as it sounds elsewhere." It must be remembered that this oft-despised and much-misunderstood science of Indian Economics is analogous neither to American Mathematics nor Japanese Physics; for the latter are unrealities while the former is a reality. Again, Mathematics and Physics are exact sciences; Economics is a social science and no social science can afford to be as exact as Mathematics or Physics. The underlying assumptions and laws of the latter sciences are one and the same whatever may be the countries of study; not so in the case of a social science like Economics. Societies change from time to time and place to place in their ideals and general organisation and so the same universality and scientific necessity characteristic of the laws of Mathematics or Physics can never be attributed to economic laws, the non-absoluteness or relativity of which can be easily inferred from the historical conception

of economic life as exhibiting continuous organic growth and development. If this basic idea of the historical school of economic thought is accepted in its broadest significance, there is a strong case for not only Indian Economics but even Italian or Patagonian Economics however unpalatable these expressions might sound to some writers. The so-called pure science of Economics has ultimately to be incorporated in the science based on historical investigation or rather a philosophy of Economic history, the generalisations of which have to be obtained wholly or chiefly by induction from observed facts, past or present.

Every country should not only study the economic theory thus far developed and the economic histories of other countries but should also pursue both a theoretical and a practical enquiry by a study of its economic facts and a formulation afresh, if necessary, of economic doctrines or principles consistent with its traditions, history and social phenomena. As one of my correspondents remarks, "much of what is regarded as General Economics is merely the discussion of certain general principles formulated with special reference to the economic conditions of Western Europe and America." That science itself requires perhaps to be reconstructed in the light of the recent or the yet-to-be-conducted historico-economic investigations in various countries. Such being the nature of the situation, it behoves all countries (India included) to study and interpret afresh their economic life with the help of, though not with absolute reliance upon, the existing economic doctrine. This then is the general plea for Indian Economics which is nothing but a short-hand expression for a scientific

study of the economic conditions of India. It seeks to clearly analyse the "*ceteris paribus*" of some economic laws as expounded in western manuals of Economics. Besides this pure scientific interest, there is also a practical importance in the study of Indian Economics and that is the economic rejuvenation of India.

I honestly think that Indian Universities have no claim for existence unless they so organise their economic studies and teaching as to produce in the minds of their successful alumni a genuine love and enthusiasm for the study of Economics, General and Indian. Our Madras University should see that her Pass or Honours graduates, Economics diploma or degree-holders should not only have some general grounding in the broad principles of Economics but should also possess an intimate acquaintance with the important Indian Currency and Exchange Commission Reports, the Imperial and Provincial Budgets, the peculiar problems of Indian Agriculture and Factory organisation, Labour questions, Rural Economics, the problems of India's Banking and International trade. My object in suggesting a separate paper on Indian Economics is simply to give an increased impetus to its study in all its above-mentioned aspects by the examination-going students of our University. I do not for a moment seek to suggest that Indian Economics is to be taught in the colleges as a separate course after finishing the general principles of Economics. I entirely agree with Mr. S. Subbarama Iyer in his view that "the best method..... is to introduce Indian economic conditions as well as foreign conditions side by side when discussing the principles of the subject." But in the matter of setting questions on the subject, I beg to

differ from him and hold that, in consideration of the specially important Indian economic conditions and problems pertaining to the consumption, production, exchange, distribution and finance aspects of Economics, the University might set two papers on Economics, one of which should exclusively deal with Indian economic problems. There might be two parts (General and Indian) of one and the same question paper for 3 hours or 2 separate papers of 1½ or 2 hours each.

Some questions at least in the paper on Indian Economics should, as Mr. P. S. Loganathan suggests, "be framed with a view to see if the students are able to deduce theories and principles from Indian conditions directly." Some isolated or continuous facts and figures concerning Indian trade, population, agriculture, currency and banking, index numbers, family budgets, transport economics, etc., might be given and the student asked to deduce theories or harmonise the inferences therefrom with given statements; or some two or three alternative courses of economic action may be suggested in the question itself and the student asked to prefer the most feasible and advantageous and support it in the light of the suggested statistical information. If some at least of the questions of Economics papers are of the nature above indicated, I think they serve to test the research aptitudes and critical tendencies of the students. There seems to be some difference of opinion amongst my correspondents with regard to my suggestion of incorporating such questions. Some think that the tendency of examiners has, in recent years, been to set such questions while others contend that the suggestion would be more suitable in the case of the Honours than in

that of the Pass course students. What I suggest is that there will be no harm if the concerned Board of Studies expressly defines or explains the standard of research aptitudes and critical tendencies expected of the students. It is quite possible to observe a well-graduated scheme of setting such questions in the case of the pre-collegiate, collegiate and post-graduate students studying Economics. When Economics, as I suggest, becomes a part and parcel of the curricula of studies in the High School and Intermediate classes which, I am sure, will soon be re-organised in the light of the recommendations of the Sadler Commission Report, and when my suggestion of organising courses for a separate degree in Economics is accepted and when our University institutes Post-graduate studies of Economics, the necessity of setting questions capable of testing the research aptitudes and critical tendencies of students becomes an imperative necessity and I think that there will then be unanimity with regard to my suggestion. One important advantage, besides ever so many others, of the University accepting my first two suggestions is that there would arise a regular crop of special literature on Indian economic problems and both the students and the teachers of Economics will manifest a more increasing interest than at present in a critical and scientific study of the publications of the Commercial Intelligence Department and the Director-General of Statistics, the Proceedings of the Indian Legislative Councils and Assembly and the Reports of the Government Commissions on all topics of economic import. If, apart from accepting my suggestions, the University insists on the production of some special thesis by every student appearing for the Economics Degree or Diploma Examina-

tions, there will ere long be a speedy growth and development of the much desired Indian school or schools of economic thought.

My idea that the University should publish model answer papers on Economics has, with a few exceptions, received cordial support from my correspondents. Mr. M. Venkata Rangiah Pantulu, besides accepting my suggestion goes even the length of advocating that "all the answer-books of students appearing for the University examinations from affiliated colleges should be returned to the respective colleges." The wisdom of this suggestion can hardly be over-estimated. The purpose of publishing specimen answer papers is in the words of the Calcutta University Commission Report, "to make the University as a whole acquainted with the actual standards enforced by the examiners." If all the answer books of students appearing for the University examinations are returned first to the respective colleges and next to the concerned students, (the colleges might charge a few annas, if necessary, to cover the postage) not only will the students and the concerned teachers be benefited by knowing the exact ideals of the examiners but also the examiners would not, as at present, be exposed to the unpleasant charge of an indifferent and negligent system of marking. The remarks and brief comments, if possible, of the Chief or Assistant Examiners on the answers of the students to the questions on a subject like Economics would be immensely useful. The advantages of accepting this suggestion are so patent that I will earnestly recommend it for the serious consideration of the University.

So that really ideal work may be expected of the examiners, I hold that the number of papers assigned to an individual examiner

should not be large and higher fees should be paid to examiners to ensure good and careful work. The present system of a few persons undertaking to correct thousands of answer-books is, to say the least, faulty and should, in the interests of the examinees, be at once given up; and each examiner should look over only a small number of papers—say 200. To be frank, the more the papers thrust on any one particular examiner, the more careless and indifferent would be his method of valuation.

I beg to append some other important suggestions for enhancing the efficiency of University examinations in Economics and I trust that the University might find these to be of a general application. Questions on Economics should not be of a stereotyped character and an attempt should be made to introduce greater variety than at present into the questions. There should be a wide choice of questions which must be of a general nature with a few of a special nature for answering which extra credit is to be given. The distribution of the total number of marks among the questions should be so regulated that a candidate may not pass unless he answers some questions which cannot be answered from memory alone but require intelligence and real knowledge in the subject for their solution. It will really be conducive to a better state of affairs if the lecturers in various colleges are given full opportunity to criticise the questions and the scheme of marking adopted every year for examination in their subjects. The concerned professors and lecturers might discuss the question papers and the defects of marking in the answer-books in periodic conferences that might very easily be organised and consolidated reports of their proceedings might be submitted for the guidance and knowledge of the concerned Boards of Studies and Examiners.

I advocate the system of the University examinations conducted by persons outside the lecturing staff of the University and the affiliated colleges so that the students may not be encouraged to direct their attention for mechanical success in the examination to the peculiarities and the special notes of the examiners but try their best to secure thorough knowledge in their subjects so as to be able to stand any test. I am not unaware of some practical difficulties such as the unavailability of competent outside examiners and the difficulty of paying fat travelling allowances, etc., but as far as possible the suggested system might be tried with advantage. When certain professors are regarded as the most likely examiners in Economics, their notes are always at a premium and many suspicious tales hang over both students and the professors likely to be appointed as Chief Examiners. If there is no feasible and practicable exit from the system of teacher examiners, I think it is but just that every one of the teachers of Economics in the affiliated colleges should have his or her chance of becoming a chief examiner in Economics.

I propose also that the University should, to minimise the rigidity of the present examination system, provide for some collateral security protecting the students against the vagaries of individual University examiners. In some cases, the record of the candidates' tutorial and other college work—the details of this can be annually submitted to the University—may be taken into consideration; or the University authorities might take into account the recorded results and the actual marks of library work in the college and the periodical college examinations respectively.

I hope and trust that the Madras University will seriously consider my suggestions and better the system of examinations in Economics.

Answers to Question VI.

From M. R. Ry. Rao Bahadur K. V. Rangaswami, Iyengar Aul., M.A., F.R.E.S., F.M.U., Chief Professor of History and Economics, H. H. The Maharaja's College, Trivandrum (31-1-1920):—

I disapprove of suggestion (a). Good examiners will always endeavour to test the critical power of students. The publication of sample answer papers of actual examinees is more required in the lower than in the degree stages. Still there might be no harm in providing them in order to ensure uniformity in examining in the Pass B. A.

From Dr. Gilbert Slater, M.A., D.Sc., F.M.U., University Professor of Indian Economics, Madras (27-2-1920):—

(a) Certainly not.

(b) I think the examiners have of late years aimed at this.

(c) I do not endorse this.

From M. R. Ry. R. Rama Iyer Aul., Lecturer in History, Government College, Coimbatore (30-3-1920):—

I am in favour of all the three suggestions, (a), (b) and (c).

From Mr. J. V. Thomas, M.A., L.T., Professor of History and Politics, Findlay College, Mannargudi (10-4-1920):—

(c) Certainly model answers would be very helpful.

From Mr. N. H. Nanavati, M. A., Professor of Economics, Morris College, Nagpur (12-4-1920):

(a) I am not in favour of it.

(b) Certainly not for the B.A. Pass course.

(c) Good.

From M. R. Ry. M. Venkata Rangiah Pantulu Garu, M.A., Professor of History and Economics, Maharaja's College, Vizianagaram:—

The term "Indian Economics" appears to be a misnomer. We do not speak of Indian Physics

or Indian Chemistry as opposed to General Physics or General Chemistry. We may speak of an Indian School of Economics when such a school comes into existence. We may speak of Indian economic questions and of various ways of solving them. To speak of Indian Economic Science as opposed to General Economic Science does not convey to me any significance. All the truths of Economics—if at all they are truths—are of a universal character. Only those propositions that possess such a character can be styled economic truths. I do not like the idea therefore of a paper in Indian Economics as distinguished from General Economics. We have in Moreland's "Introduction to Economics for Indian Students" an admirable example of a book in general economics, the conclusions of which are illustrated from Indian conditions. When such books are written in large numbers there will be no room for thinking that there is a separate subject to be styled "Indian Economics." Practical application of economic truths is a matter of great difficulty in every country. It requires considerable modification of the original hypothesis and therefore of conclusions. Similarly such difficulties will be experienced in the solution of Indian economic problems. That does not however mean that there is a separate science of Indian Economics. (b) and (c). I agree with these suggestions in full. If practicable, I would even go further and suggest in regard to (c) that all the answer books of students appearing for the University examinations from affiliated colleges be returned to respective colleges so that professors may have an idea of the sort of work done by their pupils in the examinations. This will be a better means of bringing home to the teachers the defects of their teaching, wherein their pupils erred and in what directions they have to change their methods of instruction. This may however look quite a revolutionary suggestion though, if adopted, it is bound to effect much improvement in the marking of answer-books and in the teaching of the subject in colleges.

From Mr. E. V. Raja Kam Sastri, B.A., Sub-Registrar, Musiri (Trichinopoly Dt.) :—

VI. (a) Yes. The subject of Indian Economics will be carefully read by the students.

(b) This is very necessary as otherwise the students can very easily get by heart the answers to stock questions about the Ricardian theory, Marginal utility, Gresham's law, etc., and secure an easy pass. The student should, I think, be trained in his student days in some practical applications of economic theory.

(c) This suggestion can be taken up by our University for some years at least so as to popularise the scope of the ideal answers expected of the students.

From Mr. O. Venkatarangiah Pantulu Garu, B.A., B.L., Nellore (22-5-1920) :—

He agrees with all the three suggestions.

From Mr. S. Subbarama Iyer Aul., M.A., Professor of Economics, Christian College, Madras (27-11-1920) :—

VI. (a) I am opposed to such a separation. There is no logical division of the subject into General and Indian. Much of what is regarded as General Economics is merely the discussion of certain "general" principles formulated with special reference to economic conditions of Western Europe and America. The "general" principles cannot be understood intelligently by an Indian student when "Indian" Economics is taken as a separate course after finishing the "general" course. The best method, at least one which I have found most effective in my exposition of the subject, is to introduce Indian economic conditions as well as foreign conditions side by side when discussing the principles of the subject. The questions set for examination should follow the same lead. I have kept this point in view in the forefront of my teaching of Economics as well as in setting questions on the subject.

If your idea is to have a somewhat longer paper than the present one for 3 hours, the best method would be to have two papers on two separate portions of the subject than divide it into "General" and "Indian."

(b) I wish I could endorse this view but there is no use in insisting upon it for the Pass course, the curricula of studies being what it is at present. The Pass student has to study so many subjects and in such detail that it is next to impossible for him to develop a research attitude or even a critical tendency. There is no doubt however that students and teachers alike should aim at the ideal, and there is no harm in getting certain questions which test such aptitudes but I am sceptical as to the desirability of making such questions compulsory. When our suggestion for a separate Economics degree is accepted, such difficulties will doubtless disappear.

But the case is different for the Honours course. Research aptitudes and critical tendencies can and ought to be encouraged and questions set for testing such aptitudes. (c) This will be very useful.

From Mr. P. S. Loganathan, M.A., Reader of Indian Economics, Madras University, Madras (18-8-1920) :—

VI (a) I prefer two question papers for Economics but the division need not be between Indian and General Economics. My opinion is that questions should be framed only with a view to see if the students are able to deduce theories and principles from Indian conditions directly. In other words not only do I want application of western theories to Indian conditions as far as they are applicable but I want the students to deduce economic laws from a study of the actual conditions of India.

(b) Yes. I should prefer questions such as those set for the Diploma in Economics Examination for the years 1919 and 1920 in the Applied Economics Paper.

(c) No.

THE MODERN TEACHER AND HIS TEACHING.

A PLEA FOR CORRELATION AND EDUCATIONAL REORGANISATION.

(Continued from the September number).

SO far our purpose has been to lay stress on the fact that no subject of the school curriculum can have an isolated existence of its own and that our attempt to split up knowledge into so many subjects is perhaps a relic of the obsolete theory that the brain is composed of several compartments, each capable of a specialised training. It is not possible nor is it at all desirable, to do away with the so-called experienced teachers who, situated in a position of influence and vantage, are responsible for the perpetuation of several antiquaries in our improved systems of education. Knowing the value of the reformed methods, one cannot see why these Nestors of the plain wish to zealously guard their traditional methods. The present S.S.L.C. course is neither the old Matric nor the reformed and well-intentioned S.S.L.C., as it was inaugurated, nearly a decade ago. Even to-day when it is supposed that the system has best been understood the teaching tends to run on the old lines and consequently the S.S.L.C. is being transformed into the old much dreaded Matric. The University has had to intervene and the intervention cannot fail to bring with it its time-honoured principles of promotion. The list was originally called 'the Pass List,' but now it is termed 'the eligibility list.' Was it for this and this alone we have been so long racking our brains over?

The S. S. L. C. examination conducted annually was certainly not meant to serve as the Entrance examination and students are

not to be trained, as they certainly are, for a University course. Specialisation in Form V is at present designed to facilitate choice of subjects in the Intermediate and as it was recently observed by a responsible teacher, Geometry, Algebra and Arithmetic have to be taught separately in Form IV and periods have had to be ear-marked for these subjects. Was the syllabus in Elementary Mathematics drawn up for this kind of perversion and mutilation? It is evident that the students are being taught solely with a view towards helping them through their University courses, and that the University course begins really in the IV Form. If one were to say that mental development though multiform in its manifestations is at bottom one process and that the easy convertibility of knowledge should receive the early attention of the teacher, one is sure to be cried down as Utopian. But the teacher is not to be wholly blamed. No father would like to see his son trained for the world. The be-all and end-all of education is a fat salary in Government service. Is it then the fault of the University? No. Is it then the ulterior motive of the Government that has forced on us this phantom of an education? Again no. Who then is to be held responsible for this undesirable state of affairs? Without going too far into the realm of politics I shall try to solve this question. The same sentiment that I am going to venture forth, far from being original, was once expressed by the world poet Sir Rabindranath Tagore in one of his Trichy lectures.

The system of education is not indigenous. The egg of an educational system brought from the West, is hatched by the Indian University; without a proper equable climatic

environment and hatched by an Indian it is not surprising if healthy chicken are not the result.

The whole metabolism has been faulty and the unhealthy condition of the system exhibits itself at one or more places in the body. It behoves us to apply at least some soothing drug to the outwardly diseased area. We, teachers, do it under training and advice from our experts. There is all the appearance of a healthy body for some time. The sores appear to heal, only to have a recrudescence sooner or later. This being so, if no radical cure or prophylaxis is available I think our boys are entitled to a judicious application of the emollient. My complaint is that the soothing ointment is not carefully applied. The affected area should be cleaned and carefully looked after. No patient would like to entrust his diseased system to an incompetent and unwilling and discontented doctor.

A diseased system of education, a discontented teacher who always has to complain that it is getting more and more impossible for him to keep body and soul together, the famine which I fear is becoming chronic, the aristocracy who, being in the land of Lotus-eaters, cannot afford to think of the suffering Plebians, the parent who has his eye fixed intently and greedily on Varasulkam and Government service, the present political unrest which directly affects the student population—is there, I ask, any hope of our getting good and healthy chicken in the face of these adverse odds?

The problems that have to be solved are so vast and varied that one has to despair of any solution. The statesman, the politician, the aristocrat, the parent—all these have to co-

operate before anything could be thought of. Education is in the hands of aristocrats, not in the hands of educationists. Incompetent doctors are worse than quacks and on matters educational a non-educationist adviser to Government is little better than the incompetent doctor. Somehow or other the belief is growing strong that every layman is fit to be a teacher; chill penury repressing his noble rage and freezing the genial current of his soul, fresh from the academy, the graduate should embrace the teaching profession to repent afterwards or should waste his sweetness as a clerk and be for ever fallen. The flame of a profession, having a decent and promising start, entices the merry and innocent flies to destruction.

Elsewhere I have observed that the teachers are under-valuing themselves by their hot words in conferences and now my appeal to the guardians of education for greater emoluments is likely to be taken as a contradiction. By all means, the teacher should agitate, but let him agitate to live, and not live to agitate.

And Oh, ye guardians of education! Do kindly realise that a teacher is not only a teacher to minister to the wants of children, but is also a man with human cravings, a husband, a father, and has an existence as a member of society and that though every other consideration should be subordinated to the proper discharge of his duties it will be suicidal for him to keep aloof from his other responsibilities. He is not, as many do foolishly say, a wretched being, *sans taste, sans status, sans everything* worth having. Hitherto the teacher has been a little bit too docile and therein has he grievously blundered. But I would warn him against blunder-

ing in another way by being too noisy. While with the rest 'claim leads to claim and power advances power, and still to new heights their restless wishes tower,' the teacher has consistently been spurning away fame, perhaps with a philosophic resignation 'that it is the last infirmity of noble minds' and how many noble minds have lived and died before, unknown, unwept, unhonoured and unsung.

The problems that confront the really serious educational reformer have been enumerated in the previous paragraph and India's salvation would therefore seem to rest on a sound system of education. Without a properly-organised educational background every attempt at the betterment of the Indian's lot is bound to spell failure—yea to bring on misery. The history of the past decade gives ample proof, and each day of political unrest only strengthens our conviction. The millions of India are persuaded to believe by a few, it may be, sincere leaders, that crystal water sparkles before their very eyes and so near to them, only I fear to be doubly deceived at the sight of a mirage. A handful of leaders is not sufficient for a national cause; the principle for which the leaders fight is certainly most laudable; but I am not prepared to say the same thing of their methods or of their field of activity. Mother India wants not at present political unrest; she wants 'educational unrest,' not boycott of education and non-co-operation, but refinement of education and concerted action, not a death-blow to the diseased system, but a soothing emollient to the diseased member or members and systematic improvement and toning up of the system, not power 'for power of herself would come uncalled for, but, to live by law, acting the law we live by.'

Education does suffer as much from politi-

cal unrest, as it does from the rigid and inelastic ministerial department, which has been empowered to supervise and to rectify the working of the teaching staff. The whole inspectorate, by its most expected and unwelcome visits, by its circulars and notifications, seems more to measure and limit the work of the teacher. The headmasters, in their turn, true to their salt, see that the teacher does not while away his time, that the teacher is always active and his inspection of the 'notes of lessons' of the teachers and the number of entries in the Marks Register, and of the number of composition exercises he has valued, are all to find out if the teacher has gone through all the formalities to deserve his pay for the month and if he has turned out the requisite amount of work during the session, which, no matter its quality, will be sufficient to meet with the Inspector's approval. Thus is the teachers' work circumscribed. If all the teachers were allowed to sit silent, having given free scope even for the boys' mischievous propensities, I don't think the results would be any more disastrous than they are at present. The teacher's silent presence would do less harm than his boisterous eloquence, which in most cases is really boredom. First let the teachers be trained to be passive and then let them learn how to be passively active. If the teacher were passive he gets no opportunity for educating the boy out of his common sense and if he be passively active he has every facility for properly educating the boy. A clay model of Drona had been sufficient for Ekalaiva and every student as he enters the institution is an Ekalaiva, but the moment he becomes the silent hearer of the boredom, he is not the *sishya* he was a moment ago. The Maya of a boredom envelopes the innocent babe and drowned in

this maya very few realise and see the All-Mighty-Education and if there are Yogis who have seen God it is in spite of and not because of 'Maya'.

I shall conclude this portion of my article with two requests: one—to the public—for the sake of your sons, and sons' sons, for the sake of justice, for the sake of your country, don't forsake the teacher, adjust a healthy environment for him to thrive in; for, he is in your garden; and the other—to the teacher—for the sake of your fore-fathers, for the sake of the public and for the sake of your country, be true to your salt and adjust a healthy environment for the child plant; do not every now and then pull it and see if it has taken root, do not handle it roughly in your zeal to see if it has grown bigger and do not be dissatisfied if the plant does not show rapid progress for after all you the gardener may be at fault.

I cannot see why and how sufferance has become the badge of the teachers' tribe, and why it is not recognised as an indispensable unit in social circles. The world has perhaps become too materialistic and cannot gauge or realise the work it has to do and is doing. The work turned out by every other professional man could be valued and measured and assessed whereas the teachers' responsibilities have only to be imagined. The child-plants under their fostering care yields fruits after a very long time and progress is rather slow and imperceptible. A change in the angle of vision is necessary on the part of the public.

We are having wave after wave of educational reorganisation and the adolescence of the last decade especially has never been allowed to enjoy peace. A thorough overhauling is shortly to be expected as the result

of the recommendations of the Calcutta University Commission. The formation of a representative committee of officials and non-officials is being thought of and it is to be hoped that 'vocational education' will soon be the waking and sleeping dream of the organisers. The future of India depends on those constituting the committee and the usefulness of the committee in turn, depends on the earnestness and the insight of those representatives. Educationists of approved merit should form the majority and the fewer the number of laymen the better. We have had enough of airy platitudes from platform orators and education has already suffered a great deal. The Government in its endeavour to please everybody, has pleased nobody.

How many of those so-called great men who want to pass off for educationists have critically studied the volumes containing the recommendations of the Calcutta University Commission, which are to be adapted to conditions in the Madras Presidency? How many have not satisfied themselves with the abstracts given in the various periodicals? How many are just beginning to turn over the pages of the volumes, even as the Infanta of Spain did with an English dictionary at the prospect of her marriage with the English Prince (afterwards Charles I), only to throw the book off, when his one foolish act displeased her? How many of those Principals and Headmasters have carefully studied the question, discussed it with the staff and have responded to the call of Mr. Zumbro. These are not fit persons for a committee to whom the future of India is to be entrusted. The selection of representatives is perhaps *the most arduous task*. One cannot find the really serious educational thinker in the midst of the high social circles

nor in the midst of the noisy platform-speakers for to him these are denied.

'Remote, unfriended, melancholy slow,
Or by the lazy Scheldt or wandering Po.'

Dive deep into the staff of each High School and do not neglect any one institution; you might come across a handful after all; their adoption tried, give them the encouragement they richly deserve. A few hours of humorous gossip in a richly-furnished hall, resulting in the passing of a resolution *by a majority* composed of indifferent aristocrats, cannot satisfy the needs of a nation.

(To be continued.)

P. R. SUBRAMANIAN.

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THE TEACHING OF HISTORY IN SCHOOLS.

I.

HISTORY, as is seen in most of our schools and colleges, claims for herself a very large number of pupils, and students of history are conspicuous not only by their comparatively large numbers but also by the higher proportion they bear to pupils taking up other subjects for special study. It is the object of this attempt to consider the various suggestions that may improve, or help the efficient imparting of, instruction in this subject.

A brief survey of the present methods of teaching history and an examination of some of the reasons for her claiming a larger number of pupils will greatly help the attempt.

The latter—why a larger number of pupils take to history—shall be considered first. Now the subjects our pupils have to specialize in, as alternatives to history, are (briefly stated) Science in its various branches of Physics, Chemistry, Botany, etc., and Mathematics. These appear either too difficult for an average pupil to attempt studying or too costly for the school authorities to provide the necessary large facilities in the shape of apparatus and appliances. The consequence is, that either pupils study history because a success in it can easily be secured by a study of a few books, or managing bodies affiliate their rising institutions in history alone, at least to start with, since the needs for teaching this subject could be more easily complied with by the purchase of a few books and maps.

As regards *teaching* in this subject, it has to be observed that it does not closely ap-

proximate in most cases to anything desirable. Causes there are, for such a state of things, differing in their nature from one another and consequently throwing the blame on different sets of individuals.

A large number of pupils have to study history because they are not as already observed in a position or inclination to study any other subject and the presence of such a material can in no way be encouraging to the teacher; or the teacher himself has been taught on traditional methods of studying a few books and reproducing the facts with slight sifting in their narration; or again managing bodies themselves have mostly a poor idea of the subject partly owing to the way in which they have studied it in their own days. Anyhow the net result of any one of, or all, these causes is that history is not taught as it ought to be done. Portions or particular pages are prescribed either in advance or after class-lessons and the pupils are expected to repeat or narrate what has been so prescribed. Coupled with these we may find an earnest teacher interestingly narrating facts of history with causes excellently well, in a purely deductive method, taking care to enlist the pupils' attention by a few questions during narration and recapitulation, a black-board summary and a school atlas or a wall-map.

All these are good in themselves, but are not constituting all that is needed for making the subject one to be studied scientifically. We shall therefore proceed to see the improvements most necessary towards a proper teaching of this subject.

The teaching must, in the first instance, be more inductive than deductive. It may even be said that there is no harm in making it almost an inductive, instead of a deductive,

one. It scarcely needs elaborate exposition to show that it is only the inductive process of approaching any subject that has given rise to various and wonderful discoveries in all branches of knowledge. Pupils can be encouraged in right thinking by being asked to trace the causes from results more easily than by being asked to hit at results from causes.

Again, history being a subject dealing with the thoughts and actions of human beings, can be and ought to be made interesting by references to letters or accounts of contemporaries by exhibiting models, pictures, originals (as far as possible) of materials, and scenes of life of the period studied. These sources form the spice for the food, *viz.*, History, to be easily digested and assimilated and also the means and methods to provoke, in the pupils' minds, a number of allied thoughts which the teacher has to draw out, help to arrange and render useful to piece out the historical information which he would otherwise have to narrate himself.

These "sources" then have to form a part, not only of class teaching, but also of examinations. On this point no one can be stronger than Mr. Keatinge to whom questions, to many of us thought-provoking, are not exactly so but only memory-testing ones. He observes: "The questions set are chiefly a test of memory, and although a consideration of causal elements may be asked for, it is very difficult for the examiner to tell whether the inferences and causal connexions which are supplied by the boy in the examination room have actually been worked out by him, or like the answers to questions of fact, are mere memory work." Again, in examining a question paper he observes "when reasons and influences are given in a candidate's answers

it is not easy to ascertain whether he has been induced to make them himself or has simply been given them.....But it is not here suggested that memory should not be tested. A portion of every history paper for boys should consist of questions which are mere fact, date, genealogy and sequence questions. This portion should be compulsory, and a moderate number of marks should be assigned to it; but the bulk of the marks should be given to, and the position of the candidates decided by, questions of a different kind, intended to test reasoning power and ingenuity, and to ensure, so far as examination can ensure this, that the pupils shall have been taught in a certain way. A beginning might be made and the teaching of history might be influenced by the introduction into history papers of a few such questions with high marks assigned to them." His words are worth quotation and even frequent quotation till the subject is rightly taught and the pupils rightly examined.

Objections may arise to show that sources cannot be employed with advantage in lower classes, and in higher forms are not possible owing to the lack of material for every pupil. For the former objection it might be said that it lies with the teacher to choose and arrange the so-called sources to be presented to pupils. These sources may be either letters, or pictures, or models, or originals (*e.g.* coins) and that in young minds a number of thoughts could be more easily created. All that the teacher has to do is to provoke them and guide them to proper use by apt questions of an inductive type.

Regarding the latter objection, *viz.*, lack of material, Mr. Keatinge is practical in his suggestion. He says, "to complete it (the

text-book) and to give materials for exercises, contemporary documents must be supplied and not merely brought into the class-roombut placed straight in the boy's hand for him to use his wits upon. The science laboratory indicates the solution of the problem. Boys are not expected to buy their own water-taps, Bunsen burners, etc. In the same way source books here referred to must be school property.....In how many schools are class-room libraries to be found?" The pupils might be asked to copy down select documents for use or copies of the same might be cyclostyled or typewritten and supplied at a nominal price.

Next, the teaching must combine with it (just as in science subjects) practical work. The materials for this may be very similar or even the same as those employed for inductive class teaching: this cannot constitute any defect in the teaching of this subject. Here again, methods adopted in science subjects afford an illustrative argument. Experiments are done in class and pupils also do the same both with their master's help and themselves in their practical work periods. The materials used and the questions given in these subjects both for class teaching and independent practical work, do coincide as well as precede or follow each other. The adoption of such a method is bound to be fruitful in history also, since it aids thinking, arranging, reasoning and cogent narrating by pupils and further, practice in all these enables pupils to fall into the mode of scientific study of the subject. That all this might be more easily practised two consecutive periods every week must be devoted for such work.

Again, we have to consider the place of excursions in the study of the subject. These

are at present conspicuous by their almost entire absence. Almost every place or its near neighbourhood is with its own historical connections and a well-planned visit to such places cannot but be interesting and instructive. Any interesting narration of the destruction of monasteries cannot be so impressive as a visit to some of the ruined ones to be seen to this day in England (pupils outside England might be shown a map with the various monastic centres marked and along with it pictures of monasteries in ruins); or again, the iconoclastic zeal of some of the Muhammadan rulers cannot be more effectively depicted than by a sight of huge idols seen destroyed in abundance in both Northern and Southern India. But just as the value of excursions cannot be denied, the force of the argument that might be advanced against them cannot also be easily denied. True, excursions cost much, still the obstacle has to be overcome but not shunned. Experience cannot be easily gained. Money has somehow to be found by the management aiming at educating youths and by the parents desiring their children's education. Both should meet half-way. Education grants should be increased and ear-marked for excursion purposes just as they are done for buildings, etc.; both pupils and teachers should earn funds by application of their histrionic talents. Manufacture of historical and geographical models might be undertaken by secondary school pupils for use in elementary schools at low costs. In short where there is the will there is the way also. Another method of improvement is the use of the magic lantern with illustrative historical slides. Here the objection of cost cannot count for much since in most of our high schools a magic lantern with some slides could be found. The

kind of slides to be purchased is only a matter which could be easily agreed upon by both the science and history masters; in a point like this a central body of the various district educational councils might do some substantial help by arranging or calling for the manufacture of the required slides and distributing through their own agencies to the schools within their jurisdiction.

Yet another method for the encouragement of the study of history may be found in the institution of annual prizes for the best attempt at finding out historical information from sources in examinations. A collective estimation of the students' ability in the exercises given throughout the year will be highly useful in inducing an earnest and sustained attempt by them.

Among still more other methods may be mentioned the assignment of a separate period in the time table for (history) library work, the institution of historical essays and debates, institution of inter-school competitions with questions modelled on the lines already suggested, lightening of the syllabus and prescribing a shorter period for detailed study so that the pupil might find more time for a scientific study of history.

II.

It is not the teaching alone that requires improvement, it is after all only the form in which what proceeds from the teacher appears; and for the substance to correspond to the form the teacher has to be improved. The remaining portion of this attempt is for the consideration of this.

No teacher should look upon himself as fully up to the mark and merely think that improvements should be expected either in the pupils or in the school equipment. Educa-

tion for the teacher as well as the pupils lasts throughout life, and both have to learn and, also, to keep what has been learnt from rusting.

Teachers must rise out of the sphere of the study of portions or books necessary for mere examination purposes and resort to advanced books on the subject. Books in the library so far as history is concerned, cannot be wanting and when such material is available it should be largely made use of. They must acquaint themselves with the contemporary documents and for this purpose they should familiarise themselves with such books as Keatinge's "Studies in the Teaching of History" and Messrs. Keatinge and Frazer's "History of England for Schools."

Teachers should interest themselves in maintaining a historical museum located in a comparatively large room in school to admit of being used as history-reading-room also. Schools with fortunately a large compound should provide also for history bowers, caves, etc., which, though not traditionally historical may yet give room for pupils for holiday amusements in the shape of erection (in a miniature scale no doubt) of an Asokan pillar, a Kutb-Minar, a cave like the recess of ancient Aryan contemplation, a small "hill" and a plain for a model of the battle of Hastings, the front view of an E-shaped Elizabethan house and so on. If natural science should require and therefore be allowed space within school compounds, will the just demands of the sister subject be refused?

Closely following on the heels of this argument is the plea for the arrangement of periodical exhibitions of historical models on a regular system. The teacher must not only take interest in all these but also contribute something of his own making.

Next comes the usefulness of historical excursions. The advantages of these excursions for teachers cannot be over-estimated. School vacations should be utilized, in part at least, for such purposes and managing bodies should liberally come for help. It is only when the teacher thus moves about the country at large could he be hoped to come out of his thoroughly conservative and stay-at-home nature or even the ignorance of the world outside the class-room and books. These excursions, if systematically arranged by institutions, will benefit teachers considerably and even add to the dignity of the profession.

Should the value of excursions be granted the value of conferences of teachers so taking part in excursions cannot be under-estimated. Conferences for such purposes must form part of annual conferences where members of the teaching profession might freely exchange opinions and accounts of places visited, utilizing these opportunities for mutual edification.

Side by side with these, Universities or the Secondary Education Boards in each province should arrange for vacation lectures, thereby affording other opportunities for bringing teachers up-to-date.

Next comes the hours of work for history teachers. What is said here may be applicable for teachers in other subjects also and in that case the need is both general and urgent. The habit of expecting teachers to teach for 25 out of 30 periods in a week must be given up and teachers should be allowed to be free from teaching work at least for one period in the forenoon and another in the afternoon. The present five period-leisure-system is not of any real use since the teacher

works for all the other 25 periods and since even this single leisure period is denied to him by his being expected to engage the class of an absentee teacher. Nothing is insuperable and a teacher cannot feel unable to work even all the periods in a day throughout the week, but considering the nature of the right work expected of him, the preparation he has to make at home and corrections and valuations of pupils' note-books and exercises, he should not be denied the meagre leisure the time-table provides for. The adoption of such a step might necessitate the employment of more teachers for the same subject, but what is gained in money might otherwise be lost in efficiency. The appointment of junior masters or tutors might help to minimise extra cost.

Last, but not least, comes the question of salary. Here again managing bodies should not be very particular of expenditure alone. Though teachers should bear in mind the "nobility of their profession," "the sacredness of their work" and the like in the discharge of their duties proper, these should not be pointed out as arguments against them when they look for enhanced salary.

These two arguments might seem to make the present attempt run off the rails but really it is not the fact since they are also very potent ways of improving teachers; and that they are applicable to other instances in no way diminishes their force or connection with the subject.

It is only a simultaneous recognition of these needs that can admirably contribute towards the improvement of the teaching of History and also the scientific pursuit of the study of the subject. So long as it is regarded as a mere record of dates and events so

long will this defective state of things continue. It is no wonder if laymen in history show such an attitude. All the more reason is it that history teachers should attempt to remedy this by their own ceaseless agitation. The task is not difficult. The science classes in our high schools did not come into existence simultaneously with apparatus for each student. Sending persons for training or on deputations is not new for any management and money or collections and compounds cannot be a waste when rightly used, and needs cannot early and adequately be recognised by others so well as by those concerned and if history teachers should rise equal to the occasion and needs there can no longer be any postponement of satisfying the needs for the proper teaching of History.

G. SITARAMA AYYAR.

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THE STUDY OF WORLD-LITERATURE IN OUR UNIVERSITIES.

[Translated from the Bengali of
Prof. BENOY KUMAR SARKAR.]

By MR. L. V. RAMASWAMI, B.A., B.L.

WHILE at home in India, we usually treat our dailies and monthlies with ridicule but when once we go out of India and study conditions outside, we understand that the ridicule which we thus heap upon our Indian periodicals is not really deserved. It cannot be said that European and American periodicals and journals outstrip or excel to any great extent our Indian periodicals, whether in the matter of descriptions of subjects or in collation and arrangement of facts or in the matter of editorial comments. But because in the whole of the West the political, social and educational life and thought belong to, and move on, a higher plane than in India, the tone of Western periodical literature is necessarily a little higher than in India. Besides, it must be admitted that there is supreme excellence in the matter of management of Western periodicals; whether it is a monthly or a daily, every periodical publication in the West is a huge profit-making trading concern. We are bound to admit that, judged from this standpoint of profit-making, the proprietors of Indian periodicals would fall far below their friends in the West; but if the work and method of editing alone be considered, then many of our dailies and monthlies can claim, with great justification, equality of excellence with the best foreign periodicals. The Allahabad "Leader," the Madras "Hindu," the Calcutta "Modern Review," and many other important periodicals of our

land may be cited as instances. There is, however, a very sad deficiency in India of scientific, philosophical and historical periodicals edited by specialists of the respective departments. The "Wealth of India" of Madras, the "Bangiya Sahitya Parishad Patrika" of Calcutta and the "Sacred Books of the Hindus" Series, published by the Allahabad Panini Office, form only a very poor record for such a big land as ours. Of purely philosophical or scientific periodicals, there is not even one in India. In this matter it is true we have fallen far behind in the general march of the civilised world. Tested by this standard, our lack of independent thought and of originality, our want of free creative power become easily perceptible.

In the daily and monthly periodicals of the West there generally appear critical notices and reviews of works in the departments of the drama, the stage, painting, music, architecture and ordinary literature. In our land also such criticism is met with in our periodicals. The mode of criticism, the manner of writing and the general treatment, however, all appear to belong to more or less the same type. It would be improper to call all this, genuine criticism; such critical notices are really only descriptions of pictures, of painters, of books, etc. Even in the West better methods of criticism are rare in the periodicals and so there is no reason to particularly blame the methods of our critics—the Shrisamalachokas of our periodicals. What such reviewers of books generally do is to cull a few sentences from the preface, the introduction and the contents, and a few extracts from any one chapter of the book and then dress the whole thing up as criticism. Reviewers of painting, music, etc.,

attempt to effect their task by merely dealing with the individual biographical details and personal matters concerning the authors of painting, music, etc. Rabindranath Tagore's works have been reviewed in many European and American periodicals. The general method of criticism has been based mostly on the following type :—

"When it is seen that Messrs. Macmillan & Co. are the publishers of this work, that the Nobel Prize-winner Rabindranath is the author (or translator), and further when it is seen that this book is full of Indian mystic thought, it is superfluous for us to say that it will be received with approbation and particular respect by the learned public. We quote a few extracts from the book for acquainting our readers with the excellence of the book..... We will now finish this review with yet another extract from the work under reference....." This kind of criticism of literature and art is commonly seen in Western and American periodicals and so we think that there is no reason for Indians to unduly blame themselves in this respect.

Of course genuine criticism of the right type is also sometimes met with in the periodicals of these lands. The critic in such cases tries to bring out the innermost details of poetry, music, fine arts, etc. The very souls of the poet or artist are analysed and explained herein. Like good poetry, good pictures, good music, criticism of this type is also rare, the reason being that it is really the outcome of original creative power, a portion of genuine philosophy itself.

Such genuine criticism has not been wanting in Bengali literature also. Bankim-chandra, Chandranath Bose, Dwijendralal, Rabindranath and Ramendra Sundara

Trivedi are the representatives of the literature of criticism in Bengal. If we are to compare them with critics of the West, then we would say that the critical method adopted by writers like Bagehot, Leslie Stephen and Matthew Arnold is seen in the works of the abovementioned Bengali writers. The method adopted by these writers is to profoundly analyse, explain, and comment upon the work under reference.

There is another method of literary criticism which is adopted by Prof. Brajendranath Seal in his book, "The New Essays in Criticism"—a book of the existence of which many are not even aware. It is singular that its influence has not been felt at all in the English and Vernacular literature of India. There is both criticism of Western literature and criticism of Western critics in this book. Besides, the gradual development of Bengali literature in the nineteenth century is also explained. The book gives a clear idea of the position of India in the modern world of thought. It is, however, regrettable that in this book the references to World-Literature are so many that many people even in the West will find the book a little difficult to understand. A simpler edition of the book and an easy Bengali translation should be published.

Like Brajendranath Seal who favours the comparative and historical modes of criticism, the poet Sasankamohan Sen of Chattogram has entered the arena of literary criticism, independently adopting the same methods. If his works are published in book-form, their real value can be appreciated. Babu Dinesh Chandra Sen's "Banga Bhasha o' Sahitya" is a history of Bengali language and literature but in certain parts

of the book literary criticism also finds a place. In such parts, the critical method of Matthew Arnold, Bankim and Rabindranath is generally adopted but sometimes the second-mentioned method of Brajendranath is also evident. In Dinesh Babu's "History of Bengali Language and Literature" written in English, the method of Brajendranath Seal is adopted to a greater extent.

At Oxford, Cambridge and Edinburgh which are the centres of high thought and learning in England, very little talk about world-thought or world-literature is heard. The current of world-thought does not easily find an entrance in these centres; but in the Universities of America the case is different, for, here, the whole of European thought and learning lies before one. In the Columbia and Harvard Universities the authorities are actively engaged in adopting and popularising the thought and learning of the different countries of Europe, in their own respective Universities. The literatures and learning of Italy, France, Russia and Germany have found due recognition in America. There are special arrangements for the teaching of the arts, literatures and civilisation of the different continental nations of Europe. Consequently we think that if a knowledge of the literature and civilisation of the different continental nations of Europe is to be acquired in the English language, it is distinctly advantageous for the student to go to America, instead of to England. Such books as the Professors of the Harvard and Columbia Universities have written about the different literatures of Europe cannot be had in the literature published in England.

At the present time when in Bengal great

interest is taken in literary criticism, history of literature, criticism of the fine arts, etc., we will be particularly benefited by keeping ourselves acquainted with the forces of world-literature. We are all engaged in adopting, in different fields, the historical, comparative and philosophical modes of reasoning. It will therefore not be difficult for us to enrich and invigorate our discussions by drawing facts and principles from the forces of world-thought.

For this purpose, works of comparative criticism must be studied and popularised in our land. If the works of writers like Taine, Edmond Scherer, Sainte Beuve, George Brandes and Dowden are read widely, there will be considerable ease in understanding the mutual relationship between literature and national life. The value of painting, music, architecture, drama and novels would be made evident to society in a fresh and vigorous manner. Critics of this type are really philosophers and as such pioneers of new and fresh thought and consequently they are, really those who lay down the rules of national development and progress.

Prof. Kuno Franka of the Harvard University has written a book of criticism on German literature, which is worthy of mention in this connection. Of course the principles and opinions of no philosopher, critic, or historian can be unquestioningly adopted as absolute truth. The inferences of Brandes, Dowden and Franka also cannot be unquestioningly and blindly accepted; but in order to appreciate their modes of reasoning or methods of criticism their books have to be respectfully studied. In the preface to Kuno Franka's "Social Forces in German Literature," a concise description

of the method of criticism adopted in the book is given :—

"There seems to be a decided need of a book which should give a coherent account of the great intellectual movements of German life as expressed in literature, which should point out the mutual relation of action and reaction between these movements and the social and political condition of the masses from which they sprang or which they affected, which in short should trace the history of the German people in the work of its thinkers and poets."

In the chapters on literature contained in John Richard Green's "History of the English People" which is a well-known book in India, the mode of criticism described above is adopted.

Besides the well-known work of George Brandes on Shakespeare, there are other works of this author dealing with Ibsen, the philosopher, Nietzsche and Ferdinand Lascelles. But there is yet another famous work by George Brandes on the "Main Currents in Nineteenth Century Literature," which book is divided into six separate portions:—

1. The Emigrant Literature.
2. The Romantic School in Germany.
3. The Reaction in France.
4. Naturalism in England.
5. The Romantic School in France.
6. Young Germany.

The difference between the mode of criticism adopted by Arnold, Rabindranath Tagore and others on the one hand and the comparative, historical and philosophical method adopted by Dowden, Brajendranath Seal on the other, is well brought out by the following words of Brandes :—

"Regarded from the merely aesthetic point

of view as a work of art, a book is a self-contained, self-existent whole without any connection with the surrounding world. But looked at from the historical point of view, a book, even though it may be a perfect complete work of art, is only a piece cut out from an endlessly continuous web. Aesthetically considered, its idea, the main thought inspiring it, may satisfactorily explain it, without any cognisance taken of its author or its environment as an organism; but historically considered, it implies, as the effect implies the cause, the intellectual idiosyncrasy of its author, which asserts itself in all his productions, which conditions this particular book and some understanding of which is indispensable to its comprehension. The intellectual idiosyncrasy of the author, again, we cannot comprehend without some acquaintance with the intellects which influenced his development, the spiritual atmosphere which he breathed."

This kind of literary criticism is like a chapter in the history of civilisation. It is adopted in the French Professor Guerard's work "French Prophets of Yesterday: a Study of Religious Thought under the Second Empire" in which the literary careers and thoughts of writers like Guizot, Scherer, Quinet, Michelet, Victor Hugo, Saint Simon, Proudhomme, Vigny, Lisle, Sainte Beuve, Faine and Renan are discussed, in a historical and philosophical manner. The national life of France from 1848 to 1870 can be clearly learnt from this work of criticism. The writer is a Professor of the Leland Stanford University of California.

A series of lectures delivered a few years ago in the Harvard University has been published in book form as "Romanticism and

the Romantic School in Germany." The manner of criticism adopted in this book is described by the author thus :—

"The results to which I have been led are essentially founded on the works of the authors themselves; these I have endeavoured to understand in their historical setting and their relation to our time." In American Universities, literary criticism is attempted to be taught on such comparative, historical and philosophical lines. Provision is made for the study of 'Comparative Literature' or 'Literary Criticism' so that the gradual evolution of the human mind and the development of civilisation as reflected in literature may be understood. The following subjects are prescribed for study in the department of literary criticism in the Harvard University :—

- (1) The Relations of Semitic Literatures to the Literature of Europe.
- (2) The Relations of the Literature of India to the Literature of Europe.
- (3) The Relations of Greek Literature to European Literature in other tongues.
- (4) The Relations of Latin Literature to European Literature in other tongues.
- (5) The Relations of Irish and Welsh Literatures to the Literature of Europe in other tongues.
- (6) The Relations of Icelandic Literature to European Literature in other tongues.
- (7) The Relations of Provençal Literature to European Literature in other tongues.
- (8) The Relations of Spanish Literature to European Literature in other tongues.
- (9) The Relations of Middle High German Literature to European Literature in other tongues.
- (10) The Relations of Slavic Literature to European Literature in other tongues.

From this syllabus of studies, an adequate conception of the method of criticism popularised and propagated by the Harvard University can be had. The object of literary criticism is, according to this view, to give an idea of the mutual relations and influence of the several literatures of the world. The criticism such as is attempted to be taught in the Harvard University aims to understand the forces of world-thought by studying the relations of European literature with other literatures. Even so, by studying the relations of Indian literature with other literatures, we too in India can study the nature of the forces of world-thought. Or, if the field be still further narrowed, the mutual relations between Bengali literature and the literature and learning of other parts of India may be studied and, as a consequence, the history of India and the history of Bengal in particular will become clearer.

In this connection an objection may be raised by some. It may be asked whether we in India who have not read, either in the original or in translations, the works of the writers of Norway, Sweden and Denmark, would be benefited by reading a book of criticism like Boyesen's "Essays on Scandinavian Literature." Similarly it may be said that there is no use or benefit in studying Pollak's "Franz, Grillparzer and the Austrian Drama," when many of us do not even know the name of an Austrian writer. But such an opinion is held only by those who consider the literature of criticism to be subsidiary or secondary to, or dependent upon, any other form of literature. The literary criticism of the type described above is, however, independently educative and instructive like original literature, philo-

sophy, history and science. Even as the "History of European Thought in the Nineteenth Century" by Merz is worthy of being studied, even so, we should study the criticism of the literatures of Russia, Sweden, Persia and other lands. Not only would we thereby become acquainted with the learning and thought of different lands but also our knowledge of the scientific method of criticism adopted by these critics would become firmer and sounder. By studying various specimens of criticism, the rules of the science of criticism itself can be easily learnt.

If the "Kavikankanachandi" of Bengal or Kalidasa's "Raghuvamsa" is to be studied on the lines of such scientific criticism, then it is necessary to collect facts and truths under the three following headings:—(1) The discussion of those books in which either the subject of the work under discussion or its mode of treatment or composition is adopted. Valmiki's Ramayana, Goethe's Faust, Dante's 'Divine Comedy,' Homer's 'Iliad,' etc., can in no wise be neglected.

(2) The study of all facts concerning the social, economic, political, religious and educational conditions prevalent during the time of Kalidasa or of Mukundaram (the author of Kavikankanachandi). The question how much the particular writer has imbibed the general spirit of his age and the question how far his

influence has reacted upon the contemporary society of his age will both have to be considered in this connection.

(3) What position the age of Kalidasa or the age of Mukundaram occupies in the general history of India or of Bengal (as the case may be), has to be determined. If Kalidasa has to be properly understood, the development of Sanskrit literature and the general current of Indian history will have to be known. In the same manner, for the proper study of Mukundaram, the development of Bengali literature and that of the history of Bengal have to be studied.

Facts under the three abovementioned headings have to be collected, in a similar manner, before any literary work can be properly appreciated and understood.

Every kind of literature, whether it is religious or otherwise, has, for its proper understanding, to be discussed and explained according to the comparative method or the historical method of criticism. It is now fifty years since Christianity also has begun to be tested by such criticism in Europe. This kind of criticism is known there as "Higher Criticism." The American Missionary Dr. Sunderland's "The Origin and Character of the Bible" is written on the lines of such higher criticism. This book is well worthy of being studied by all Indians.

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EDUCATIONAL HANDWORK OR MANUAL TRAINING.

EDUCATIONAL Handwork is a branch of Education like History, Mathematics, etc., which seeks to develop and improve the minds of the pupils by the employment of their hands in the manipulation of materials in a variety of suitable occupations. The materials may be clay, card-board, paper, wood, metal, cane, etc.

The aims of Educational Handwork or Manual Training as it is otherwise called are numerous. Inasmuch as the work has to be executed purely by the hands controlled by the will and directed by the eyes, the muscles of the hand are perfectly under control and thereby manual dexterity is developed. The chief branches of Manual Training, viz., wood-work and metal-work, demand much physical strength on the part of the pupils as a consequence of which the boys are physically improved. In making a model the boys have necessarily to observe the form, size, shape, the measurements and the joints of the object that is modelled. Thereby the power of keen observation is cultivated and trained. After some preliminary work is done with the guidance of the Instructor, the boys themselves can suggest and follow various methods of making a model other than those dealt with by the Instructor. So Manual Training affords scope for self-expression by means of motor activities. If the scheme is so drawn as to make the child be in touch with the environment, the child takes much delight in making models useful for play and domestic purposes, however much bodily labour may be involved in the preparation of the models. A bit of carelessness on the part of the pupils in measurement, forethought

and execution will land the students into unforeseen difficulties which would necessitate a reconstruction of the model. Thus hasty temperament is rewarded by the breakage of the model almost at the finish. Mr. Jules Ferry, a former Minister of Public Instruction, said: "When the plane, the saw and the file have received a place of honour in the school, and when they shall be the subject of sensible and systematic instruction, then many prejudices will die out, much caste spirit will disappear and on the work benches of the school the way to social peace and prosperity be prepared." It is therefore quite clear that such powers as accuracy, industry, steadiness, perseverance, forethought and socialism are developed to a high degree by a regular course of manual training.

Though much has been said as to the aims of Educational Handwork, it may be argued that all subjects other than Manual Training, themselves aim at the above objects, that as such there is no necessity for the inclusion of this subject which is quite costly in comparison with other subjects and that the school curriculum is over-burdened with a multiplicity of subjects. Another criticism, viz., that the practical value of School Handwork is small, may be levelled against the subject, but the answer is that this criticism is equally true, though not more, of other school studies.

The reasons for the inclusion of this subject in the school curriculum are obvious. Education for the past so many decades has been entirely bookish and those who stand in the high ranks of the University examinations are mostly book-worms. Any amount of knowledge gathered from books and journals, and stored in the brain becomes useless, rusty and fades away, after its definite purpose has

been served unless it be combined with practice. It is within the common experience of all that any knowledge derived from a series of experiments sticks to the brain and remains like a blossom that never fades. Manual Training provides for the practical side of education. Moreover in these days of materialism, trade and commerce, the world requires men of practical ability to invent new machines to reduce labour and workmen to work satisfactorily with them. A start is given by Manual Training for such things. Psychologically, certain centres of the brain are overstrained by the defective system of education prevailing at present, and they get no relief almost. On the other hand those centres connected with motor activities are lulled to inactivity, and the power 'to do' is curbed. Any good system of education should provide for all centres to be worked upon so that there might be an all-sided development of the boys. The present subjects of the school curriculum do not enable a pupil to know what he is most fitted for and therefore he is entirely left in the dark as regards his future career. If right living be the purpose of education, then school handwork which fosters a taste for mechanical pursuits and cultivates the stimulus 'to do' something, should be the foundation on which the industrial development of the country and the correct choice of a walk of life of the rising generation stand.

D. SANKARANARAYANAN.

THE SECONDARY-GRADE TEACHERS.

LAST year memorials from all the pupil-teachers of the Secondary-Grade Institutions in this Presidency were submitted to the authorities concerned, requesting to reconsider the enhancement of the period of training for them, and to increase their stipends, as also better their future prospects-salaries after training. It seems they received no replies whatsoever. However they quieted themselves that their claims will be justly and duly considered.

But, from the Proceedings of the Director of Public Instruction, Madras, No. R. C. 7912, dated 13-8-21, communicating the Government Order sanctioning time-scale, we see that the Secondary-grade teacher is placed on a time-scale pay of Rs. 30, 30-2-50, -1-60. This is most unjust, unreasonable, and disappointing. A raw S.S.L.C. or even an unpassed candidate with nothing by way of general education could hope to become a clerk—a clerk who needs no special tact nor has undergone any technical training begins service on Rs. 35. His chance to reach up to Rs. 120 is also likely. A teacher of the Secondary-Grade who has undergone two years—two years to improve his efficiency, to bring him to a higher standard than a raw S.S.L.C.—a teacher who has undergone this two years' course may be said to be more or less equal to the standard of the Intermediate, for he has studied a set of books of Tamil and English literature of the Intermediate standard, and general subjects which also go higher than the standard of S.S.L.C. Thus he has made himself efficient by undergoing this Blessed Training. While he has thus improved what guided the

authorities concerned, to suggest Rs. 30 to start his life in a damp and discontented spirit? Is it due to the sin of undergoing the Blessed Training for two years? Or is this the way to discriminate between a raw S. S. L. C. and a trained S.S.L.C.? Let the authorities think deep over this! Again a raw graduate is started on Rs. 40, while another graduate who has undergone the initial training (L.T.) for nine months, is started on Rs. 100. Whereas, a raw S.S.L.C. is started on Rs. 35 while another S.S.L.C. who has undergone a sin of initial training for two years, and has an equal qualification of an Intermediate, so to say, is started on a pittance of Rs. 30. Oh! Authorities, Ministers, and responsible men! Consider deep whether it is just or unjust, reasonable or unreasonable, thoughtful or unthoughtful. Nay, perhaps this may due to want of proper understanding and right discrimination of the present standard of the efficient Secondary-Grade teacher.

Really it is a horrible death-blow to the cool teacher in his best spirits to begin work at the threshold of his profession. It cannot be that commonsense would have guided the powers that be, to drive at this fixture on the time-scale to the poor teacher. While all departments are being reorganised and condition ameliorated, the Secondary-Grade teacher has the unique and unenviable distinction of standing not even where he was. Is it the manner to improve the keen and rapid want of education in India to pupils—future citizens? Is it the pittance to be paid to the Secondary-Grade teacher who works at least six hours a day with pupils who know much less than he? The authorities could not be blind to the various

hardships the pedagogue has to contend with in his accomplishing the noble and arduous task that falls to his lot. Then what means the position allotted to him in the economic and therefore of the social status. Is it that Government and the public do see that the teacher is the last man required to help him in life? Or in other words the existence of a teacher in an age of calculators, economists, and sophisticators—as it seems to be to-day here—is unnecessary? The greatest of all teachers in describing his own mission once said: "I am come that they might have life, and that they might have it more abundantly," i.e. "he wants to help his pupils—the future citizens, to live a fuller, a richer, a more interesting and a more useful life." Well then, if the Government exists only for the welfare of the people and not for itself, and if education is a necessary qualification for man, the economical recognition in proper terms of the services of the teacher who exhausts his every nerve towards the upliftment of the community at large is absolutely essential.

As such, (1) I request every one of the Secondary-Grade teachers and also the students undergoing Secondary-Grade training, to rise up and demand all in one voice for their just claims and rights. Brothers! 'Awake, arise, or be ever fallen.' "Demand, and it shall be given."

(2) I beg most respectfully the authorities, the Ministers, including Mr. A.R. Knapp and Mr. Patro, and the members of the Legislative Council concerned, and last but not least, the Director of Public Instruction, Madras, as their veteran commander, to be pleased to handle them and march them on towards winning a glorious victory in obtaining a time-scale pay of Rs. 50-3-80, -4-100.

A. K. VISVANATHAN.

Reviews and Notices.

"IDEALS AND REALITIES," BY DR. S. A. KHAN.
(MADRAS: LAW PRINTING HOUSE.)

The thinking population of India will hail with joy the advent of Mr. S. A. Khan's new book on "Ideals and Realities." The title of the book at first sight seems to be bewildering; and even after a perusal of the contents of the book, one is hardly able to make out the relation which exists between the first and the second parts of the work. The first part deals with the history of English Education in India down to 1750, while the second and more interesting portion deals with the realities of Indian Economic Life—the Currency and the Banking Problem.

The first chapter of the book gives a descriptive critical analysis of the Indian Banking System. The author starts with giving us a good and succinct account of the advantages of credit and shows how credit transfers capital and accelerates the flow of capital into useful and productive channels. Banks are, no doubt, the most important agencies for the transfer of credit and hence Banking is of so much importance to trade and industry. In fact, banking can be regarded as the hand-maid of industry and trade. Nowhere is it more so than in Germany; and German Banking can have a special interest to India at the present time, for India occupies much the same position which Germany occupied about the middle of the last century.

The author then proceeds to give a descriptive account of the origin and development of the Indian Banking System. Banking was not totally unknown to Ancient India but banking on western lines was instituted in the country only at the commencement of the 19th century. The history of the development of Banks in India is a chequered one; we hear more of failures and collapses than of continuous steady development. No doubt, the failures were often due to the bad management and officering of the Banks. It is usual for authors to explain away Bank-failures in India by the simple and oft-repeated maxim that the Indians have no banking-instinct and that India is the 'sink of the precious metals.' No better and clearer condemnation of such a view can be given than in the words of Mr. Khan: "A great amount of ignorant criticism has been levelled at the incapacity of the Indian people to utilise the agency of Indian Banks....The hoarding of precious metals, to which constant references are made by nearly every English writer on Indian Currency, would have disappeared if greater

honesty had been shown by the Banks founded in the first half of the 19th century. The public were justified in viewing with distrust the bubble-companies, etc." p. 332.

Then Mr. Khan proceeds to analyse the working of the Presidency, the Exchange, the Joint-Stock and the indigenous Banks of India. While dealing with the operations of the Exchange Banks, one is afraid, that the author over-estimates the probable influence which can be brought to bear on exchange by these exchange-banks. But the author more than makes up for this by discussing boldly the suggestion that Sir Lionel Abrahams placed before the Currency Committee—the necessity for the Secretary of State to make a much more and better use of the Exchange-Banks to steady exchange and to sell exchange-contracts forward to the banks.

The question of the Central Bank for India next engages the attention of the author who traces the history of the movement for such a bank and then outlines briefly its constitution and functions.

The second section of Chapter I, deals with the Paper-Currency. The author states first the advantages of paper-currency in general and then outlines the necessary safe-guards to ensure the value and convertibility of paper-currency. Then he details the provisions of the Paper Currency Act of 1861 and shows how Government retained the main features of the English Currency System inaugurated by Peel's Act of 1844. To bankers and students of Banking, it is a matter of common knowledge that the currency system of England as constituted in 1844 was based on the currency theory (as opposed to the Banking theory); and that it entailed drawbacks, the most serious among which was the inelasticity of the paper currency. The same drawback is visible in the Act relating to the Indian paper-currency as well. But whereas in England the inelasticity was made up by the unexpected and unprecedented development of cheque-currency, in India there was no such safety-valve and so inelasticity had to be mitigated by subsequent Government measures. The necessity of a metallic reserve for all notes issued above a fixed maximum, became increasingly cumbrous and so Government passed a series of Acts providing for the increase in the invested portion of the Paper-Currency Reserve. This brings the author to the next topic, the composition and location of the Paper-Currency Reserve.

The question of Paper-Currency during war-time is then taken up for discussion. One remark-

able fact more than any other, which strikes us during the war period, was the phenomenal acceleration in the use of paper-money in India. The economic situation in 1919 was such that Government considered the possibility of making notes inconvertible. The findings of the Smith Committee in regard to inconvertibility are very ably sketched by Mr. Khan who comes to the correct conclusion that Government's fiat of inconvertibility would have been nothing short of a 'leap in the dark'.

Chap. II. Indian Currency.—This chapter deals with the main lines of the evolution of Indian Currency. The first section is devoted almost to the study of the principles that have governed the relations between gold and silver. The author traverses over the rather wide and much discussed questions of Mono-metallism, Bi-metallism, the Latin Monetary Union, etc. Then he takes up the history of Indian Currency between the years 1870 and 1893. The fluctuations in the value of silver is the predominant fact during this period, such fluctuations causing thereby the disorganisation of trade and of the finances of the Government of India. Much diversity of opinion exists as to whether high and low exchange have any great and direct effect on the trade of a country and it would repay to study those pages of Mr. Khan's book which deal very aptly with this topic.

The findings of the Herschell and the Fowler Committees are then taken up for discussion and a student of Indian Economics will find almost a complete replica of the reports of the two Committees in those pages of Mr. Khan's book. The author shows great insight and wide knowledge in the discussion of the recommendations of the Commissions. The author then covers a fairly familiar field, when, in the next section he describes how an attempt was made by Government to force gold into circulation in 1900; and as J. M. Keynes put it, "India then did not take kindly to the yellow metal." The subsequent years 1900 to 1907 witnessed a large absorption of Rupees, which finally culminated in the crisis of 1907. No doubt, there were other external causes also which precipitated that crisis, as Mr. Khan points out. But the influence of the huge and unprecedented absorption of Rupees has not been sufficiently perceived by him. As Keynes very shrewdly remarked: "The Government seem to have thought that India can consume Rupees with much the same appetite with which some communities consume beer."

The history of Indian Currency subsequent to

1908 has been then sketched and the report of the Chamberlain Commission well described. The Exchange crisis during the years of war is then the next topic on which Mr. Khan has tried to be very elaborate. The history of Indian Exchange during these years is a tangled one and every one is now fairly familiar with the causes of the Exchange troubles, which are very well brought out. But Mr. Khan, though he shows much critical acumen in discussing proposals like those of Mr. D. M. Dalal and Sir Lionel Abrahams, still gives merely a descriptive account of Government's policy in these years as a mere by-stander or outside spectator will do. No doubt, this attitude secures a fair amount of calm and impartial judgment. Yet no one who is familiar with recent events can fail to notice the extremely timid and sometimes extremely rash steps taken by Government. We all know too well at what cost the Rupee was linked to gold instead of to sterling. We can recognise what an amount of unsteadiness the London-New York Exchange wrought on the Indian. We can realise the amount of uncertainty that was introduced into trade by these sudden exchange fluctuations.

Another word in passing. The exchange troubles were due to factors beyond the control of any authorities. The causes were both external and internal and no policy or measure of Government however discreet it might have been, could have met the situation fully. So it has to be said that neither the adoption of the scheme proposed by Lionel Abrahams for which Mr. Khan pleads with such force, nor the circulation of 15 English Treasury notes in India for which Dr. Slater pleads with such earnestness, could have solved the problem of exchange. These suggestions could at best have mitigated the situation but by no means could they have been radical cure.

Chap. III. The Gold Standard Reserve.—The Gold Standard Reserve is the subject of a lengthy and elaborate discussion in the next chapter. The object of the Reserve has been frequently misunderstood and Mr. Khan removes the misconceptions. "The Reserve," says Mr. Khan, "is established for the purpose of maintaining the Exchange value of the Rupee and is issued when owing to an adverse balance of trade, the exchange value of the Rupee should fall. The object is the liquidation of an unfavourable balance of trade to the extent necessary to prevent exchange falling below the specie point.It is not intended to provide for the conversion into sovereigns of all the rupees, in

circulation in India." That the reserve is not intended for the purpose of converting into sterling all the Rupees in circulation is evident and true. It is natural to think that the only purpose of the Reserve is to support the exchange value of the Rupee from falling down; for we never had, till the war of 1914, any apprehensions of an enormous rise in the value of the Rupee. But now that, subsequent to the war, our Exchange troubles are not those of a falling Rupee but of a rising value of the Rupee, should we not consider that the object of the reserve is to stabilise the value of the Rupee at a certain point? Then Mr. Khan proceeds: "Its object is not to insure the convertibility on demand of the whole of the Rupees in circulation." The truth of this statement cannot be contested. But when he says "its object is only to provide a reserve sufficient to convert into sterling such amount of Rupees as may at any time seek export," he is not stating its object in its entirety. For evidently in times of rising exchange, when Rupees seek import into India in great and ever greater volume, should not the Reserve step in, if it is to stabilise exchange, to convert into sterling such amount of Rupees as may seek import into India?

The amount of the Reserve depends on the volume of Indian trade, and the possible variations in the net balance in favor of or against India. The Chamberlain Commission and the Smith Committee held that no limit to the accumulation of the Reserve can be fixed now. The composition of the Reserve has been a subject of acrimonious debate but all are agreed in holding that the reserve should be in as liquid a form as possible.

The location of the Reserve has been a much-disputed question. The Reserve was held in London hitherto because (1) its main aim was to prevent the exchange value of the Rupee from falling below 1s 4d.; and when, owing to an adverse balance exchange went low, Government offered sterling in London in exchange for Rupees in India; and (2) the possibility of a rise in the value of the Rupee was not contemplated. Exchange difficulties have recently been all on the side of providing local currency in exchange for sterling; and in view of this new phase in the development of Indian Exchange, the Smith Committee has recommended that half the gold contents of the Reserve should be located in India.

To sum up, the entire field of Indian Currency and Banking has been well and boldly traversed

by Mr. Khan in the second part of his book, "Ideals and Realities." This work is from the pen of an able scholar who evidently has made a deep and thorough study of the subject, and has given us in his pages a critical perspective. The chief merit of the book is that it is brought up-to-date and replete with information. To students of Indian Economics, and especially to students of Indian Currency, this book is sure to have an abiding importance and a secure place in their library.

'MAGIC PICTURES' OF LONG AGO,' BY ANNA CURTIS CHANDLER; 'THE ALOE MAN,' BY M. L. PRATT-CHADWICK; 'THE STORIES OF THE WATER FOLK,' BY MABEL MACLOWE. (GEORGE HARRAP & Co.); INDIAN AGENTS: P. T. I. BOOK DEPOT, BANGALORE.

One has become so used to getting good and well-got up publications from Messrs. Harrap, that one now has begun to expect good publications, and in the books under review one has certainly got what one expected.

The first two publications deal with History in the form of stories. It is now-a-days fully recognised in the Educational World that education by story-telling is one of the most delightful and instructive means of education for the young. There comes a time in the child's life, usually about the age of eight when the child prefers stories of 'real' things rather than fairy or imaginative tales it is then that History—which is only the story of man and what he has done for the world—is given to the child. The teacher's difficulty however very often is to find suitable stories for this period in the child's development, and Messrs. Harrap have done a service to every teacher of History in having brought out these most delightful books, which will even be of interest to the lay-reader. We recommend them to every school.

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PROGRESSIVE EXERCISES IN ENGLISH COMPOSITION, BY O. E. L. HAMMOND, ASSISTANT MASTER AT THE ROYAL NAVAL COLLEGE, DARTMOUTH—WITH AN INTRODUCTION BY J. C. SMITH, (OXFORD: CLARENDON PRESS, 1921.) Price 3s. 6d. net.

The volume before us is yet another contribution to the Teaching of English. The exercises, we are told, have been mostly used by the author in his own class-room. They are so designed as to provide work for six terms and so arranged as to enable each teacher to easily adapt for himself a course suited to his requirements. Each term's work is divided into three parts. The language part supplies the pupil with sufficient vocabulary and a knowledge of sentence-structure. The composition part covers, in the earlier stages, such useful exercises as conversion of sentences and simple essay-writing. The third and last part deals with "interpretation," as the author would call it, which is largely but an intelligent variety of the time-honoured "paraphrase," with "epitomization" intervening. An interesting part of the book is that in which a number of items are set haphazard for purposes of rearrangement in the proper order and eclectic essay questions are introduced. Some of the exercises are indeed "ingenious," as Mr. J. C. Smith observes in his "Introduction." The volume before us can be advantageously used in the higher forms of our schools.

THE PRINCIPLES OF LANGUAGE STUDY, BY HAROLD E. PALMER, ASSISTANT IN THE PHONETICS DEPARTMENT, UNIVERSITY COLLEGE, LONDON. (LONDON: GEORGE G. HARRAP & Co., LTD. 1912.); INDIAN AGENTS: P. T. I. BOOK DEPOT, BANGALORE. Price 6s. net.

Mr. Palmer is already well-known as the author of *A First Course of English Phonetics* and *The Scientific Study and Teaching of Languages*. In the volume before us he enunciates in simple and non-technical language the principles which consciously and unconsciously guide all language students in mastering one or more of the spoken languages. He rightly lays stress on habit-forming and the chapters on "A Rational Order of Progression" and on "The Multiple Line of Approach" are of special interest to teachers who in their new-born enthusiasm are often

carried away to extremes. We feel sure that the book will be very popular with the class of students for whom it has been intended.

THE BEGINNERS' ANCIENT HISTORY, Pp. 174; THE BEGINNERS' MODERN HISTORY, Pp. 160, BY J. B. NEWMAN. (GEORGE G. HARRAP & Co.); INDIAN AGENTS: THE P. T. I. BOOK DEPOT, BANGALORE. 2s. 3d. each.

The object of these small books is to present in a very short compass and in very simple style ancient and modern history from the universal or international aspect. The two together form a survey of the world's history from the earliest times to the end of the Great War. The subject, though too much and too extensive for the school-boy's capacity has been so dealt with that only important epochs and personages receive attention. And the object of the first book is to present to boys of the school "a connected account of the development of mankind so that he may say that there has been an unbroken story in which familiar characters such as the Pharaohs of the Bible, Alexander, Cæsar, Nero and Charlemagne have all played their part."

It is only with at least an outline knowledge of international movements, foreign relations and the relation of one's own country to the world beyond that the student can properly grasp with a better sense of proportion the story of his country and its significance. The first book devotes itself to a brief outline of human progress by the banks of the Nile and the waters of Babylon, then in Greece and Rome, and lastly as it passed through the darkness of the Barbarian invasions and emerged into the light of Teutonic reconstruction and Charlemagne's empire. The second book forms more or less a companion to the study of British history and concerns itself with England's relations with the Continent. The main features of modern history like the Reformation, Colonial Wars, the Nationalism of the 19th century, etc., are well brought out, though only in brief sketches. A good number of illustrations of buildings, human types, personages, maps and occasionally coins enhance the value of these primers.

THE JOY OF MOUNTAINS, BY WILLIAM PLATT. Pp 80.
(G. BELL & SONS). 1s. 9d.

The author, a lover of travel and sport who has been spending his holidays among mountains and has had a few real adventures among them wants that this book should be read by boys and that they should love the great grand mountains and love to live among them and know them for familiar and inspiring surroundings. The first chapter describes what a mountain chain and peak look like, though they are in reality mere wrinkles on the crust of the earth's surface. Then he tells us how men are drawn to the mountains by art reasons, science reasons and sport reasons. Mountaineering, according to him, is a *King of Sports* making great demands on the human strength and nerve. The author then goes on to tell us about the Pennine Chain, the Swiss Mountains, Matterhorn, Mont Blanc and such adventure and gallantry as there had

been in these places. He describes the fine and famous glaciers of Mont Blanc, the Audes, the peaks of Chimborazo, Cotopaxi and Aconcagua and finally the mighty Himalayas whose Mount Everest is even now being tackled and whose peaks have attracted such brave climbers as Bullock-Workman, Godwin-Austen, Freshfield, Mummery, Sir Francis Younghusband, the Duke of Abruzzi, etc. "One need not be a climber to revel in the superb beauties of the Himalayas. Travelling in the train from Calcutta towards the little Mountain-State of Sikkim, the snow-clad range lies dazzlingly in front of us and Kanchenjunga, a sublime white Temple of God's own building, glistens in the sun while on the lower slopes the dark dense woods throb with a mysterious hush." The problem of climbing the Everest peak is treated next, and the chief difficulties in the way of its accomplishment are enumerated.

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The Educational Review.

We must confess that we are losing patience with some of the ways of the Ministry of Education in Madras, especially with the ill-assorted manner in which some committees are being formed for the consideration of important educational matters. The composition of some of the committees is open to very grave criticism and we have no hesitation in saying that they are woefully wanting in persons of the ability and special experience necessary for the special work which has been assigned to them. Many members seem to have been selected only on considerations of caste and party-feeling in the Council and have been appointed in spite of not possessing the remotest qualifications for the purpose, to the great amusement of those conversant with the needs of education. But there is unfortunately a tragic side to this ludicrous exhibition on the part of the Ministry and the consequences may be serious enough for educational progress in the Presidency. While welcoming the transfer of education into non-official hands, we expressed misgivings of the future and we are afraid that at least as far as Southern India is concerned, it has not been much of a success. Educational administration has been subjected to petty caste-squabbles and it will not be long before things get bad beyond repair in a Presidency which has a splendid record of educational tradition behind it.

We have a committee to consider the

question of starting a University for the Andhra Districts and the following is the composition of that wonderful body:—

Non-officials:—Dewan Bahadur L. A. Govindaraghava Ayyar, President; Mr. A. V. Subba Rao, Berhampore; Sriman Sasi Bushan Rath Mahasayo, Berhampore; Diwan Bahadur D. Sesbagiri Rao Pantulu, Cocanada; Rao Bahadur T. Balaji Rao Nayudu, Kistna; Mr. K. Gopalakrishnaayya, Bezwada; Mr. B. Muniswami Nayudu, Chittoor; Mr. A. Ranganatha Mudaliyar, Bellary; Saiyid Mahomed Badsha Sahib Bahadur, Bellary; Mr. T. Sivasankaram Pillai, Anantapur; Mr. N. A. V. Somasundaram Pillai, Tinnevely; Mr. K. Prabhakaran Thampan, Malabar; The Reverend W. C. Penn, Masulipatam; Mr. M. Suryanarayana Pantulu, Vizianagrum; Mr. C. V. Venkataramana Ayyangar, Coimbatore; Mr. G. Vandanam, Ongole; Rao Bahadur A. S. Krishna Rao Pantulu, Nellore; Rao Bahadur C. V. S. Narasimha Raju of Vizagapatam, Secretary.

Official:—Mr. R. Littlehales, Director of Public Instruction, Madras.

We know very well what sort of report this expert committee can produce and weight will be attached to that precious document by the world of education. May we enquire what special qualifications the Minister of Education has discovered in Mr. Prabhakaran Thampan of Malabar and Mr. Somasundaram Pillai of Tinnevely, to sit on a committee to enquire into the question of a University for the Andhra Districts? The educationists of the Andhra Districts may naturally be expected to be especially interested in the matter and also be of some real use in advising the committee, but even such a prominent educationist as Dewan Bahadur K. Ramanujachari, M.A., B.L.

of Vizianagrum, does not find a place and the Government educational institutions at Rajahmundry which are among the most important in the Andhra Districts and which are situated at a place which has strong claims for the establishment of a University are completely ignored. Looking down the list of names, we regret to say that there is not the name of even one *distinguished* educational *expert* conversant with the latest developments of higher education in India and elsewhere and still the following important matters have been referred to the committee:—

(i) The necessity for a University for the Telugu districts of the Presidency; (ii) the nature of the University, i.e., whether it is to be mainly a teaching or mainly an affiliating or partially an affiliating and partially a teaching University; (iii) the jurisdiction and location of the University; (iv) the financial aspect of the University; (v) the sources from which funds will be available for financing the University, and (vi) generally the lines on which it should be founded.

We promise ourselves considerable amusement when the document sees the light of day.

An earlier committee—the appointment of committees is a convenient way of showing activity on the part of a department—is the one appointed to consider in the light of the recommendations of the University of Madras, the applicability of the report of the Calcutta University Commission to South India and to make suitable recommendations to Government which will enable effect to be given to its conclusions. We

reproduce the names of the committee below:—

NON-OFFICIALS.

Diwan Bahadur R. Venkataratnam Nayudu, M.L.C., F.M.U., Retired Principal, Pittapur Raja's College, Cocanada, President; T. A. Ramalingam Chetty, M.L.C.; Mr. S. Arpudawami Udayar, M.L.C., Trichinopoly; Diwan Bahadur L. A. Govindaraghava Ayyar, B.A., B.L., M.L.C., F.M.U.; Diwan Bahadur M. Krishnan Nayar, M.L.C.; Miss E. McDougall, M.A., F.M.U., Principal, Women's Christian College, Madras; Messrs. B. Munusami Nayudu, B.A., B.L., M.L.C.; Abbasali Khan Bahadur, M.A., LL.B., Bar-at-Law, M.L.C., Madura; K. Ramanujachari, Principal, National College, Trichinopoly; G. A. Natesan, B.A., F.M.U., Madras; M. Ratnasami, M.A. (Cantab.), Bar-at-Law, Principal Pachaiyappa's College, Madras; the Rev. W. Meston, M.A., B.D., M.L.C., F.M.U., Principal, Madras Christian College; Mr. P. Siva Rao, M.L.C.; Rev. X. Miller, M.A., D.D., Pasumalai, Madura; Rao Bahadur N. Subba Rao, President, District Board, South Canara; Mr. P. A. Subrahmanya Ayyar, B.A., L.T., Headmaster, Triplicane High School; Rao Sahib P. Ethirajulu Nayudu Garu, M.L.C., Guntur; the Rev. W. M. Zombro, M.A., B.D., F.M.U., Madura; Mr. A. Ramachandra Rao Pantulu, B.A., L.T., Principal, Kallikota College, Berhampore; Mr. O. Thanikachalam Chettiar, B.A., B.L., M.L.C., Madras.

OFFICIALS.

Mr. R. Littlehales, M.A., M.L.C., Director of Public Instruction; Mr. H. S. Duncan, M.A., F.M.U., Acting Principal, Presidency College, Madras; Mr. R. G. Grieve, M.A., F.M.U., Principal, Teachers' College, Saidapet; Mr. L. C. Cartwright, F.M.U., Acting Principal, Engineering College, Madras; Abdur Rahim Sahib Bahadur, F.M.U., Additional Deputy Director of Public Instruction; Miss De la Hay, F.M.U., Principal, Queen Mary's College for Women, Madras; Mr. C. P. Ramaswami Ayyar, B.A., B.L., F.M.U., Advocate-General; Mr. M. K. Dendekar, F.M.U., Principal, Institute of Commerce, Madras; Lt. Col. F. F. Elwes, Acting Principal, Medical College, Madras; Mr. H. W. Callaghan, B.A., L.T., Inspector of Schools, Madras.

SECRETARIES.

Messrs. R. K. Shanmukham Chettiar, M.L.C.; C. D. Subrahmanya Chettiar, M.A., Principal, Brennen College, Tellicherry.

The Committee is expected to make proposals which will have the effect of inaugurating a new era in education in Southern India and still the Minister could not select abler and more experienced Secretaries than Mr. R. K. Shanmukham Chettiar and Mr. C. D. Subrahmanya Chettiar! In view of the caste-terminations at the end of the names, should the public be blamed for drawing the inference that it was not educational ability and experience that weighed with the Non-Brahmin Minister in the choice of the names? A few appointments more of this kind, and the Government will get thoroughly discredited and it will be proved well to the satisfaction of the Indian public at large, that Indians cannot manage Education as a transferred subject, at least under the present conditions of the Council in Madras. We find that the names of many able and veteran educationists in Southern India have been studiously avoided. To mention only a few: Prof. K. B. Ramanathan; Prof. K. V. Rangasawmi Iyengar; Principal Ramanujachari of Vizianagrum; Prof. K. Sundararaman; Prof. S. Krishna-swami Iyengar; Mr. A. C. Pranatharthi-hara Iyer; Prof. B. Hanumantha Rao; Prof. P. T. Srinivasa Iyengar—but we forget they are unfortunately Brahmins and therefore they must yield place to such esteemed educational experts as Mr.

B. Munusawmi Nayudu of Chittoor and Mr. Ethirajulu Nayadu of Guntur! May we enquire how it happens that while all sorts of M. L. C.'s have been put on the Committee, the University representative on the Council, Mr. S. Srinivasa Iyengar, C. I. E., does not find a place, in spite of his pronounced interest in educational matters? Is it because he is a Brahmin or a Nationalist in Politics? Probably both are crimes in the eyes of the present Ministry in Madras.

The United Provinces of Agra and Oudh have not yet been able to organise Teachers' Associations even to the extent the Madras Presidency has done

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and the profession is not very much to the forefront in the public life of that part of the country. We are therefore glad that the teaching profession there has begun to assert itself in some measure and the *Non-Gazetted Educational Officers' Association* has just begun to publish an organ of its own entitled, *U.P. Education*. The first number is before us and we are glad to see that the journal aims at real *educational work* and is not satisfied with the mere discussion of educational politics affecting their service. The contributors are all experienced members of the teaching profession and they all write on matters which have come within the range of their personal knowledge and work. We however feel it wrong that there should be such sectional organisations among members of the teaching profession and

we hope that the *U. P. Non-Gazetted Educational Officers' Association* and the newly-started *Secondary Teachers' Association* will join hands and work for the organisation of a general *Teachers' Guild* for the whole Provinces, open to all members of the profession.

In view of the adverse comments one occasionally hears of Indian students in England, it is satisfactory to find that the latest report of the Indian Students' Department of the India Office gives a very good account of their general progress during the year. Mr. J.N. Sen, the Secretary, has no hesitation in saying that the "majority of Indian students by their conduct, ability and industry and increasing record of success in the academic and other fields of educational and allied activities, have very favourably impressed those most competent to express an opinion." The following summary of the report will be read with interest:—

It is estimated that there are about 1,500 students at the Universities and technical colleges in Britain, and in view of the great pressure at the Universities, this number, says the report, cannot be said to show any disregard for India. The war services of the students or their relatives have been generously recognized since the Armistice by substantial concessions, which are limited to a definite period, and the colleges are now insisting more and more upon the strict fulfilment of the regulations. The report emphasizes the difficulties of finding facilities for practical and technical training in factories and mills, due to the labour unrest, also to the attitude of the Trade Unions, who in many trades resent the introduc-

tion of even English students, unless their parents are closely connected with the trade, as well as the desire to keep it as far as possible, a close preserve.

The report welcomes the increase in the number of Indian women students, chiefly in medicine, most of whom have worked very successfully. The report emphasizes that all classes in Britain have gratefully recognized and appreciated the work and sacrifices of Indians in the war and hopes that the good feelings thus engendered will long continue to the great and lasting advantage of students in Britain, who are naturally sensitive to any kind of discourtesy or hostility. Mr. Sen points out that training is not everything, and that the students must devote a due share of their time and enthusiasm to the corporate life of the colleges, as sport and social activities play a most important part in British University life.

We are glad to hear that the Government of India have at last resolved upon appointing a committee to enquire into the working of the Tata Institute at Bangalore. Its administration by a coterie of Englishmen in a manner neither conducive to the advancement of science nor helpful to the training of Indians, has been a public scandal for some years and we are glad the Government has moved in the matter at least now. We cordially endorse what has been written by the Editor of the *Collegian* on the subject and the remarks are particularly valuable as he is himself a Professor of Science and can thus speak with knowledge of the work of the institution:

The outside public know neither of any great contribution to the progress of science or industrial research made by the Institute nor of any great research workers produced by it. Indeed,

such students who had considerable enthusiasm to go to the Institute have had to return keenly disappointed. The Professors of the Institute appear to have been too much concerned with their own private work to pay any attention to the pupils. The "Times" article appreciates, in a cautious manner no doubt, the Indian point of view. "Complaint is made," it says, "of the small extent to which post-graduate teaching has been developed." "It is held," it continues, "that the system whereby professors have been permitted to engage in private practice has been detrimental to the best interests of the Institute." The Institute has been captured and converted into a private industrial research laboratory by a colleague of oligarchs who, determined as they are to profit by their knowledge and, what is less easily available, by the monopoly which they have cleverly acquired in the laboratory, built out of the munificence of Tata, persistently act in such a way as to make it impossible for any Indian rivals to them arising out of the Institute. They are paid to teach as well as to advance knowledge, but, though they get their pay, they do neither of design, but only to the extent that such teaching and research are incidental to the practice of their trade. Unfortunately, they are able to have their way, under the constitution of the Institute, unchecked. The administration of the Institute is in the hands of a Council of Twelve, in which the staff of the Institute manage to have their own way. They are virtually able to appoint the Director of the Institute and in making this appointment they see to it that they get one who, being not well versed in science, will abide by their selection of subjects and courses of study. In the Council, too, laymen predominate, and with a lay Director, the supremacy of the Professors as regards training and research, that is to say, their ability to give most of their time and attention to their private practice at a laboratory for whose use they not only do not pay but are paid, is assured. The public have tolerated this state of office long enough and it is time that

Government redeemed the Institute from the hands of paid private practitioners.

Sir William Pope of Cambridge is to be Chairman of the Committee, the other members being Sir Henry Haydon, Prof. C. V. Raman and Sir Ashutosh Mukherjee. The presence of Prof. Raman and Hon. Justice Sir Ashutosh Mukherjee on the Committee is enough guarantee that Indian interests will be sufficiently safeguarded.

Some important business was got through at the last meeting of the Senate of the Madras University.

We are sorry to see that in spite of all the money which has already been consumed by the Tamil Lexicon Committee, the Lexicon is nowhere near completion, and the Senate is still being asked to vote for the appropriation of all sorts of grants to that purpose. Mr. T. V. Seshagiri Iyer's testimony, we are sorry to say, has not convinced us of the value of the work of the Committee and its General Editor, Rev. Chandler. We wish the Senate paid more attention to this matter and mended or ended once for all the discreditable state of affairs with regard to the Lexicon. We are glad to find that Prof. Raman of the Calcutta University has been invited to deliver a special course of lectures. Prof. Raman is an *alumnus* of whom the Madras University may well be proud and we are glad the Senate has resolved to honour him at least now. It is significant that the University of Madras

should be recognizing him only after the Universities of Calcutta, Benares and the distant Punjab had begun to discover his greatness—Madras has always been chary in recognizing the merit of its own *alumni*, though it is boundless in its enthusiasm for European lecturers having a comfortable holiday in India at the expense of the University. We are glad to find that the Senate has resolved upon making arrangements permanently for holding the University Examinations twice a year, once in March-April as at present and again in October-November for the benefit specially of failed candidates.

The Address delivered to the graduates of the Mysore University by the Vice-Chancellor, Dr. Brajendra-nath Seal, is in many

**The Mysore
University
Convocation
Address.**

ways characteristic of its author who is a man of age and of learning, and as such a most suitable person to address the young graduates just at the critical period of their life, when they leave their youth and collegiate education behind to enter on the more responsible field of education by experience which opens out before them. The bulk of the address, however, is devoted to a historical survey of educational development in Mysore with side glances at current developments. It begins with the beginnings of the educational system of India and goes on in rapid survey over the indigenous educational system so much commended by Munro's Minute till he comes to the epoch-making change as a

result of Macaulay's Minute. He traces as one consequence of the adoption of the new learning, the loss of literacy in the bulk of the population. The new system failed, according to him, in taking too much for granted that the Indian national record in education was a *tabula rasa*. He points out the double life of the University-educated Indian, and pleads for a historic continuity in spite of the break, evolving ultimately a national system of education which should be a happy blend of the best in the West and the best in the East. In the words of the learned doctor "the problem before us is to adapt the highest Hindu or Muhammadan thought or spirituality to modern ideals of life and the universe, a problem which can be attempted only by minds familiar with the types and forms of culture in the East as well as the West, and be able to survey from the philosophic height of universal history, as from an Eiffel tower, the march of the human mind in any particular race or age." He points out that one characteristic of the old Indian educational organization was to socialise education by ensuring that the theoretical education such as was received was supplemented by vocational training. Such was according to him national education, the genuine *Swadesi* commodity. While he admits that the foundation of that national education must be deepened and widened to answer the living needs of the complex democratic civilization of modern times, he sounds a warning against the creed which has attained to

a considerable amount of vogue "back to nature and to the savage state." He points out appropriately that the isolation of India which such a policy would involve would be detrimental to the interests of India, material and moral. He then passes on to consider the various kinds of Universities, such as the International University, the Regional University, the Unitary and the Synthetic University, of which the University of Mysore comes under the Regional. He points out that Mysore, while answering in many particulars to the Unitary type of a University still partakes of the character of a Synthetic University. He then passes on to consider the various desiderata of the University among which he points out the need for the development of Research. Research work as such is almost as good as absent in the Mysore University so far "and yet Research, the advancement of learning, creative or constructive culture, is the very breath in the countenance of a modern University, indeed, of all national organization and administration in a progressive State; its endowment is always an object of special concern to Parliaments and Governments. For any intensive administration which is faced with problems of development, and which must aim according to a pre-ordered plan, at utilising to the full all the resources and capabilities of a people and region, can ignore research only at its own peril!" Then he passes on to discuss the position of women's education and the need for incorporation of new faculties at

the University. Then he discusses the question of the reorganization of the University now pending and winds up his address by addressing a few words to the graduates who received their degrees at the Convocation. He reminded them: "You belong to a tradition and a race that carried with it the original home Brahma or Brahmvarta, in its march, its migrations, its settlements. Do not sell that birthright for a mess of pottage. Claim the entire world as your own. Wherever the Atman reveals itself you have your country and countrymen; wherever the Atman is dishonoured you are ousted and dishonoured. Correct therefore your passion for territorial nationality from your country's true standpoint." In other words he warned the young men while cherishing national ideals and national patriotism against forgetting there is something beyond nationality which is greater than nationality and there is a kingdom beyond the earthly possessions of a king, the Kingdom of God. In the closing words of the learned Vice-Chancellor: "Remember you are citizens of no mean city; not of Benares, not of Delhi, not of Rome, those eternal cities of the East or the West that come on the tidal wave of history and are borne away by that tide, but of that eternal city that sits enthroned in the Brahman above the barrier and tumult of man in his generations!"—a fitting reminder to the excited minds of youth of this critical time of day in the history of India.

We pass from this long and somewhat imaginative Address which shows considerable touch of sentiment, by a rapid transition to the Convocation Address delivered to the graduates of Madras by Mr. C. R. Reddy. Being a young man and without the pretensions to the age or experience of the other, the address does not assume the paternal tone of advice usual on such occasions. The address plunges wholesale into the politics of the hour and touches various points of current interest to the new era of democracy that is being ushered into the country. One is disappointed however at the halting and indefinite attitude that Mr. Reddy takes in regard to the various points that he touches upon. If the young graduate who listened to the address, expected some instruction for harnessing and guiding his enthusiasm into proper

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Address.

channels he looks in vain for guidance in the address. It would have been far better if Mr. Reddy had laid himself out to say something more definite about the attitude that young men should take in respect of the Government that is, on the one side, the Swaraj that is promised on the other, and gave a few hints of a positive character about the political education that the young graduates require to school themselves in on entering life under the new dispensation. The feeling as one reads through the address is that Mr. Reddy would like to say certain things in regard to the several matters, but is unwilling to commit himself to what is in his mind. It need hardly be said that that is not the kind of attitude suitable for the occasion to create an impression of the seriousness of the life that lies before the young men who were addressed on the occasion.

B. A. DEGREE EXAMINATION, 1923.

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CALCUTTA UNIVERSITY—SPECIAL CONVOCATION

(17TH DEC. 1921)

Address by the Hon'ble Justice Sir ASUTOSH MOOKERJEE, *Saraswati, Sastrabachaspati*,
Bt., C.S.I., M.A., D.L., D.Sc., F.R.A.S., F.R.S.E., F.A.S.B.,
Vice-Chancellor.

MEMBERS OF THE CONVOCATION:

AMONGST the many privileges enjoyed by an Indian University, one of the most highly prized is the power to confer honorary degrees on persons distinguished for eminent position and attainments. This function serves to enlarge the primary scope of the University as an institution for the encouragement of our fellow-subjects in the pursuit of a liberal course of education, by the promotion of study and research, by the provision of instruction of students, by the ascertainment of merit through examinations, and by the bestowal of rewards and marks of honour. The authority to confer an honorary degree implies that a University is in essence an academy of learned men banded together for the discovery of Truth and is consequently

entitled to draw within its sphere of recognition individuals engaged in the advancement of learning, regardless of the limitations of race, colour, creed, or of dogmas—social, religious or political.

It is needless for me to emphasise, in this connection, that during a dozen years it has been our constant endeavour to realise this high ideal, by the creation of new intellectual agencies and new organisations for the advance of knowledge, learning and research. Our University has, indeed, been the pioneer and the leader in what has now become an All-India movement; and judged by the extent and variety of the subjects comprehended in the scope of our activities and the worth and excellence of the work accomplished by many of our teachers, we are still

the foremost Teaching and Research University in this vast continent. The Senate of this University, conscious of its obligations, has accordingly decided to exercise the valuable right to confer honorary degrees on the memorable occasion of the visit of His Royal Highness the Prince of Wales, and the duty is now cast upon me, in accordance with established usage, to remind you briefly of the services rendered to the cause of advancement of learning by the personages whom we have resolved to honour in an appropriate manner.

Amongst our guests stands pre-eminent the Right Hon'ble Sir Rufus Daniel Isaacs, Earl of Reading. The romantic history of his early life, the splendour of his success at the bar, the brilliance of his achievements as an ambassador and the glamour of the exalted office he now holds under the Crown, cannot but stir the imagination of the layman. But, let me urge, that another feature of his career appeals powerfully to us, the members of an academic body which has sedulously endeavoured to foster the study of the science of law and is proud to count among its alumni leaders of the highest eminence in the legal profession. His name occupies a distinguished position in the long line of illustrious men, who have adorned the most ancient judicial office in the land of his birth, and we are met to-day to express our high appreciation of the signal success which marked his efforts to expound and administer those immutable principles of jurisprudence that constitute the priceless heritage of mankind, alike in the East and the West.

The Right Hon'ble Syed Ameer Ali, who stands in the foremost rank of our graduates, has spent a life-time in the noble task of

administration of justice in the name of his Sovereign in one of the highest Courts in India as also in the supreme tribunal of appeal for the British Empire beyond the seas. His scholarly contributions to the exposition and development of legal principles have long outstripped the boundaries of Moslem Jurisprudence. Equally striking has been the success achieved by him in another and a distinct sphere; his presentation of the life and teachings of the Prophet of Islam, the spirit and ethics of his religion, and the history of the remarkable civilisation and manifold activities of the Saracens, is characterised by purity of style, sobriety of judgment and critical acumen, which have secured for him an honoured place in the front rank of historians of the Muhammadan faith. To our deep disappointment, his advancing years and his judicial engagements have rendered it impossible for him to revisit the scene of his early labours and to receive the enthusiastic welcome which would assuredly have awaited him.

Professor Arthur Anthony Macdonell who has ably maintained the high reputation of the Boden Chair of Sanskrit in the University of Oxford, has assiduously laboured for the promotion of Oriental studies, and his services are held in high regard wherever Sanskrit studies are honoured. His works on Vedic Grammar, Vedic Reader, Vedic Mythology, his critical editions of the *Sarvanukramani* of Katyayana and the *Brihaddevata*, his Sanskrit Grammar and his Sanskrit-English Lexicon have served to illumine many a dark labyrinth of Sanskrit learning, to the benefit of two generations of grateful students. The utility of his numerous contributions has secured for him unques-

tioned recognition by Orientalists in the Eastern as well as the Western hemisphere. As might have been anticipated, considerable interest was roused amongst the students of our University by the announcement that a scholar of such maturity of judgment and breadth of vision would discourse to them on Comparative Religion, on the foundation recently established by our worthy benefactor, Mr. G. C. Ghosh, in memory of his late lamented son, Stephanos Nirmalendu Ghosh. It is not a matter for surprise that they should have been keenly disappointed to find that his visit to these shores has been temporarily postponed by reason of sudden illness.

Far different has been the field of intellectual activities of Professor Sir William Jackson Pope, who has shed lustre on the Chair of Chemistry in the University of Cambridge and holds a distinguished place in the foremost rank of investigators and teachers of Chemistry of the present generation. The scientific world is indebted to him for highly important discoveries which have thrown much light upon the impenetrable mystery surrounding the problem of the ultimate nature of matter. In collaboration with Professors Perkin and Wallach, he has published the results of numerous experiments dealing with the optical activity due to asymmetry of nitrogen, tin, selenium and sulphur atoms; and in conjunction with Professor Barlow he has propounded an attractive theory, remarkably supported by experimental evidence, dealing with the connection between crystalline structure and chemical constitution. The practical value of his brilliant researches in aerial photography has received well-merited recognition; and he has placed the students of this University under special obligation by

the striking lecture on the Reality of the Atomic Theory which he delivered recently in connection with the lectureship established by Professor Adharchandra Mookerjee.

Professor William Alexander Craigie, who so deservedly occupies the Chair of Anglo-Saxon in the University of Oxford designated after Rawlinson and Bosworth, has oft roamed in the realms of gold and many goodly States and Kingdoms seen. The results of his explorations in the region of Gaelic, Scottish and Scandinavian Culture, Religion and Civilisation have made his name a household word amongst scholars of high repute. At the same time, his appreciations of the Icelandic Sagas on the one hand, and of Robert Burns on the other, have found response amongst a wider circle of readers. His name and fame are, again, closely linked up in the popular mind with his labours as Joint-Editor of the great Oxford English Dictionary, which has been rightly regarded as a lasting monument of the richness of the English Language and of the vitality of British scholarship. Our students deem themselves fortunate to have an opportunity to profit by the lectures of so ardent a scholar in whom are combined the best traditions alike of St. Andrews and Oxford.

In Dr. Brajendra Nath Seal, we welcome one of our eminent graduates, whose services have been enlisted by a highly progressive Indian State in the momentous formative period of the history of its University. His intellectual attainments are truly encyclopædic in scope and character, and the most powerful microscope would be needed to detect the cultural germ which has successfully escaped his omnivorous instinct. His name is held in veneration by the students of Bengal, who, whether at Berhampore, at

Cooch-Bihar, or in Calcutta, have come under the influence of his intellectual dominance in the departments of Philosophy, Religion, Literature, Mathematics and the Physical and Natural Sciences; and scholars in Western countries have been equally ready to recognise in him a compeer, fully their equal in many a region of human thought.

The Hon'ble Mr. Raghunath Purushottam Paranjpye, after his brilliant academic record in the Universities of Bombay and Cambridge, nobly decided to adopt a career of honourable poverty, and to dedicate his life to the promotion of education amongst his countrymen. The Fergusson College, which owes its origin to the far-sighted educational policy of intellectual leaders like Bal Gangadhar Tilak, Vishnu Krishna Chiplunker, Mahadeo Balakrishna Namjoshi, Vamana Shivaram Apte and Gopal Ganesh Agharkar has been sanctified by the unselfish labours of a long line of illustrious Mahrattas, including amongst others, Gopal Krishna Gokhale, and I felt myself on hallowed ground when I was privileged to visit that memorable institution in the historic city of Poona. The spirit of sacrifice and service imbibed by him at the feet of his great masters, in whose steps he has treaded, has become so inseparable an element of his nature that it will never disappear, however exalted be the station in public life that he may be called upon to occupy.

Sir John Marshall, who has so wisely directed the activities of the Archaeological Department for the last twenty years, came out to this country with the reputation associated with a distinguished academic record in the University of Cambridge. His mind had been saturated with what might be fittingly described as the Hellenic spirit, and his intensive study of the masterpieces of the Greek

intellect had been followed by journeys of exploration in those classic lands where Greek genius had flourished in all its glory. It is easy to be wise after the event, but I venture to think that one might have predicted, even without the gift of prophecy, that a scholar who had drunk deep at the Piræan spring would not be slow to appreciate the manifestations of the Indian genius in the field of sculpture and architecture. He has earned the deepest gratitude of the Indian people by his devotion to the systematic conservation and preservation of ancient Indian monuments at Delhi, Agra, Lahore and Mandu and to the scientific exploration and excavation of many a site of ancient Indian civilisation such as Saranath, Bhita, Sanchi and Taxila. His contributions to the advancement of our knowledge of Indian Antiquities are of abiding value, while the constant encouragement he has afforded to fellow-workers and students in this fascinating field has led to the rapid growth of an indigenous school of Indian Archaeology.

Mr. Rudrapatna Shama Shastri, who has been the guiding spirit of the Chamarajendra Sanskrit College at Bangalore and the Government Oriental Library at Mysore, is a profound scholar whose unquestionable merit has been overshadowed by the innate modesty of his character. His brilliant performance in the difficult task of decipherment of the unique manuscript of the Artha Shastra of Kautilya will bear comparison with the restoration of the text of the Institutes of Gaius by Goeschen and Hollweg and of the text of the Panchasiddhantika of Varaha-Mihir by George Thibaut and Sudhakar Dvivedi. His labours in the preparation of the *editio princeps* and of the first English version of this great monument of Indian genius in the

domain of Political Philosophy deserve the highest commendation; but while scholars have not been slow to utilise the results of his life-long toil, generous acknowledgment of obligation has by no means been profuse. His other contributions to Indian History and Antiquities have been thrown into comparative shade by the well-merited success which has attended his efforts to lay a solid foundation for the study of the science of Indian Polity during the Vedic and Post-Vedic periods.

Professor Sakkottai Krishnaswami Aiyangar, who has filled with distinction the Chair of Indian History and Archaeology in the University of Madras, has successfully pursued his investigations in an obscure and neglected branch of Indian studies. He has endeavoured to estimate the value of the contributions of Southern India to culture and civilisation in ancient and mediæval times, and his successive works on Ancient India, the Beginnings of South Indian History, South India and Her Moslem Invaders, and the History of the Hindu Empire of Vijayanagar have notably helped to dispel the illusion that Northern India and Northern India alone has been the most potent factor in the growth and expansion of Indian culture in all its varied manifestations.

Professor Devadatta Ramkrishna Bhandarkar, who so fittingly occupies the Char-michael Chair of Ancient Indian History and Culture, is the inheritor of an illustrious name held in high reverence in every centre of Sanskrit learning. His bold and brilliant excursions into many an unknown tract of ancient Indian History have furnished fresh evidence of the law of heredity, and his colleagues rejoice to find in him, not a chip of the old block, but the old block itself. I shall

not undertake to appraise here the value of his many original papers on Indian History and Antiquities, which are found scattered through the volumes of the Indian Antiquary, the Journal of the Bombay Branch of the Royal Asiatic Society, the Journal of the Asiatic Society of Bengal, the *Epigraphia Indica*, the Archaeological Annual, the Hyderabad Archaeological Series and other like learned publications. He may rightly be regarded as the path-finder in trackless regions of the boundless field of Indian antiquarian research, and this has enabled him to take unquestioned rank as an inspiring teacher. To him it must be a deep gratification to be admitted to the degree which was conferred a dozen years ago in this very hall upon his venerable father, who has fortunately been spared to witness the triumph of his son, whom he so sedulously brought up to follow in his footsteps.

Professor Henry Stephen holds a unique position among the teachers of our youths, whose affection and reverence he has enjoyed for forty years. Whether within the walls of the College consecrated by the religious fervour of Alexander Duff, or within the wider sphere of a Teaching and Research University, he has helped to ennoble their lives by bringing them into contact with the minds of the greatest seers of the world, the acknowledged masters of Literature and Philosophy. To the surprise and delight of thousands of pupils, he has elucidated, with equal ease and enthusiasm, the problems of life as expounded by Aristophanes and Shakespeare, by Plato and Kant, by Aristotle and Emerson, by Virgil and Coleridge, by Schiller and Swinburne, by Wordsworth and Bergson, who symbolise the wisdom of diverse ages and races.

Rai Sahib Dines Chandra Sen, who has worthily held the Fellowship which commemorates the services of that pious educationist of a by-gone generation, Ramtanu Lahiri, has established for himself an unassailable position as historian of our mother-tongue in its manifold aspects. It was in recognition of the value of his original researches in the history of the language and literature of Bengal that the Secretary of State for India, now more than twenty years ago, awarded him the first literary pension in British India. His numerous contributions on the life and times of Sri Chaitanya, the great apostle of religious revival in the fifteenth century, have served to elucidate many a dark corner in the social and literary history of Bengal; on the other hand, his labours in the examination of the earliest manuscripts of the Bengali language have smoothed the path of all his followers in that captivating field of scholarship. The value of his life-long work in these and other departments has spread the fame of this University in far distant lands and has been appreciated by scholars of all shades of opinion.

Professor Abanindra Nath Tagore, who has accepted our invitation to occupy the Bagishwari Chair of Indian Fine Arts—a subject whose claims have unfortunately not hitherto been recognised by Indian Universities—is the undisputed leader of the movement for revival of the School of Indian Art. He is himself a gifted artist, whose numerous paintings exhibited in Delhi, Simla, Bombay, Calcutta, London, Paris, Tokyo, Boston and New York, have arrested the attention and secured the admiration of connoisseurs. His presence in what has hitherto been regarded as orthodox academic circles will help us to

realise that true national education is impossible without a genuine appreciation of national art. Nowhere does it require to be more insistently emphasised than here that if it be the purpose of a University to train men for the public services and for professional careers, it is equally its duty to widen the intellectual and spiritual horizon of the students. This will be most effectively achieved when our people learn to appreciate the patent truth that the soul of India manifested itself in a special manner through her wonderful art which furnishes a powerful instrument for self-discipline and self-refinement.

Professor Cuthbert Edmund Cullis, who has for more than a generation revealed to our ablest students the abstruse truths of the highest branches of Mathematics, now adorns the Chair named after our late Chancellor, Lord Hardinge. He has been for many years past engaged in recondite researches on the mysteries of mathematical forms which would bewilder the ordinary mortal. Yet his discoveries, though well-nigh incomprehensible to all but the trained mathematician, have proved to be capable of fruitful and far-reaching applications in the realms of Higher Algebra, Geometry of Hyper-spaces, Vectors and Invariants, with possibility of extensive use in the solution of difficult problems in Applied Mathematics and Physical Science.

Dr. Gilbert Thomas Walker, one of the acutest intellects sharpened by the remarkable discipline which has made Cambridge famous as a seat of mathematical learning, has not only worthily maintained but has substantially enhanced the high reputation of the work of the Indian Observatories, initiated by his predecessor, another prominent son of Cambridge, the late Sir John Eliot. But five

years before he chose India as the field of his activities, he had established a lasting reputation as a mathematician and physicist of the highest rank by the penetrative insight displayed in his Essay on Aberration and problems connected with the Electro-Magnetic Field; the value of this work may be appreciated from the fact that it was adjudged worthy of the Adams Prize in the University of Cambridge, jointly, with the thesis on Ether and Matter submitted by Sir Joseph La. mor. He has further laid our students under obligation by his lectures on the Theory of Electro-magnetism in which he expounded a subject, inherently difficult of comprehension, with singular skill and clearness in presentation.

Professor Chandrasekhar Venkata Raman, fascinated by the charms of scientific research, abandoned a lucrative and tempting official career and accepted the Chair of Physics founded by our great benefactor Sir Taraknath Palit. His striking investigations in various departments of Physics, particularly in the ever-widening field of the Theory of Vibrations, have attracted respectful attention in the highest scientific circles in Europe and America. But what is still more worthy of congratulation is that a vigorous School of Physics has sprung up for the first time in the history of our University, and students have flocked from all parts of India to his laboratories in the College of Science and in the Indian Association for the Cultivation of Science, to imbibe his enthusiasm and to profit by his teaching and guidance.

Sir Mokshagundam Visvesvaraya occupies a prominent place in the front rank of Indian administrators, and is conspicuous for his sagacity of judgment, independence of character and boldness of conception. But here

I lay more emphatic stress on his triumphs as one of the foremost of Indian engineers. He has planned and executed, with unsurpassed skill, stupendous works of public utility to control and utilise the agencies of Nature for purposes of irrigation and improvement of agriculture. No one who has witnessed the practical result following the erection of the dams across the rivers Musi at Hyderabad and Kaveri at Mysore will venture to dispute his solid claim to the gratitude of his fellow-subjects.

We rejoice further to extend a cordial welcome to that renowned savant, Professor Sylvain Levi, who stands in the forefront of the present generation of French Orientalists. It is now nearly eight years ago that we decided to give expression to our high appreciation of his eminence as a scholar; but, by reason of the outbreak of the Great War he found it impossible to be in our midst and to lecture to our advanced students on the captivating subject of India and her neighbours in ancient times. It is superfluous for me to reiterate his many-sided activities which have influenced the course of thought and speculation in almost every conceivable corner of the ever-extending domain of Oriental studies. His wonderful mastery of Asiatic languages of the most diverse types, such as Sanskrit, Chinese, Tibetan, Annamese, Mongolian and Central Asian, has enabled him to take a comprehensive comparative view of many an abstruse topic, literary, philosophical and religious; his learning is indeed so varied that the value of his contributions to the elucidation of the past history of Asiatic nations can be fully appraised only by a syndicate of specialists. It is truly a matter for congratulation that he should have found it possible to accept

the invitation of our national poet as also of this University to expound the mysteries of oriental culture to students at Bolpur and Calcutta.

I have reserved till the last all reference to one who is so intimately connected with us, I mean our Chancellor. I am not called upon here to anticipate the verdict of history upon the administration of the Right Hon'ble the Earl of Ronaldshay as Governor of this Presidency during one of the most critical periods in the history of its development. But this I maintain with confidence that in him are united, in a very special manner, the attributes of a gifted scholar and statesman. He had imbibed the best ideals of true education at Harrow and Cambridge, and his intellectual vision was widened by travel all over the East, from Turkey to Japan, from Siberia to Ceylon. It is no wonder that a cultured nobleman like him should be able, with hereditary aptitude, to temper his individuality with sympathy for the aspirations of the people whom Providence has placed under his rule. Remarkable for his inborn courtesy and sincerity, courageous yet felicitous in the expression of his convictions, he has secured the respect and admiration of all who had the privilege to come into contact with him, even though they might not assent to his views. He has been an observant student of human nature in the East, whether in the innermost recesses of the villages of Bengal or on journeys of exploration to unknown corners of the Eastern Himalayas and the glaciers of Kanchinjangha. But more than all this; he has appreciated the unfathomable difficulties which surround the metaphysical problems propounded by the sages of Buddhism on the one hand and

Vedantism on the other; and few, even amongst those of his countrymen who have felt attracted by eastern ideals, have gained an equally deep insight into the basic problems of Indian Philosophy and Religion, which are indissolubly associated as much with our spiritual life as with the true advancement of the Indian Nation.

Finally, you, gentlemen, who have so indulgently listened to this inadequate estimate of the varied achievements of so many distinguished individuals, with such diverse tastes and accomplishments, may well enquire if a characteristic, common to them all, may be discovered. Let me, therefore, venture upon a bold synthesis. To my mind, they are all pilgrims on the endless road which leads to that sacred shrine where the lamp of Truth burns eternally resplendent, the ultimate goal of humanity. They have never deviated from this noble path, and their activities have been constructive rather than destructive,—all honour to those, who have so faithfully worked, each in his allotted sphere, for the progress of the race.

CLOUD MESSENGER.

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CONVOCATION ADDRESS.

By H. H. the Maharajah of Mysore, the Chancellor.

MR. VICE-CHANCELLOR, GRADUATES, LADIES AND GENTLEMEN:—

BEFORE calling upon the Vice-Chancellor to deliver the annual address to this Convocation, I desire to express the great pleasure it gives me to revisit this University after a period of three years. I notice with deep satisfaction the remarkable expansion which the University has undergone in every direction, in teaching staff and organization, in college buildings and hostels, indeed in all the moral and material resources of a great modern University. I congratulate the University on the formation of an officers' training corps, the sanction for which was announced by His Excellency the Viceroy in the sympathetic and inspiring speech which he made here a few days ago. I feel that we may rest assured that our University will find in him a true friend and well-wisher. The historic ceremony which you witnessed yesterday marks, as it were, the admission of the University of Benares to the franchise of the commonwealth of learning and the recognition of her claims to be the spokesman of a whole people's cultural tradition. Her new responsibility demands that the University should make a searching examination of her programme, her resources to work out that programme and her present situation in the Indian academic world. Such an enquiry may immensely strengthen the position of the University. It may bring increased

financial support from the public, by reviving zeal and confidence, and rousing the imagination of the country at a time of great distraction, doubt and difficulty.

The situation to-day may be described as follows: the movement for residential teaching Universities has entered on a new phase in this country. The day of the smaller University is come, and some of the larger centralized Universities may even break up into more local institutions for the purposes of what may be termed an intensive culture. In the United Provinces, for example, there will be four or even more Universities, besides one or two technological institutes, which will carry on chemical and industrial research of an advanced character.

This University is a novel experiment in educational reconstruction. It seeks to conserve the vital and essential elements of Hindu learning and civilization, to adapt them to modern conditions and to make such enduring contributions to the solution of the world's problems and difficulties as India is fitted to make by her long experience and history.

The time has now come to ask how the Hindu University is equipping herself for her special mission. A clear vision of the genius of India, of the soul of the people, must be her inspiration. Has the University gathered, at this historic centre, a band of teachers, preceptors, acharyas, and provided herself with the most up-to-date machinery in order to turn out nothing higher than the standardized B.A.'s and M.A.'s of the approved pattern? The answer is surely "No". True, there is the Oriental Department and even a College of Theology, but what we must ask ourselves is how far our regular

curricula and schemes of examination and the ideals of personal and social relationships, which the students of this University imbibe from the atmosphere of its halls and hostels, will foster and enliven all that is really inspiring in the Indian outlook upon life. Nor must a Hindu University, in its Oriental Department, forget at the present day to welcome into the bosom of the Indian family the Buddhist Pali and the Jaina Prakrit literature. Benares must also endeavour to build up Indian schools of Tibetan, Chinese and Central Asian languages, which may serve to recover the vanished treasures of ancient and mediæval India. This is a pious duty which Benares cannot neglect.

Equally insistent is another factor, that struggle for existence, that challenge of the modern world which a Hindu University must face, and face with sincerity and courage. The University has begun, and begun wisely, with faculties, in mechanical and electrical engineering, for, after all, industrial power, by which I mean not only machinery but also cheap hand power, is essential to the rebuilding of a sane and healthy life for the Indian people to-day. But we must not forget the masses in our Indian villages living by agriculture; the tillage of the soil, no less than the cultivation of mental and moral resources, must be given a prominent place in the organization of a Hindu University reflecting the form and impress of Indian life and surroundings. The Agricultural Department will not, therefore, come a day too soon.

A Hindu University must prove itself equal to one more crucial test. The foundations of the old order, like the very foundations of the deep, are being broken up to-day, all over the world. Revolutionary doctrines,

economic, social, political, educational, are being spread everywhere under a hundred different guises and names, and under a hundred banners. Everywhere there is spreading an under-current of revolt against order, progress, and reform. The old hope and faith, the old wisdom and charity, are being forsaken and forsworn. This is the great agony to-day, the agony of the world. It is for Hindu culture to try and root out the seeds of disorder. It was here at Benares that the Buddha preached his first sermon and set in motion the wheel of the perfect law. Here Shankaracharya, Ramannuja, and Kabir brought deliverance to mankind in new and untried ways. India, the land which has preached and practised *ahimsa*, the land which has through the ages meditated on Maitri and uttered the great benediction *Shanti*, has India no message to the world? May we not look to the graduates of this University to go out into the world of humanity to endeavour by precept and example to raise the standard of morality and good citizenship?

Such are some of the problems which confront a Hindu University at Benares, and they cannot be solved without careful thought and deliberation. But if our University is to achieve anything in this direction it is imperative that her finances should be placed on a sound basis. Without this, nothing great or durable can be done or even attempted. If the University is setting out on a great campaign, she must have not only money, the indispensable sinews of war, she must also husband her resources and beware of speculative schemes and barren or illusory projects.

Our urgent need of more funds has been

RESEARCH AND UNIVERSITY REFORM.*

and is being pressed forward in a campaign that knows no flagging and no reverse or retreat, thanks to the flaming zeal and persuasive eloquence of Pandit Madan Mohan Malaviya who has, indeed, been the life and soul of this University ever since its inception and has rendered invaluable service as its Vice-Chancellor. Equally important with the quest of money are the upholding of a pure ideal of the Sanatana Dharma, the core and essence of Hindu Culture, and the wide dissemination of right ideas as to the meaning and substance of that Dharma. Indeed, there can be no true Hindu University without such a movement of illumination, purification and revival. In this cause signal service has been rendered to this University, and to the promotion of constructive national education, which it represents, by Mrs. Annie Besant, the founder of the Central Hindu College, and by the Maharajah of Darbhanga, one of our most munificent benefactors, and it is only right and proper that this University should express its grateful appreciation of their great services by conferring on them its highest degree, *honoris causa*.

Our Hindu University cannot survive unless she contributes to the reconstruction of life and social order in the India of to-day. She must quicken what is inert, illumine what is dark, rejuvenate what is old and withered. And even as the Eternal city, in which she has her home, is to the pious Hindu the meeting place of the Earth and Heaven, so must the University of Benares stand as the bridge between the past and present, between old and new, and, with the holy river at her side, link the India of the Vedic times with the India of the morrow that is to be.

RESEARCH is a word which comes from Old French *re* and *cercer* and Modern French *chercher*, meaning search. The latter word can be derived from Late Latin *circare* meaning to go round in a circle to explore and may correspond to the Sanskrit *charcha*. It is defined as the act of searching into a matter closely and carefully by enquiry directed to the discovery of its real nature. As such it refers in particular to the trained scientific investigation of the principles and facts of any subject based on original and first-hand study of authorities, or on actual experiment. While it is possible to give the term a broader meaning, including in it investigations of every kind based on original sources of knowledge, authoritative usage restricts it particularly to the investigations of those who devote themselves "to the study of pure as opposed to applied science, to the investigations of causes rather than to practical experiment." It is more generally used for a course of post-graduate study at a University, for which many Universities have provided Research studentships or fellowships. It is in that sense that we shall have to consider the term in connection with the Indian Universities which are at present—thanks to the report of the Sadler Committee—reforming themselves. The work of revision of the older Indian Universities has been going on for some time, and is in various stages of completion. Our own University here is formulating its own schemes of reform to give them practical shape, while at the same time

* A lecture delivered before the Teachers' College Association, by Professor S. Krishnaswami Aiyangar, M.A., Ph. D. (Hony.) &c.

a Government Committee has been constituted, perhaps with a view to settling questions of policy in regard to the various stages of education including that of the University. It may be useful therefore to consider generally what exactly is understood by the term 'University Education' and what its relation should be to Research.

What a University is, at any rate ought to be, as accepted in authoritative quarters, is best exhibited in the following extract from Lord Haldane, one of the highest living authorities in matters of higher education. Speaking of leadership among men he gives it as his opinion that "leadership among the peoples of the earth depends upon the possession of a deeper insight," and proceeds to point out that "without moral and intellectual equipment of the highest order no nation can to-day remain a world power." In describing what kind of men those leaders should be he deals with the question of University Education as such and the following extract gives his whole idea: "The so-called heaven-born leader has a genius so strong that he will come to the front by sheer force of that genius almost wherever his lot be cast, for he is heaven-born in the sense that he is not like other men. But in these days of specialised function a nation requires many leaders of a type less rare—subordinates who obediently accept the higher command and carry it out, but who still are, relatively speaking, leaders. Such men cannot, for by far the greater part, be men of genius; and yet the part they play is necessary, and because it is necessary the State must provide for their production and their nurture. At this point the history of the modern State shows that the University plays an important part. The elementary school

raises our people to the level at which they may become skilled workers. The secondary school assists to develop a much smaller but still large class of well-educated citizens. But for the production of that limited body of men and women whose calling requires high talent, the University or its equivalent alone suffices. Moreover the University does more. For it is the almost indispensable portal to the career of the highest and most exceptionally trained type of citizen. Not knowledge, not high quality, sought for the sake of some price to be obtained for them, but knowledge and quality for the sake of knowledge and quality are what are essential, and what the University must seek to produce. If Universities exist in sufficient numbers and strive genuinely to foster, as the outcome of their training, the moral and intellectual virtue which is to be its own reward, the humanity which has the ethical significance that ought to be inseparable from high culture, then the State need not despair. For from among men who have attained to this level there will, if there be a sufficient supply of them, emerge those who have that power of command which is born of penetrating insight. Such a power generally carries in its train the gift of organisation, and organisation is one of the foundations of national strength." Speaking of the difficulties that concern those that seek higher education,—among them the want of means of several worthy aspirants—he says rightly that "learning is a jealous mistress, the life of the scholar makes more demand for concentration than any other life and as it is with the finished scholar so it is even with the beginner. He is subject to the same temptations, is apt to be deflected by the same tendencies. Nothing but the passion for

excellence, the domination of a single purpose which admits of no foreign intrusion can suffice him who would reach the heights. As the older man moulds his life in order that he may pursue his way up from the distraction of the commonplace, so it is with the best students of the University. They live for their work and as far as can be for that alone." This may be a very high ideal, but that is an ideal which has equally the approval of the scholar and the man of affairs, a supreme example of which latter is Lord Haldane.

The Sadler Committee therefore rightly considered the promoting, the organizing, and the carrying out of independent investigation, a vitally important function of all Universities. They pointed out that down to the time of the Universities Act of 1904, Indian Universities had neglected to make provision for this essential function of University work. The Universities Act of 1904 laid emphasis on this omission or neglect, and many Universities took the stimulus from the Government to organize Research sections of their own in consequence of the Imperial grants made to them since 1912. The only University that has made anything like a measurable progress in this new direction is the Calcutta University which utilised the Government grants and various donations from her own distinguished sons to establish a well-organized scientific department for post-graduate work as also a flourishing department of Arts and Letters. The staff of this department called the department of Post-Graduate teaching, consists of very near two hundred men engaged in various branches of work. The results of this work have not been allowed to smoulder in musty note-books of the individual investigators. They have been published

from time to time in various books and papers, and the latest sign of organized activity in this direction is the issue of two journals, one for the department of Arts and the other for the department of Letters.

This new-born zeal for Research runs great danger which is not peculiar to the Indian Universities alone, but which has shown itself already in English and American Universities as well from the somewhat strange notion that teaching and research are quite separate and distinct functions which must be left to different bodies of men and separate organizations. This naturally has the somewhat unlooked for consequence, that teaching is getting to be regarded as an inferior function which might well be left to men of inferior capacity to give the mass of the students the routine training they require. It is also considered by those who hold this view that such men would be quite good enough to guide even a few brilliant students in the earlier stages and give them the necessary preliminary drill before they pass on to the guidance of the nobler and more exalted scholars actually engaged in original work whose function it would be to help them to learn how to work for themselves.

There is a tacit implication underlying this notion which might be the consequence of the somewhat sharp distinction that is drawn between what is called University education and the various grades of education which lead up to it. It is hardly necessary to point out to those that have any experience of teaching that there is no such sharp distinction in education in point of its character, whether it be education in the University stage or education in the earlier

stages. If the definition of the term 'Research' as given above is correct and can be taken to mean substantially what is implied in the word exploration, it is hardly possible to conceive of teachers and students doing work profitably to themselves in any stage of education unless they keep "the eagerness to know the truth" always before their mind. It is not given to all to make those researches which add substantially to the sum total of human knowledge; but at least the students and teachers in a University ought to take up their work in the spirit of the explorer. Their studies, whatever be their subject, should partake of the character of search for truth that may be new to themselves although the truth may not be quite so new at all. It is more the inculcation of the exploring spirit rather than the result of the exploration that really matters. According to the Sadler Committee "a University is not fulfilling its duty as a centre of research if it merely hires a few men to carry on investigations in corners by themselves, however handsomely they may be supplied with materials for investigation. It is the spirit of research that is needed and *this spirit must be present in all serious work*". A University student, therefore, it is necessary, must be trained up to be a man using all his powers especially of imagination and of insight in the search for truth. The object of University teaching ought to be really to implant this desire for truth in a student. Unless this training is given to him in his under-graduate days and unless he comes to his post-graduate work in full possession of this spirit, he is likely to do little good to himself in his efforts, should he make such, at investigating and finding

out truths that he does not know, or truth that nobody so far knows. "The business of a University teacher," according to the Sadler Committee "is not to pump knowledge into his students, but above all to show them how to acquire knowledge for themselves, how to do independent work." It is incumbent upon every teacher to go into his teaching work with that eagerness to discover truth which it is his business to communicate to his pupils. This exploring spirit may show itself in two ways. 1. It may show itself in a re-arrangement of ascertained facts to give a new interpretation to them. This, in the sciences, would take on the form of repeating the experiments already performed by others to study up the details that go to constitute the full experiment and to examine whether the interpretation meets all the requirements, or whether that interpretation requires to be added to or amended. 2. It may exhibit itself in the search for and discovery of new facts. This search may be capable of being planned beforehand but the discovery resulting therefrom cannot be anticipated.

A University may carry on both liberal and vocational teaching at the University, and most modern Universities do the two. The aim of the first is the attainment of knowledge and understanding, the aim of the second is the acquisition of mastery or dexterity in a technique. University teachers engaged in achieving the first object ought to be constantly engaged "either as eager discoverers of new facts, or as eager explorers of unperceived relations between known facts" to perform their functions satisfactorily. This will show the teacher constantly to his students as dominated by that intellectual curiosity in order to infect those that come under his teaching with a similar curiosity when they

go out into the world, if not as finished products of a University, at least as those who had attained to graduation in it.

This, it can be easily demonstrated, was the spirit with which the ancient teachers of this land went into their work. If we go to the period of the Upanishadic speculators it will be found that the most important characteristic of the teacher was this independent investigation resulting in independent thought. There is no doubt that so far as we know of them and their work at present, they devoted themselves almost entirely to philosophical subjects, but whatever the character of the subject the spirit of the investigation was the same. The mere fact that there were as many as sixty-two schools of thought in the age of the Buddha is the clearest indication of this independence. That feature continued to be a feature of the mediæval Universities of India, as well as the various systems of teaching in the several subjects coming within their purview, be they secular or sacerdotal. Those Universities of ancient and mediæval India combined education in secular and religious subjects. To the University of Taxila went King Prasenajit of Kosala not merely to acquire proficiency in logic and grammar, but to acquire proficiency in the various subjects that went to constitute the equipment of rulers. These subjects included accounting and finance, the treatises bearing on courtisans and courtzanship, (with a view to the employment of agents and ambassadors for spying), the sciences of politics and wealth, the sciences bearing on law and administration. What would perhaps seem strange to us archery, "Dhanurveda." Much the same can be said of the University of Nalanda, which came very much later and

where the Chinese traveller, I-tsing, resided to learn the literature of Buddhism from those that were first-hand experts in such literature. One small detail in regard to the working of the Professors of this University indicates distinctly the spirit of research. The highest class of professors in this University were men who could at one hearing gain complete mastery of a work of about six hundred slokas. This perfection of the work of memory was absolutely essential to them as without that ready acquisition of anything new that may be presented to them it was impossible for them to give it the repeated cogitation to grasp the truth, and contend against any untruth that any new presentation might offer. It may therefore be taken that among the indigenous University teaching of the country, the spirit of research went through and through the system of education both in the teacher and in the taught.

It would be one essential feature of nationalising our educational system, which as far as it has gone at present, may be characterised as thoroughly exotic except for some slight features of modern introduction, to try and infuse this spirit of research into University teaching as a whole and make University education subserve the ends of higher learning. It ought to be borne clearly in mind that Universities might introduce into their curricula vocational subjects of various kinds and might give to the students that take those subjects a perfect mastery in the technique of various vocational schemes that they might elect for study. But that is not the genuine University education which gives the University its character and contributes to the advance of the national intellect which ought ultimately to result in any large contribution

to the sum total of human knowledge. The infusion of such a spirit into a University would be possible only by the unstinted co-operation between the actual University teachers engaged, it might be as a matter of convenience, in the training of the University students, and those that make research work their principal function, in regard to the training of the youth that come under the purview of the University. This can hardly be achieved unless the University, whatever be its character, necessitated by the geographical and other considerations, provides not merely satisfactorily but liberally for the prosecution of research work by equipping laboratories and libraries and making provision for the votaries of the various subjects to conduct their work in these without thought of anything else than advancement of learning. This would involve expenditure of national resources. Arguments may be advanced, necessarily of expediency or of practical convenience, that this expenditure of resources may not be readily productive and may wait in order that other items more directly subservient to the earning of livelihood by the educated classes be taken up first. Such an argument would partake of the character of the argument in the fable that it is the leg that walks and the hand that does, and therefore the stomach need not be fed or the head taken care of. No educational system in a country can be expected to flourish and discharge its essential functions to the community that does not make provision on an adequate scale for all grades of education simultaneously. The human intellect will not admit of partial development where the education of a whole community is concerned. The education of the community must be the first charge upon the national resources of the community and no part of

the community can claim priority of the community that represents the head. A system of education which fails to provide for the higher needs of human intelligence provides only to produce "hewers of wood and drawers of water," and nobody has any right to complain that it failed of production of intellectual men of the higher rank,—leaders of men in the words of Lord Haldane.

It is not at present so well or fully recognised here that University education so-called involves this research spirit. Public utterances of responsible men could be quoted almost to the contrary effect. Hence it seems almost obligatory that emphasis should be laid upon this feature of University education. I may therefore be excused if I make another quotation from Lord Haldane from his work "Universities and National Life." "Here then, lies the true and two-fold function of the University. It is a place of research where the new and necessary knowledge is to be developed. It is a place of training where the exponents of that knowledge—men who are to seek authority based on it—are to be nurtured and receive their spiritual baptism."

"Such a University," according to him, "cannot be dependent in its spirit. It cannot live and thrive under the domination of either the Government or the Church. Freedom and development are the breath of its nostrils, and it can recognise no authority except that which rests on the right of the Truth to command obedience." The necessity for freedom and independence in University work has long been recognised as essential to good work and would require no elaboration now had it not been for certain new tendencies among a class of University reformers here to order University work on the lines of bureaucratic

routine. It was Lessing who declared that "were God to offer him Truth in one hand and the Search for Truth in the other he would choose the Search. He meant just as the Truth never stands still, but is in its nature a process of evolution, so the mind of the seeker after it can never stand still. Only in the process of daily conquering them anew, do we, in this region also, gain life and freedom. And it is devotion to this search after the Most High—a search which may assume an infinity of varied forms—that the dedicated life consists; the life dedicated to the noblest of quests, and not to be judged by barren failure to reach some fixed and rapid goal but rather by the quality of its striving." This search for truth is hardly compatible with a departmentalist organization. That that is the accepted general view of those devoted to research work, and therefore those who could speak with authority on it was recently in evidence in the controversy that was carried on in the scientific journal 'Nature' directly on the publication of the report of the Indian Industries Commission which recommended the organization of a Department for Research under the aegis of Government. Scientists of the highest authority brought it out clearly in the course of the controversy that departmentalism was actually detrimental to the progress of research. Real research according to them could flourish only in an atmosphere of freedom and that freedom could be commanded, best of all, only at the Universities. Dr. W. Beatson, F.R.S., said "Research like Art, Literature, and all the higher products of human thought grows only in an atmosphere of freedom. The progress of knowledge follows no prescribed lines and by attempting such prescription the head of a service would merely kill the spontaneity and enterprise of his workers." Professor Seward, F.R.S., wrote to the same effect: "If there is one thing for the successful prose-

cution of scientific research of the best type and for the encouragement of the full development of a researcher's capacity, it is freedom of action." Professor Soddie in the same connection pointed out that "the crying need in India, as everywhere, is for men of high calibre and honest mental outlook anxious to secure favourable conditions under which they may be left free to pursue their creative work, and, this being secured careless of wealth, rank and power save as the necessary antecedents to this essential condition." He proceeds to observe, "I do not wish to advocate for scientific investigators, a close corporation keeping a lynx-eyed vigil for their professional interests and seeking every opportunity to enlarge and consolidate them, identical with other learned professions; for the permanent interest of a scientific investigator should be his work, and his privileges, emoluments and status ought to be regarded merely as means necessary to secure opportunity and power to do it." Such being scientific opinion in regard to the need of freedom for research, it hardly needs to be stated that in all well-organized countries it ought to be the University that should provide the essential requisite of freedom for the prosecution of higher learning. There is nothing so far to show that India is an exception to this rule. The existence of a high ideal of a University is bound to react upon the young men coming within its influence. The result of this reaction would be the rise in the number of young men who would devote themselves to this work of national advancement irrespective of material conditions. Such a University infused with the spirit of research and aiming high in the field of research work ought to appeal to young India as "to maintain the University of the country at a high level becomes then an act of the highest patriotism on the part of its citizens."

THE PRESENT RELATION BETWEEN PHILOSOPHY AND SCIENCE.*

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IT appears as an irony of Reality that it forces man to understand itself. Man, however, when called on to penetrate into its nature, is puzzled at the impregnable frontiers which bear the marks of innumerable knocks left by a struggling humanity on its onward march, and seem to mock at the fresh assaults of a new intruder. Nothing daunted by this, and inspired by an indomitable confidence in his own power and resources, man joins the struggle afresh and cheers himself up by interpreting the past failures as the pillars of a future success. Thus the growth of knowledge assumes a rhythmic appearance jagged by the marks of action and reaction.

In this process of action and reaction through which knowledge struggles for self-expression, a new discovery is like a turn of the kaleidoscope which introduces a perfectly strange scene by forcing the old materials into a new organisation and thus subverting the relations that gave the previous scene its individuality. So a really new theory is always a signal for reorganising the long-established beliefs in all spheres of life, intellectual, moral and religious. This need for reorganisation, to confine ourselves to the discoveries of the Physical Sciences, was once felt about the beginning of what is called the modern period in the intellectual development of Europe when Tycho Brahe placed the sun in the centre of the planetary system, Copernicus

placed the earth among the planets, and new truths about the forms of the planetary orbits and the motion of the earth were revealed by Kepler and Galileo. The new cosmology was completed by Newton by means of his theory of universal attraction. In face of this world picture man's religious and ethical consciousness had to be reconciled with his intellectual ideal. Science and Philosophy, Ethics and Religion entered into a sort of fraternity in the work of reconstruction. The Newtonian conception of the world received a further enrichment, by a series of important truths which were discovered towards the end of the eighteenth century by the investigations of Lavoisier, Priestley, Ingenhousz and others, and which were completed about the middle of the nineteenth century by the discovery of the famous law of Robert Mayer. These discoveries once more necessitated a reconciliation between the demands of our practical consciousness and the scientific conception of the world, and compelled the thinkers to see if the foundations upon which the speculative philosophy of religion was based were not ultimately identical with those of the world picture which was arrived at by the scientific method.

Our century is witnessing another radical change in our outlook and feeling the need of another new reorganisation. The source of this new call may be primarily traced to the investigations of Einstein and Minkowski. The deductions that follow from their researches mean almost a death-signal to the accepted scientific conception of the world and give such a violent shock to its foundations that the stupendous Newtonian superstructure has been already made too shaky not to tumble down in the near future. Newton based his mechanics on the three entities :

length, time and mass, which he considered to be absolutely independent of each other. It is Einstein's originality to break off this isolation and to show that they are not really independent of each other but are interconnected inseparably. With regard to space he urges that it is not uniform but has a variable curvature, that the radii of a circle are not equal to each other, that the three angles of a triangle are not equal to 180° , that parallel straight lines may meet in the long run. It is by reference to the relative significance of space and time that certain perplexities as to the concordance of several delicate observations are finally solved. Minkowski presses the necessity of recognising a fourth dimension of the world and thus reconstructing the mathematical sources which were so long based upon the conception of a three-dimensional world. This general assimilation of space and time and the recognition of their relative significance have not only produced a revolution in Physics and Mathematics but they have an important bearing upon the problems of Metaphysics as well. Henceforward the realistic as well as the idealistic interpretations of the world must be brought into harmony with the Principle of Relativity—if they are to be more than mere idle speculations. This new theory has called forth a classical response from the realistic side in the Gifford Lectures of Prof. Alexander, though his results are based on independent lines of arguments. In the idealistic camp, it provided an invincible armour prepared out of the very bones of the enemy's body. The idealist now comes forward to point out how science, working along its own lines, has finally cut away the ground from under the foot of realism, and how the Hegelian principle has now to be accepted as the true

scientific principle. Thus a general need for reconstruction is felt in every quarter and Professor A. N. Whitehead is but responding to this when he seeks to lay the basis of a natural Philosophy which he thinks is necessary for a reorganised speculative Physics.

Professor Whitehead, who is already known to the students of Philosophy through his "An Enquiry concerning the Principles of Natural Knowledge", wants in the present volume, which he calls a companion book to his previous work, to lay the basis of a natural Philosophy and hastens to warn the reader that if he indulges in the "facile vice of bifurcation not a word of what I have here written will be intelligible." This vice is committed by all those theories of perception which divide nature into two systems of reality by distinguishing between the nature apprehended in awareness and the nature which is the cause of awareness. As a protest against all the different varieties of the theory of bifurcation, the author holds that there is but one nature which is before us in perceptual knowledge. Almost in the strain of Berkeley he declares that so far as reality is concerned all our sense-perceptions are in the same boat and must be treated on the same principle. "We may not pick and choose, for us the red glow of the sunset should be as much part of nature as are the molecules and electric waves by which men of science would explain the phenomena." Now, the determination of the meaning of nature reduces itself principally to the discussion of the character of time and of space because they provide those all-embracing relations apart from which nature must be bifurcated, warmth and redness being on one side, while molecules, electrons and ether, are

* 'The Concept of Nature' by A. N. Whitehead.
(Cambridge University Press.)

on the other. What are then time and space? The author's account of space and of time is distinct on the one hand from the doctrine of absolute space and time which considers nature as "set in" them; and on the other hand it is distinct from the current relational theory which takes them to be relations between bits of matter. In truth, space and time are each partial expressions of one fundamental relation between events which is neither spatial nor temporal. There can be no time apart from space and no space apart from time, and no space and no time apart from the passage of the events of nature. The recognition of this relational character of space and of time goes along with a radical change in our concept of nature which the author explains with such a super-abundance of novel technical terms that the real meaning which is very often simple enough is hardly audible amidst the confusing reverberation of the accidental sounds. A summary of the main results of general interest is attempted below.

Our knowledge of nature is an experience of activity or passage. It is a continuous stream of occurrences, which we can discriminate into finite events. Each of these events is an entity discerned as the specific character of a place through a period of time. In discerning an event we are aware of its being a relation in the structure of events. The general fact which is presented in sense-awareness and which is the whole simultaneous occurrence of nature in so far as the whole is related to what is actually discerned is also called duration. As each duration happens and passes, nature may be said to be moving on. This passage of nature is exhibited equally in spatial transition as well as in temporal transition. The passage however should not be called a passage in time, because the measurable time of science and of civilized life presupposes this passage of events.

The germ of space is to be found in the mutual relations of events within the immediate general fact, *i.e.*, duration, and the germ of time is to be found in the relations of other events to this totality of nature. Hence, time, space and material can not be posited for us in sense-awareness in concrete independence. We perceive one unit factor in nature and this is that something is going on, *then, there*. It is this unit factor which is the primary concrete element, and these primary factors are events. An event, therefore, has a very complex spatio-temporal relation; and if we go on analysing it we finally reach the ideal of an event so restricted in its extension as to be without extension in space or in time. Such an event is a mere spatial point-flash of instantaneous duration and may be called an event-particle. It must not however be thought that the world is ultimately built up of event-particles. They are rather the ideal limits in terms of which we express the properties of the spatio-temporal structure of the events. Now, in order to determine the position of an event-particle we require four measurements of independent types, *viz.*, measurements of length in three directions, and a time. This is because nature in its most fundamental aspect is four-dimensional. What are then the molecules, ether and electrons with which science deals? If events are the only concrete facts of nature, and if each event is unique in the sense that when it is gone, it is gone, how can science discover permanent laws and on the basis of these laws predict future facts? The answer is that though an event as such cannot be recognised as the same, a character of an event can be so recognised. The recognised things are called objects. In recognition, we arrest, as it were, the flow of nature. These objects may be of different types, *viz.*, a sense-object, *e.g.*, particular patch of colour; a perceptual object, *e.g.*, a coat; a

scientific object, *e.g.*, electron. It is the purpose of science to trace the laws which govern the appearance of objects in the various events. Science, however, in its most ultimate formulation of law seeks objects with the most permanent definite simplicity of character and expresses its final laws in terms of them. Thus we get the scientific object, *e.g.*, molecules, electrons, etc. So, the scientific realities do not form a world apart from and independent of the world of our immediate perception. They are rather those aspects of the character of the events which are most permanent and definite.

There are two points in the author's philosophy of nature which call for special comment; first, his aversion to bifurcation of nature, and secondly, his avoidance of metaphysics. With regard to the first, it must be remembered how persistently philosophers, since the time of Berkeley, have been pointing out the untenability of the position of scientific realism. Once you divide nature between the world of colour, taste and sound, and the world of atoms and molecules, your real world is not only deprived of much that we care for most, but it can hardly be recognised as a world at all. So, when the author re-organises the scientific beliefs on the lines of what has been called Immanent Philosophy, he can claim the support of commonsense as well as philosophy. He however appears to stop in the middle and to refuse to push his position on to its legitimate consequences. This leads us to the second point, and we at once ask: Is it possible to accept the Principle of Relativity and yet leave the reader in doubt with regard to the metaphysical problem of the relation between mind and nature? A philosophy of nature which is based on the relative significance of space and time must inevitably consider space-time for each observer as his own, and this means that it is impossible to abstract from the mind of the

observer. Pure objectivity becomes a senseless absurdity,—the only concrete reality being subject-object. This position, which is eminently idealistic, is all the more inevitable for a theory of immediate perception of the world, for, representative perception is a necessary accompaniment of realism, however cleverly the fact may be disguised under the cover of an ambiguous expression. This is true not only of the realism of Mr. Reid, but of all the theories of the modern realists as well. The embarrassments which the new realists feel in determining the status of the 'sensus' are the inevitable consequence of an abstraction of mind from the object, and owe all their plausibility to this abstraction of mind from the object, and owe all their plausibility to this abstraction. Once assume an object independent of the subject, or a mind independent of the things which are brought into relation only in knowledge, we have to meet all the old difficulties of Descartes and Locke plus a group of new difficulties arising out of the introduction of the *tertium quid*—the sensa—between the subject and the object. It is difficult to surmise that history repeats itself. But when we read carefully the philosophical controversy of the so-called neo-realists, that which was a mere surmise in the former case attains to a high degree of probability, and our impression is that the history of philosophy at least repeats itself, and that another Kant and another Hegel are not very far off from our habitations. It remains to add that this does not amount to the denial of a possible abstraction of nature from mind temporarily, and so it is not impossible to think, with the author, "homogeneously" about nature. But then it is to be constantly borne in mind, that this is after all a useful make-shift, and so in dealing with a nature "closed to mind," we have to use words and phrases that cry out for the concrete whole which contains nature as an element, and apart from which those words cannot be grasped in their full significance.

THE AGE OF DISCOVERY.

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THE dawn of the fifteenth century in Europe saw the old elements of society, government and science fast disappearing. The adventurous brain of new Europe began to busy itself with new questions of the wonders of Nature as the shadows of the Epoch of Darkness rolled away to the horizon.

Was the world flat or round? Was there a limit to the extent of land and sea? From the shores of Western and Southern Europe, the man of the fourteenth century looked wistfully at the broad expanse of the blue sheet spreading far beyond the ken of his eye. Could a man go round the world and return again? Yes! said the sailors of Venice who sailed to Palestine and India. Yes! said the merchant adventurers who sailed north and south and beheld the stars rising overhead or sinking into the horizon, in a manner unaccountable but on the notion that the earth is round.

Rumsar asserted that many had gone and returned in safety. The old knight of St. Albans, Sir John de Mandeville, returning home from the Far East had more than proved the rotundity of the earth. But Mandeville's proof received final acceptance only after the elapse of another one century and a half. Says Mandeville, "—the land and the sea are of round shape and figure... He (man) might with his vessel sail round the world, both above and under it..... I have myself in Prussia seen the North Star by the astrolabe fifty-three degrees above the horizon. Further on in Bohemia it rises to the height of fifty-eight degrees. And still further north-

ward it is sixty-two degrees and some minutes high..... Now the South Pole Star is, as I have said, opposite to the North Pole Star. And about these poles the whole celestial sphere revolves like a wheel about the axle.... They who dwell in the southern hemisphere are feet against feet of them who dwell in the northern hemisphere, just as we and they that dwell under us are feet to feet. For, every part of the sea and the land has its antipode..... When men go on a journey toward India and the foreign lands, they do, on the whole route, circle the circumference of the earth..... And yet it seemeth to simple unlearned rustics that men may not go around the world, and if they did *they would fall off!* If a man might fall from the earth towards heaven, by much more reason the earth itself, being so heavy, should fall to heaven—an impossible thing."

Thus it is seen that the belief in the sphericity of the earth and in the existence of a New World beyond the waters became diffused in the minds of men even in very early times. The fifteenth and sixteenth centuries had to make an actual revelation of the New World to the Old. But, the former had been touched and traversed, as much as five hundred years previously. Since 1888 the Scandinavian Sagas have been subjected to the critical judgment of Europe, and all the grounds of doubt have been removed relative to the Norse discoveries in the West at the close of the tenth and the beginning of the eleventh century. Long before the days of the Norman Conquest of England, while Sweyn of Denmark was girding his loins against Ethelred the Reedless; while Hugh Capet sat on the throne of France; while Otto III swayed the destinies of the German Empire;

and while Baghdad was flourishing under the Abbaside Caliphs, Labrador, Newfoundland, Nova Scotia and the United States were visited and to some extent colonized by men of the Aryan race from Iceland and the coast of Norway.

The Whiteman first saw the Western Continent in 986. Herjulfson was the first Norse navigator to sail from Iceland to Greenland. He was caught in a storm and cast near the shores of Newfoundland or Labrador. The land was seen but not occupied. On reaching Greenland, Herjulfson told wonderful stories of the new lands seen in the West.

Leif Erickson was a noted Icelandic captain. He resolved to know the truth about the discovery of Herjulfson. In the spring of 1001 he sailed West from Greenland and reached Labrador. He landed there with his men and explored the Coast. The climate was attractive and he was encouraged in his explorations. He went southward as far as Massachusetts where he stayed for over a year. Rhode Island was discovered and even New York harbour was visited by the daring band of Norsemen.

In the years that followed, other bands of Norsemen came to the shores of America. Thorwald, Leif's brother, made a voyage to Maine and while returning died at Fall River in Massachusetts in 1002. Another brother, Thorstein by name, arrived in 1005. In 1007 Thorfinn Karlsefne came with one hundred and fifty followers. Thorfinn was the most renowned sailor of his day, and he explored the Coast up to Virginia. Other companies of Norsemen colonized Newfoundland and Nova Scotia. However, they little understood the magnitude of the country which they had discovered. To them it seemed but a portion of Western Greenland;

and they called it Vinland. Their settlements soon began to dwindle in numbers and strength. The country was the land of wretched savages intercourse with whom was an impossibility. The Norsemen therefore, soon returned home disgusted with the fruitlessness of their endeavours. They were a hardy race of restless adventurers. They penetrated every clime in Europe and abroad. The better parts of England and France fell before their onslaughts. The blood of the Norsemen still flows in the veins of the English kings. The Norsemen were rovers, pirates, freebooters; they were audacious and invincible warriors; woe to the land on which they descended with steel and fire!

In the 12th, 13th and 14th centuries the men of the north made occasional voyages to the West. In 1347, a Norwegian ship visited Labrador and parts of North-East United States. Norse remains still exist at Newport, Garnet-point, and other places. They point clearly to the occupation of these lands by the Norsemen. They give a consistent account of the exploits of their countrymen. Any school-boy in Iceland will still say when asked about America, "O, Yes; Leif Erickson discovered that country in the year 1001."

But, the discovery of America by the Norsemen led to no important results. The very name of Vinland was forgotten and "the curtain which had been lifted for a moment was stretched again from sky to sea." However, in 1170 a Welsh adventurer Prince Madoc reached the Coast of America. He tarried there for sometime and then returned to Wales. But when he set out for a second time towards the West, nothing more was heard of the crew. The Cambrian Chroniclers and the Poet Southey attest to this effect.

Ever since that time "the mystery of the Atlantic lay unsolved under the shadows of the West." At last the monarchs of Europe asserted themselves over the hordes of Feudalism. Spain expelled the Jew and the Muhammadan and was finally consolidated under Ferdinand and Isabella. Under their auspices the West was once again discovered and opened to the gaze of the whole world. The author of the discovery was born in Italy. Christopher Columbus was his name. The idea of the sphericity of the world was not original with Columbus, as already seen. But, the belief was so feeble that it led to no important results. Columbus was the first *practical* believer in the theory of circumnavigation. He calculated the circumference of the world at about 12,000 miles. After sailing 3,000 miles westward of Europe he hoped to reach the East Indies. This was the great purpose of his life.

Christopher Columbus was a native of Genoa. He was born in the year 1435. His ancestors were seamen. From his infancy his own inclinations made him a sailor. For some years he traversed the seas round about Europe. Then, the idea of reaching the Indies, through the West, took possession of his mind. About 1484 he saw King John of Portugal who refused him any help. He then went to Spain where he was given no encouragement, at first. At the same time both Genoa and Venice also refused to aid him. In 1491 he left for France, and on his way met Prior De Marchena, Confessor to Queen Isabella. The Prior introduced Columbus to Isabella. Both Isabella and Ferdinand heard Columbus, and the King declared that the treasury was empty. But the Queen gave the memorable answer, that

she would undertake the enterprise for her own Crown of Castile and would pledge her jewels to raise the necessary funds. It should never be forgotten that the faith, insight and decision of a woman led to such far-reaching results in the annals of the world's history.

It was the year 1492. On the third day of August, Columbus left the Harbour of Palos, in the early hours of the morning with three little ships. He first sailed towards the Canaries and then turned his direction due West. After seventy-one days of sailing, in the early dawn of October 12th, Rodrigo Triana who was on the look-out, set up a shout of "Land!" A gun was fired as a signal. The ships lay to. There was music and jubilee. At sunrise Columbus stepped ashore and unfurled the Royal banner of Castile before the wondering natives of the island. He named it San Salvador. Other islands were soon added to the list of discoveries. In January 1493, Columbus sailed for Spain. In March he arrived home and was greeted with rejoicings and applause.

September of the same year saw Columbus setting out on his second voyage. He still hoped to reach the Indies by the westerly route. This voyage led to further discoveries. Jamaica, Porto Rica and others of the West India Islands were discovered and taken possession of. In 1496 Columbus returned home. He then became the object of ill-feeling, bitterness and jealousy; and the rest of his life was one long chapter of persecutions and misfortunes. His third voyage resulted in the discovery of the Orinoco. He sailed then to Hayti, where he was seized by the Spanish Governor and sent home a prisoner in chains. He was liberated after some time and his fourth and last voyage was full of discouragements. He returned to his un-

grateful country in disappointment and disgust. His benefactress Queen Isabella was dead; and the great discoverer found himself despised and friendless and tumbling fast into an unhappy grave. Death, very soon, relieved him of his bitter moral agony at the ingratitude of his countrymen. Christopher Columbus, Sailor, Captain and Discoverer, breathed his last in the year A.D. 1506.

"Of all the wrongs done to the memory of Columbus, perhaps the greatest was that which robbed him of the name of the new Continent." It was bestowed upon one who was least worthy of that distinction. Amerigo Vespucci was a Florentine navigator. In 1499 he reached the Coast of South America. After two years he made a second voyage. The only merit of Vespucci was that he proved that the recent discoveries were not a portion of that India, already known, but were another Continent. The name of Columbus was for a time neglected and forgotten. The new world was named *America* after Amerigo Vespucci.

The zeal which the discovery produced in Europe was tremendous—especially in Spain. Within ten years after the death of Columbus all the West India Islands were explored and colonized. The Spaniards crossed the Isthmus in 1513; and Balboa took possession of the Pacific Ocean in the Spanish King's name. De Leon discovered Florida in 1512 while searching to discover "the Fountain of perpetual South." The land was full of "waving forests, green leaves, birds of song and the fragrance of blossoms." It well deserved the name given to it. De Leon was then made Governor of the *land of flowers*. But in 1521 he was attacked and driven out by the Red Indians. In the years 1517—1519 Yucatan,

Mexico and other places in Central America were discovered. Fernando Cortez landed at Mexico with his fleet and began his famous conquest of that place.

The conquest of Mexico is one of the Romances of History. The Mexican Emperor Montezuma desired peace and persuaded Cortez to be on terms of friendship. At home the enemies of Cortez were busy impeding his further progress. All these were of no avail. Conquer he must and conquer he will. The City of Mexico was glittering with wealth and prosperity. It contained inexhaustible stores of gold and silver. The Mexicans were a martial race and revengeful. All these only roused the greed and unscrupulousness of the Spaniard. The story of Cortez's battle with the Aztecs is full of thrilling incidents of patriotism, bravery and untold sacrifice on both sides. The strategies of Cortez far excelled those of his adversaries; and after negotiations and occasional sallies, in December 1520, Cortez marched on the Capital. He was at that time cut off completely from Spain. No help was proffered him from any quarter. His enemies were still actively plotting against and persecuting him. Their plans to upset his schemes never for a moment deterred Cortez from carrying out his objects to the utmost possible extent of success. He laid siege to the city which fell after resisting for nine months. The Empire of the Montezumas was overthrown and Mexico became a Spanish province.

The 16th century marked the beginnings of several daring enterprises. The first and foremost among these was that of Ferdinand Magellan. A Portuguese by birth, he was a famous navigator of extraordinary boldness and ability. His determination was to dis-

cover a south-west passage to Asia. The King of Portugal did nothing to encourage him. Magellan then went to Spain and laid his plans before the Emperor Charles V. The Emperor listened patiently and ordered an expedition to set out, properly manned and under the command of Magellan. The voyage was begun from Seville in August, 1519. Magellan reached South America and spent both the winter and summer there. He explored the seas hoping to find a strait which would lead him into that ocean which Balboa had discovered six years ago. He at last reached the southern end of the Continent and passing through that strait which still bears the name of its discoverer, found himself in the broad and tranquil ocean, which he named the *Pacific*. He then sailed north-west and suffered greatly from want of provisions and water. In March 1520, he reached the Ladrões Isles, midway between Japan and Australia. Sailing due west still, he came to the Philippines where he was killed in a battle with the natives. The crew chose a new Captain and crossing the Moluccas returned home by way of the Cape of Good Hope, on 17th September 1522. The circum-navigation of the world, had turned from a dream into a reality. The long-looked-for experiment had been made and it resulted in success. The theory of Strabo and of the old astronomers, of Mandeville and of Columbus had been proved by actual demonstration; and the work which the great Mercator was soon to perform in mapping the seas and Continents was made an easy task.

All this time while the Spanish and Portuguese were engaged in discovering and exploring strange lands and seas and in establishing the claims of their respective

governments and reaping the glories of the world's praise, the English and French were not idle in their secluded homes in the North. When the news of the existence of another hemisphere was made known to the nations of Europe, the mariners of England and France turned the direction of their voyages towards the wistful West.

On 5th May 1496, King Henry VII of England desirous of emulating the fame of his contemporaries, Ferdinand and Isabella, chartered a commission to John Cabot, a mariner of Venice, to make discoveries and explorations in the Atlantic and Indian Oceans, and to carry the English flag and to take possession of all islands and continents discovered in the name of the King of England. John Cabot was a bold and adventurous sailor and a wealthy merchant of Bristol. He fitted out five strong ships, and in April the fleet left Bristol. On June 24th, he reached the East Coast of Labrador. Cabot went ashore and planting the Flag of England took possession of the land in the English King's name. After exploring the country for three months he started back to England. On his way, he sighted Newfoundland but did not stop to make any further discovery. When he reached home there was rejoicing. The people of Bristol had a holiday. The King gave him money and encouraged him to accept a commission for a second voyage. But very strangely the worthy mariner's name disappears from the annals of history.

In the spring of 1498, Sebastian, second son of Cabot, was put in command of a well-equipped fleet. He inherited his father's energy and boldness, and added to it the enterprise and fervour of a South. His main idea was the discovery of a North-West

passage to India and the Far East. On his way, he was caught amidst the icebergs of Greenland. This compelled Sebastian to change his course; and ploughing steadfastly through shoals of seals and codfish he reached the mainland. Then he explored Nova Scotia and the neighbouring tracts of country. He went as far as the Chesapeake Bay and Cape Hatteras and then sailed homeward. When he reached home, Henry VII was parsimonious in his gifts although keenly appreciative of the young mariner's work. On the death of Henry VII, Ferdinand of Spain enticed Sebastian away and put him in entire control of the maritime affairs of the Spanish Empire. Therefrom Sebastian set out on many a successful voyage and died at a ripe old age. The circumstances of his death are not preserved for us and his place of burial is enveloped in mystery.

The year 1498 is the most notable in the history of discovery. In May, under the auspices of the sovereign of Portugal, Vasco de Gama doubled the Cape of Good Hope and reached the Malabar Coast. About the same time Sebastian Cabot made the famous explorations which confirmed England in her possession of the North American Coast. In August of the same year Columbus himself explored the Orinoco region in South America. But the course of English discovery was impeded by certain events. In 1493, the Pope, Alexander VI, had issued a Papal Bull by which he drew an imaginary line North to South, 1,300 miles west of the Azores, and declared that all countries west of that line belonged to Spain! Both Henry VII and Henry VIII of England were pious Catholics and therefore did not disregard the Papal Bull. On the death of Henry VIII and the

final accomplishments of the Reformation, England not only disregarded the Pope's decision but despised and laughed at it also.

The voyages and discoveries of the French, though less important in their results, were hardly less interesting. About 1504 fishermen from Normandy reached the Coast of Newfoundland in search of cods and herrings. A Frenchman drew a map of the St. Lawrence in 1506. The year 1508 saw two Red Indians being taken to France. In 1518 Francis I. organised measures for colonizing the New World. After a lapse of five years John Verrazzani, a native of Florence, was sent out to conduct an expedition to the West. The chief aim was the discovery of a North-West passage to Asia. In 1524, Verrazzani left Europe with four vessels. On the way three of them were destroyed in a storm and only the *Dolphin* reached the American Coast at the end of seventy days. The brave mariner underwent varied experiences in the land of the Reds. He was subjected to kindness and harshness and confidence and suspicion alternately, by the natives. He explored the whole coast from the Latitude of Wilmington to Rhode Island and Newport, and when he returned home in July published an account of his explorations. The country explored by him was called New France.

No other expedition was organized till 1534. In that year James Cartier, a seaman of Brittany, was commissioned to make a new voyage to America. Two ships were fitted out for the enterprise and after twenty days of sailing he reached Newfoundland. In two months Cartier sailed round the island and crossed the Gulf of St. Lawrence. He found his way to the West blocked and therefore sailed due North. He ascended the St.

Lawrence and landing at a convenient place, set up a cross bearing a shield with the lily of France, and proclaimed the French King monarch of that country. He then sailed back and reached the Harbour of St. Malo in less than a month. While the English and French were thus busy, exploring the new hemisphere, the Portuguese were no idle spectators. In 1501 King Manuel fitted out two vessels, under the command of Gaspar Cortereal, and sent them on a voyage of discovery. The Portuguese reached America and landed on the Coast of Maine. Then sailing northward they explored the coast for 700 miles. The party then came upon icebergs and had therefore to abandon any further attempt at exploration. Cortereal then

returned home after kidnapping fifty Indians whom he sold as slaves. His second expedition in the next year ended in failure. He was then never again heard of, and his fate has since remained one of the unsolved mysteries of history.

Thus was the veil which shrouded the New World lifted, and the unknown West revealed to Europe an unbounded field for human expansion and progress. The theories of Strabo and Mandeville were proved beyond doubt; and the nations of Europe launched themselves upon fresh schemes of colonization which brought about that close connection between the East and the West, the known and the unknown, the fruits of which we still enjoy.

B. A. DEGREE EXAMINATION, 1923.

SPENSER:

THE PROTHALAMION.

EDITED WITH

INTRODUCTION AND NOTES

BY

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A COURSE OF LESSONS IN GEOGRAPHY FOR THE ELEMENTARY SCHOOLS—ITS SCOPE AND MODE OF TREATMENT.

INTRODUCTION.

A. *The Old and New Methods.*—Modern exponents of Geography teaching emphasise the importance of the present-day methods of teaching the same subject and condemn the old methods vehemently. The view point under the old system was this:—Children should know something of their own district and of the other districts of the Presidency and in that connection learn the names of important towns and rivers, productions and industries of the various districts in the Presidency. For such a teaching they resorted to text-books written only on the lines chalked out, thereby leaving the boys to the fate of their own text-books without giving them sufficient opportunity to exercise their observation, imagination and self-expression. Moreover, under the old system, Geography was to be taught only in the two higher classes of the Elementary School, the portion prescribed for the former being the District Geography and that for the latter being the Presidency Geography.

Under the present system it is urged that the children of still lower classes can have Geography lessons where the teacher could give enough facilities for the children to exercise their observational and imaginative powers thus correlating Geography with Nature-study. Again, under this head, mention is made of Local Geography, Observational Geography, and Descriptive Geography such as stories of travels and exploration

undertaken by famous travellers, adventurers and explorers. As regards the aids to the teaching under these lines, the elementary school teachers are boarded with a series of high-sounding words and phrases, as realistic pictures, stereograph exhibition, lantern-show, map-reading and map-making, clay-modelling, sand-modelling, etc. When and at what stage of each lesson are these to be advantageously used is left to the teachers to solve. A model scheme of work for the lower school is also left to the discretion of the teacher, leaving him to shape it according to local conditions.

B. *The Problems before the Teacher.*—

With these few observations on the modern method of treatment of a geography-lesson, the school-master is to commence work with a regular programme before him. But the curriculum of the lower school has to meet the requirements of the advanced school also. The absence of a regular and systematic, though not a detailed teaching of the child's home, i.e., his own country and Presidency in the lower classes leaves much to be desired. For example, a boy not knowing some of the important ports of the Presidency, some of the industrial centres and other allied things of a rudimentary nature is unfit to receive his geographical lessons in the High School. There the elementary school-master alone is found fault with. Even some of the parents are prone to view the new methods with great misapprehension when they see the above pointed defects in their own children. Secondly, if the teacher could devote, say about two months, to finish a lesson on the Productions of the Presidency dealing with it under the heads:—1. soil; 2. climate and rainfall; 3. particular climatic conditions for a particular crop; 4. the divisions

of the Presidency according to regions of different crops; 5. some leading characteristics with the harvest of each crop followed by a picture show; 6. the drawing of maps, especially coloured maps; 7. more particularly the drawing of other maps wherein children could paste specimens of the typical products themselves—all these, though surely commendable, he finds himself at sixes and sevens when he thinks of the remaining few months when he has to give the child at least a main survey of the whole Presidency under different heads. Probably for an exhibition lesson, the above procedure may be found to be quite appropriate and worthy too.

To begin with, let me place before the readers an outline scheme of work for the lower classes combining as far as possible both theoretical knowledge and practical working. I shall then supplement the scheme by some more observations and remarks.

A Suggested Course of Lessons in Geography for the Elementary Schools.

Classes II to V.

CLASS II.

FIRST COURSE.

I. Descriptive Geography based on Picture-study.

1. Life of a boy at home
at school
at play.
2. Different types of men and children :
A. The Hindu.
B. The Christian.
C. The Muhammadan.

Their dress, customs and manners as seen by children.

The Hindu prays in a temple.

The Christian prays in a church.

The Muhammadan prays in a mosque

3. The different workmen of the village;
The potter, the carpenter, the blacksmith, etc.

4. Trees, animals, birds and insects of the locality.
[How the water snake lives in water.]

SECOND COURSE.

I. Observational Geography.

1. Rain, wind.
2. The sun and moon : day and night.
3. A talk in the class room based on excursions and walks.
a. The riverside : flow of water, banks, flood, bridge-boats.
b. Fields : plough, farmer, the crop, the harvest.
c. Garden ; picota, waterways in the garden, water storage, gardener and his tools, plots, sowing, manuring, etc.
d. Roads or Railways.

II. Types of Climate : Picture-Study.

1. People of the cold North.
2. People of England, the land of our king, or Japan, the 'land of the rising sun'.
3. People of the desert
[Lay emphasis on how children in each part wear clothes, go to school and play.]

THIRD COURSE.

I. Home Geography.

1. Directions :—Front, back, right, left.
[Carry on a game with objects in the class-room].
2. An idea of distances using any measuring rod.
3. Prepare on sand a model with the school as the centre. Locate therein the street, river, tank, temple, main road, the local river or canal, garden, etc.

4. Describe a road or a Railway journey to a place very near the locality undertaken in connection with a festival or a marriage.

II. Geographical terms based on Picture-study.

1. Mountains : Story of a Saint Bernard dog. Passes, a mountain railway.
2. Seaside : steamers, boats, light-house, story of a Newfoundland dog.

Class III.

FIRST COURSE.

I. Descriptive Geography based on Picture-study.

See II Class, II Course, Item II
(with more details.)

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Class IV.

FIRST COURSE.

I. Introduction to Maps and Map-study.

A. Plans and measurement.

1. What a plan is.
Children to measure and draw rough plans of the class-room, the ground-plan of the school.
2. Idea of what a scale is.
Draw correct plans of above.

3. Teacher to draw a rough plan of the locality on the black board, the pupils helping the teacher. Mark important roads, streets, railway line, Post-office, hospital, temple, tank, river, etc., proceeding from the school as the starting point.

B. Study of the Picture map of the world.

1. Continents and Oceans.
2. Mountains and rivers (how are they represented in maps?)
3. Note the curious animals and trees in the picture-map.

- i. The Reindeer of the cold North.
- ii. The Kangaroo of Australia.
- iii. The Elephant of Ceylon.
- iv. The Camel of the desert.
- v. The Wild and water animals of Africa.
- vi. The Rubber trees of America.
- vii. The Date trees of the desert.

SECOND COURSE.

I. Observational Geography.

1. Note the changes of the surroundings before, during and after rain.
2. Rain water : How stored, its uses.
3. Mark the hot, rainy and the dewy months.
4. The sun and the moon : rays. The sunlight and the moonlight : hot and cool.

- II. 1. Continue the study of the world-map, if not finished previously.

2. Stories of Expeditions and Explorers :

- | | |
|-----------------|--------------|
| (a) Livingstone | (Africa) |
| (b) Cook | (Australia) |
| (c) Scott | (South Pole) |
| (d) Hudson | |

III. Geography of the District.

1. From the map, study the surrounding districts; Is your district situated near the sea?
2. Mark the hills, rivers and lakes, if any.
3. What are the rainy months in your district?
4. The general climate of the locality leading to that of the district.

II. The nearest railway station. Describe it.

III. A Railway journey to a place near the locality. e. g., Saidapet to Obingleput.

Railway bridges, rivers, hills, vegetation on both sides of the railway line, a continuous road seen to pass near each railway station; animals, birds, etc.

SECOND COURSE.

I. Observational Geography.

1. Sky : sunny, rainy or cloudy.
2. Division of the day into morning, noon, evening and night.
3. Surroundings : hot, cool, windy, calm, bright, dark.
4. Shadow in a light.
5. Also study all items in Class II, Second Course I

II. Geographical terms based on Picture-study and description.

1. Sea : seaside, beach, sand, shells, waves, sea-breeze, steamer, harbour, light-house.
2. Mountains : Passes, origin of rivers, rocks, vegetation.
3. Trees and animals of the jungle.
4. Man in the woods and the hills.

THIRD COURSE

I. Local Geography.

1. Cardinal points.
2. As in Class I prepare a sand-model more systematically and a little more accurately, judging distances.

Construct small clay-houses and plant trees in the model. How do you mark the rivers and the fields in the sand model?

3. Describe the locality under the headings :
(a) The school and its surroundings thereof.
(b) The fields and the surroundings thereof.
(c) The temple and its surroundings.
(d) Some of the ways in which the people of the locality occupy themselves :

- i. Agriculture, gardening, farming ;
 - ii. Carpentry, jewellery, pottery ;
 - iii. Rice-mills, oil-mills, etc.
- e. Some of the neighbouring villages and towns, if any.

THIRD COURSE.

I. District Geography (contd.).

[Note headings suggested in the course of this essay.]

II. Observational Geography.

1. Continue items under this head in Course II of this class.

2. Shadow: watch the changes in the lengths of your shadow from morning to evening on any day.

3. Note some of the local products according to the seasons of the year. (A peep into the local market or an evening walk now and then to local gardens may facilitate this study).

III. Description of a Railway journey with pictures. [Select one].

- A pilgrimage to Rameswaram
- To Kumbakonam in connection with Mahamagam festival
- To Tirupathi as accompanying a marriage party.
- To any hill station.

Class V.

FIRST COURSE.

I. Introduction to Globe and Globe-study.

1. Recognise the land and water masses.
2. Locate your own country and that of England.
3. Mark important cities as Madras, Bombay, Delhi, Calcutta and London.
4. Trace the sea-route to London. [A description of a voyage from Madras to London may be given.]

B. 1. What does the globe represent?

2. Rotation: Day and night [Division of the Globe into Eastern and Western Hemispheres.]

C. Revise study of the picture-map of the world. [See Class IV, II course, item II.]

SECOND COURSE.

I. Observational Geography.

1. Rain: how caused; work of rain water.
2. Watch time of sunrise and sunset. Choose some sunny days in a rainy month (to be carried through in the III course as well).

II. Map of India.

1. Study from a physical map of India
 - (a) The several regions as table-lands, plains and coastal strips.
 - (b) The chief mountains and rivers.

2. The political divisions of India with some important towns in each followed by an exhibition of stereographs.

III. Geography of the Presidency.

[Note headings suggested in the succeeding pages of this article.]

THIRD COURSE.

I. Observational Geography.

1. See item I-2, II course: Continue.
2. Watch the length of shadows: Direction of shadows. Are they always exactly to the East or the West?
3. Time of day is determined by a clock or can be approximately determined by reference to the position of the sun and the shadow it casts.
4. Note direction of sunrise. [May be determined by continued observation from any fixed place as the school or the home.
5. Tell the children why the first days in the Tamil months Adai (அடை) and Thai (தை) are considered as important by the Hindus.

II. Geography of the Presidency—(continued.)

III. Stereograph study of some important industries in other lands as Gold mines, Diamond mines, lumbering, ship-building, harvesting, etc., thus eventually studying about those places as noted under Ceylon in the course of this article.

I have now in a way solved the problem of the drawing up of an outline programme of work and now proceed to lay before the readers some instances which will substantiate my previous statement, viz., how theory can be combined with practice. The instances will also be of some value at least for those in whose responsibility is left the sacred task of training young children.

Class II.—In Class II, Geography begins and the first lessons form a description of a picture having a geographical bearing. The children are led on to observe the different types of

nationalities in their own home and surroundings and those living far far away from their home subjected to the influence of different climatic conditions. In these lessons they learn something about the dress, food, mode of living, customs and manners of those people, how children spend their time at home, at school, at play, etc.

2 (a). The study of people living in different climates is suggested in the second course. (As for literature on these and other allied lessons, teachers could consult—"Man and the Earth," by J. W. Page; "All the World in Picture and Story," by J. Riley; "At Home and Abroad" published by Macmillan & Co., Parts I and II. Part I is also published in Tamil.) An elaborate description on the part of the teachers together with an exhibition of a series of pictures is all that is needed. A lesson on the desert life will be dealt with thus:—Caravan, camel, ostrich, oasis, and date-palm, sand-storm, tents; an Arab school and Arabs at prayer, etc. Pictures illustrating these can be got from the geographical readers, enlarged if possible, and suitably hung in the class-room. Apart from the lessons suggested in the scheme, more lessons on the African Negroes and the Australian Aborigines may be dealt with on the lines indicated above.

(b). These lessons may again be taken up in the higher classes as well. Each lesson there should be followed by a blackboard summary. If the drawings of pictures as above represented under desert-life could be done by children themselves, they will surely serve more than a blackboard summary does. During Clay-modelling lessons they could have some clay-houses according to those they saw and studied in respect of these people in

Africa and Australia, or any clay-boats or clay-carts that occurred during their lessons. During some other periods in school-time they can sew a small tent in cloth, cut in cardboard pictures of camels, ostriches, Esquimaux, dogs, etc., and colour them. The more the occupations proceed in correlation with other lessons the better will it be for the teacher and the taught. But a suitable choice of exercises to be given for the children's occupation lessons remains with the teacher. It is not necessary that every lesson should be followed by such occupations, for, the interest in the general trend of the topic on hand may be lost.

3. Some more geographical terms are then introduced in Class II with the children's observations as the basis. A more difficult type as passes, steamers, light-houses are however introduced with the aid of pictures and stereographs. Incidentally the teacher could spend part of his time in story-telling and hence provision is made in the syllabus for such subjects as the Newfoundland dog, the St. Bernard dog, etc.

4. Stereograph Exhibition plays a great part in the child's acquisition of correct geographical ideas and facts which even the children of the lowest class can get into. The pictures are so vivid that a child could see them for some consecutive minutes and take a good deal of interest, in understanding something about the pictures. The teacher too, might get some additional information regarding some of the stereographs on their back side. As for the selection of stereographs according to different grades the following may be roughly suggested:—

(a) In the first stage, the children could see stereographs depicting natural scenery,

different kinds of people following their own respective pursuits, curious trees and animals, famous buildings or shrines, etc.

(b) In the second stage they can have an exhibition and description of more natural sceneries, probably of a difficult type as waterfalls, tunnels, harbours, tunnel bridges, etc., all of which require more of imagination than in the previous grade.

(c) Thirdly, the children of a higher class could look into pictures that represent the various industrial activities of people in other lands such as mining, cotton and tea-picking in gardens, sheep rearing, butter cleaning, making of beams of steel in a factory and thus understand the huge establishment of those factories and realise the enormous cost that these will involve notwithstanding the quick turn-out of work and the realisation of a considerable profit.

Such an exhibition of pictures may be made when there is a necessity for such pictures to be used in the class-room and even if there be no scope for the use of pictures in a lesson, any other suitable opportunity in the school may be seized and such pictures may be exhibited then.

With all these advantages, the enormous cost of these stereographs and stereoscopes will rather hamper the enthusiasm of the elementary school-masters. But a co-operative concern among the teachers or any central association of teachers can set apart a portion of its funds in providing itself with a set of useful stereograph pictures and about half-a-dozen stereoscopes. These may be under circulation throughout the year among the schools that form the association.

5. Lastly in Class II in the III Course, the children are taught the directions and

are then made to tell the teacher where some of the objects are, having in view the four terms as front, back, right and left. This lesson will lead to a sand-model of the school and its surroundings.

6 (a). *Class III.*—Many of the topics in the previous class are again gone through in this class more systematically, the difference in the age of the children being one or two years at the most. A *railway journey* is suggested to be done in this class, a type of which I shall describe at present. The railway journey has to be done very slowly; the children and the teacher imagining themselves to be sitting on the train and seeing the various things in the surroundings, sometimes halting in one or two places in the middle and sometimes having a continued journey in the train. The place that may be selected is one that is near the locality and is familiar to most of the children in the class. The description of an actual journey by a boy who might have himself performed the journey is the appropriate one. If not the teacher can proceed to describe the journey himself incorporating in his description any supplementary and pertinent information added to the same by some of the boys in the class. Herein a prominent place is given to the children's description of their own observations rather than to the route of the journey, etc.

(b) The following is roughly an account of a journey from Saidapet to Chingleput:—Get into the train (in the morning at 7-80) at Saidapet. Pass through the Adyar Railway Bridge and get down at Grindy. Reference may be made to the Race Course and the King's Institute where vaccine is prepared.

i. Pass on to Mount. Watch some of the sepoys roaming about the station, some getting

into the train and some getting down from our train. A walk to the St. Thomas' Mount, on the way passing through the Parade Ground, the sepoys' barracks and huts. Go up the hill and from there note the surrounding view.

ii. From Mount pass on to Pallavaram. Refer to the Cantonment, the hill side, the lake near the railway line. Go to the top of the hill. From there watch the surrounding view. Note what the coolies do there. Also take note of the ballast train loaded with gravel, etc.

iii. Then a long journey in the train will bring the teacher and the children to Chingleput. During the time they are in the train the following references may be made to draw out the children's observation:—Gravelly soil, hills seen at a short distance from the stations (a chain of hills as it were), the shrubs all round presenting a jungle-like appearance, a road always seen to pass near each of the stations (perhaps a long big road—a trunk road), etc.

iv. *Chingleput*:—The lake, chief buildings and offices. A peep into the Reformatory School. The junction. From the board put up there and from observing the railway lines learn what a junction is, etc.

(c) Thus the description of any other similar journey near the locality would create sufficient interest in children to understand the manifold advantages of travel, one of them being the acquisition of geographical facts by first-hand observation. This is all the reason why each of the other classes has a journey included in their respective scheme of work.

7. Then the geography of the child's home is taken up and in so doing the child's powers of observation are thoroughly exercised. By giving them the directions, they can prepare

more accurately, here a sand-model of the school and the school compound with a rough idea of distances. The children also study the geography of the locality according to headings, marked in the course of lessons. (See Morrison's "Man's Home"—Macmillan & Co.; also in Tamil). An excursion to the sea-side on a holiday whenever possible may be undertaken.

8. *Class IV.*—First lessons on plans of class-rooms, verandah, play-ground, roads, streets, etc., lead to the understanding of the plans of different localities. Children could themselves measure the above with a five feet tape, choose a suitable scale and draw the plans. From plans drawn to a given scale the children can measure the length and breadth of any locality as given in the plans and then calculate what the actual measurements would be.

Then a rough plan of that locality is drawn on the black-board, the pupils helping the teacher now and then. This plan and a survey map that can be got for the school may be compared.

9. Then follows the study of the world-map especially a picture map of the world on the lines suggested in the course of lessons. References to the study of animals in the jungles and curious trees in some of the places in the world are made just to create interest in children and make them remember the names of Continents and parts of the world. There is ample scope for stereograph exhibitions in connection with these lessons. Story-telling may also find in a place here if the story of explorers and expeditions are described by the teacher. Some of the important places in the map may be shown to children. More than this, the understanding of some of

the geographical facts is very important. ("The Child's Livingstone," by Mary Entwistle—Oxford University Press.)

10. Another interesting item for this class is the *railway journey* suggested in the syllabus. A journey to one of the four places is suggested, so as to give a free choice to the teacher. A description of an actual journey by one of the pupils to any of those places is quite a welcome idea. During this imaginary journey they could again halt at some places and make a round of those places. Thus a journey to Rameswaram would be a journey with as many breaks in the middle, one at Chidambaram, then at Kumbakonam, then at Tanjore, later on at Trichy and Srirangam, and so on. A description of the shrines in each of these places, a description of the festivals, gods and goddesses, an imaginary peep into the famous buildings, forts, rock forts, etc., would surely make the lesson interesting, if only the journey is undertaken very slowly. Apart from the above observation connected with the journey the teacher could draw attention to the facts that can be seen all round from the train itself. Thus the jungles, the hilly tracts, sugar-cane and ground-nut plantations, casuarina and cashew-nut trees, rice-fields, noise of the rice-mills near the stations, plantain cultivation near the rivers, the important rivers and river-bridges crossed in the way, etc., will also throw a flood of light on the topic on hand. The exports from some of the important stations may also be studied from a glance at the nature of goods left in the platform of those stations ready to be booked in a goods train.—So far for the railway journey.

11. *Under Observational Geography* coming in the second course of this class-work, the children could learn some of the correspond-

ing Tamil calendar months to English months. The study in the change of local produce according to change of local seasons can best be effected by an excursion now and then to markets, gardens and fields.

12. *The study of the District Geography* is one of the main items for this class and though this is noted in the second course it is meant to be started in that course and carried through the III course as well. Apart from headings suggested in the course of lessons the following may be taken up so as to be in continuation of that noted in the course of lessons.

Irrigation—according as it is river, canal, lake, tank, or well irrigation.

Starting from local produce lead to several products of the district according as they are food products, cattle, forest, mountain or mine. Even if there be no mountains or mines in that particular district they could be taught through stereographs some of the mountain and mine products.

From produce lead to local industry and manufacture.

Abundance of a particular crop leading to exports of that produce from that locality or district.

What are Exports and Imports. How business is carried on and modes of communication.

Roads, railways, canals, rivers, etc.

Ports, if the district is a coastal one. Railway—the main one—any junction; People; language and religion.

Towns—thickly populated, thinly populated. Their importance according as they are industrial centres, places of pilgrimage, etc. Taluks, etc., how administered.

18. A detailed study as above will form

the basis of teaching the geography of the Presidency in the next higher class in a still more detailed manner.

14. *We now come to Class V. The Globe is introduced here* and a study of the same is as follows:—In dealing with these lessons the following remarks should receive the teacher's careful consideration and thought. To talk to the children and then convince them as to the rotundity of the earth, the inclination of the earth's axis and consequently the change of seasons, etc., is quite a difficult task. Any amount of reasoning on the part of the teacher, practical though it may be, will not improve the child whose reasoning has not yet been developed to such an extent. He would remain in the same position at the end of the lesson as he was at the beginning. He recognises only the apparent motions of the Sun and the Moon, that part of the earth he lives in appears to be a small piece of that big flat earth he imagines to see or in his sense truly sees, and so on. Sometimes, the child tries to think. But yet these knotty points may be safely left out and even if taught no such force may be laid on the understanding of these facts, as it is otherwise done in quite advanced classes. What is required of us is to form in him sound ideas of true observations that would lead him on to reason at a later stage.

15. Under this head, a description of a *Voyage to London*, the place of our King-Emperor—all these are suggested. Stereographs may be advantageously and freely used in connection with this lesson. The voyage may be associated with the return journey of His Highness the Duke of Connaught or the in-coming of Lord Reading, our present Viceroy, the teacher and the children imagining themselves to be in that particular

steamer. If possible, and if the locality is either a seaport town or just close to it, an excursion with the children may be arranged just to let them have a sight of a ship or steamer as the case may be. The name of the steamers as the 'Malaya' or the 'Caledonia' can also be given. Children embark in Bombay, halt at Aden, pass through the Suez Canal; again halt at Malta, Gibraltar, etc. (only three or four places of halt are suggested) and then pass on to London. Then a survey of London, the Capital of the British Empire, may be made with quite a number of stereographs. A lantern show if it could be conveniently arranged would make the children more happy to bestow their attention on the subject.

16. *More lessons in Observational Geography for this class:*—Besides those mentioned in the course of lessons the following items may also be undertaken by the teacher and the taught especially in the months of March and April, either as a school lesson or hobby outside the school hours:—

(i) The heat of the Sun. With a lens and some cotton or a piece of thin wood the extreme heat of the summer sun can easily be demonstrated to children.

(ii) A shadow chart can be maintained. The change in the length and direction of the shadows from one morning to that same evening may be recorded.

(iii) On a bright evening observe the Pole Star and the Great Bear. Tell children about the legend of the Pole Star, its fixity in the North of the sky and how its permanent fixture serves as a true and safe guide to the mariner.

(iv) The Moon:—Waning and Waxing—The changes could be seen and maintained in a chart. (When does the moon begin to grow

and when does it begin gradually to lose its full light—the New Moon and the Full Moon days.)

Have you ever seen the moon in the day when the sun is shining? If so, note on what days and at what time.

(v) The 'brightest star' in the sky (Venus).

(vi) Any more groups of stars in the sky. What are the 27 Tamil Nakshatrams (stars).

17. A *Survey of India* is another item marked out for this class in which the children are led to see from a physical map of India, the natural divisions, the mountains and rivers of India and from a political map learn the several political divisions with some important towns which could be studied through pictures or stereographs. The study of the above though not carried in the strict geographical sense is intended to convey to children some impressions about India which they are to read at the next higher stage of their study.

18. Now comes the *detailed study of the Presidency* in studying which the teacher has to note the following particulars:—

(i) The foremost aim should be to make children understand how the resources provided for by Nature are utilised by man to the fullest extent possible, thus humanising the teaching of this subject.

(ii) Plenty of opportunity should be given to children for making maps thus alleviating the difficulty in securing a good text-book. (Morrison's 'Our Home' in Tamil contains enough maps and is also one which can be safely left in the hands of the pupils.) A note-book containing, say, about a dozen of the outlines of the Presidency, may be prepared beforehand by each boy and then filled up in the course of each lesson. Some periods in the school can be devoted to the children

'drawing maps on the wall blackboard. Coloured maps are still more welcome. Other individual talents such as a child's contribution out of his own labour, a neat and large size physical, rainfall or a production map may be given their due encouragement and publicity and neatly exhibited in the class to the great benefit of the others as well. Printed outlines can also be had at six pies each if the children could afford to purchase them. The school too, should provide itself with three or four outline maps of the Presidency for constant use in the class.

(iii) A system of taking the children on an imaginary journey along the main railway lines up to the boundary limits of the Presidency and a voyage along the coast are all quite agreeable ones and can be certainly practised in the class.

(iv) The teacher without going into a great detail under each head should try to present to the children a fairly thorough knowledge of the whole Presidency within the school course. The natural lines in which the latter is to be done may be roughly put thus:—

Map study:—Boundaries, Coast-line, Physical features, Mountains, Table-lands and plains. (Map I showing all the above details).

2. *Rivers and Lakes*.—River-deltas.

(i) Districts enjoying the benefits of the respective river-deltas.

(ii) Means of Irrigation, Anicuts, Canals, etc.

(iii) Other interesting observations about rivers, water-falls, and bridges. [Map II. Mark in an outline the three great deltaic systems and the other main rivers.]

3. *Climate of the Presidency*:—

(i). The temperature of a day varies according to sun-shade, clouds, chill winds, etc.

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(ii) Start from the region in which the pupils' locality is situated, study the climate of each region.

(iii) How the following influences the climate of a region:—(a) coastal town; (b) mountainous district; (c) table-land; (d) inland town far away from the sea-port; (e) a hill station.

(iv) Where are these places situated:—(a) Ootacamund; (b) Kodaikanal; (c) Yercaud; (d) Kattalam; (e) Bangalore; (f) Coimbatore.

4. *Rainfall*.—Clouds: How and at what season of the year are more clouds formed? The advantages of mountain barriers and the influence of winds on clouds. What is the rainy season of the particular region in which the locality is situated? [Map III. Prepare a rainfall map according to the distribution: heavy, moderate, light and very light.] No detailed explanation of the monsoons is necessary.

5. *Productions*.—What are the productions of your district? What are the productions of other regions?

Different crops in different kinds of soil—Note productions according to regions thus—(1) Mountain region and the West coast. (2) Forest region. (3) Deltaic region and the East Coastal strip. (4) Mines. Map IV. Mountainous areas, forest regions, dry lands, plains, mines, etc. Map V. Productions.]

No detailed study here is necessary. More attention here should be paid to maps.

6. Abundance of productions leading to industry: Study industry and manufacture, only the important ones. (Excursions, wherever possible, to an oil, rice, or sugar mill or soap or leather factory, or a weaving or dyeing centre may be profitably undertaken.) This leads to trade and commerce; important nodes of communication; roads, waterways,

Railways, sea-ports, etc. [Map VI. Mark the main Railway lines.]

N. B.—If printed Railway maps can be procured and distributed to children they can find out for themselves the route to some important places in the Presidency. Railway maps that are attached to the several Railway guides may be suggested.

Map (VII). Important sea-ports showing against each the exports and imports. Also note the industrial centres and their important industry—references to other minor ones as the making of brass and aluminium ware, mat-making, soap-making, leather-tanning, etc., have to be made.

Map (VIII). Map showing the distribution of population, showing the most populous towns; also note under the map the most populous districts.

Map (IX). Division of the Presidency into linguistic areas. People and population, language and religion.

Map (X). Political divisions.

Map (XI). Towns.—Select the important ones in each district according as they are principal towns, industrial centres or seaports, places of pilgrimage or worship.

Map (XII). Also note French and Dutch possessions. Some Native States in and around the Presidency.

19. The very last item suggested to be taken up for this class is the *Stereograph study* in which the children can learn something about the other parts of the world as for example, important industries, chief towns and famous buildings, etc. The importance of this item can be better understood and realised in the case of those children who are under necessity compelled to leave off their education after the elementary school course is over. If, for example, they could see all these pictures bearing on the Geogra-

phy of Ceylon, they do come to know of some real facts in connection with Ceylon: rubber-trees, rice-fields, tea-plantations, cocoanut groves, elephant hunt, jungles, Colombo Harbour, etc. Such an exhibition substituted for the teaching of the Geography of Ceylon sometimes be criticised from the standpoint that the teaching does not proceed from a strict geographical point of view of connecting cause and effect, and of developing the reasoning powers from observation, etc., but as remarked already this is only meant to add to the child's stock of information.

20. *Equipment*.—Before concluding I should like to mention the necessity of each school being fully equipped so as to meet the due requirements of the teacher with regard to the teaching of this subject. A thorough equipment of the school serves a double-fold advantage, first in enabling the teacher to carry on his school work very smoothly, and secondly in creating an active interest on the part of the children towards school lessons—

1. The things that are of supreme importance are, a fairly big size globe preferably a vernacular one, a world map, two big size Maps of India also in vernacular—one physical and the other political; a big size map of the Presidency (Macmillan & Co. have published one, price Rs. 14) and District and Town maps, etc.

2. Other accessories as stereographs and stereoscopes, picture maps of the world, outlines of the Presidency and those of India, map building sheets, etc., whose importance has been referred to are worth purchasing.

3. Albums showing views of Ceylon, Madras, Delhi and Agra, Simla, London, etc., may be purchased or otherwise the teacher and the taught can procure some of them

mainly from cuttings from newspapers and periodicals, etc.

4. A Telurian, if the school could afford, can be purchased.

5. A set of nicely-illustrated Geographical Readers (preferably in vernacular) containing information just suited to children is a long-felt want in the case of Indian schools. The choice of these books is solely left to the teachers concerned.

Conclusion.—In conclusion I should like to point out how by adopting this scheme or any similar one we can really achieve the true aims of geographical teaching, making children at the same time happy in the class-room. The teacher's description of different people with pictures and stereographs, his imaginary railway journey and sea voyage with his pupils, the child's study of his own home based on his own observation giving ample opportunities at the same time to his ideas of constructive work,—all these, I am sure, will help the child in the sound understanding of the geographical facts. Even if a child should leave the elementary school, a true, practical and workable scheme of this kind, if systematically followed, will certainly meet the requirements of his after-life, pave the way for his grasping more geographical problems, and make him look upon the geographical lessons in his school hours with a deep sense of pleasure and pride.

S. JAGANNADHAN.

DR. MACKICHAN'S REPORT ON THE CONGRESS OF THE UNIVERSITIES OF THE EMPIRE AND ITS TOUR OF THE BRITISH UNIVERSITIES.

The British Universities Congress and the Tour of British Universities organised in connection with the Congress being now over, I am sending you the report which I promised to furnish. I am making my report as succinct and condensed as possible confining it to the outstanding features of this truly Imperial assembly and to such impressions obtained during my visits to the British Universities as appear to me to be relevant to the present situation in our Bombay University.

First let me speak of the Congress itself which met in the New Schools, Oxford, 5—8 July. The numbers present at the various sessions were in the neighbourhood of 500 for about 400 of whom, Oxford provided most generous hospitality. Each day there were two sessions. Most of them had as Chairman the Chancellor of one of the British Universities. The sudden death of Lord Balfour of Burleigh, Chancellor of the University of St. Andrew's, who should have presided on the morning of the 7th July, cast a shadow of sadness over the proceedings of the Congress. His place was taken by the Vice-Chancellor of his University, Dr. Irvine, whose touching and elegantly expressed tribute to the memory of the deceased statesman made a deep impression on all the assembled delegates.

The Congress was opened by the Marquis of Keddleston, Chancellor of the University of Oxford. In a carefully prepared address Lord Curzon with that mastery of diction which has been a feature of all his public utterances described the scope and aims of the Congress. The address should have been followed by the reading of papers dealing with the place of the Humanities and of Science in the curriculum of a University. As the time at the disposal of the Congress was too limited to admit of the reading of papers the authors of these papers were asked to summarize them in speeches of about 15 minutes.

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This unexpected order took some of these speakers by surprise and in the majority of cases the attempts to comply with it were not too successful. Even this curtailment of the proceedings did not allow time for any real discussion of the problems placed before the Congress and those of us who desired to take part in such discussion as followed had to content ourselves with the briefest possible statement of our views. One might say that the only defect in the proceedings of the Congress was just the absence of free discussion.

This was perhaps inevitable in a Congress of such dimensions with a very limited time at its command.

The Right Honourable Mr. Arthur Balfour, Chancellor of the University of Cambridge, presided at the afternoon session of the first day. He seemed to be in indifferent health and while, in the few minutes he allowed himself, he gave expression to his views in observations that were suggestive and arresting, as most of his utterances are, the delegates from overseas, especially those from the Colonies, were disappointed in their expectation of a great introductory speech from this distinguished statesman.

Lord Haldane who opened the proceedings of the second day came with a well-thought-out message and made a distinct impression on many of the delegates by his plea for the democratisation of the University.

But I do not mean to deal in detail with the speeches. They will appear in the Report of the Congress. The papers have already been printed and I have sent you by this post printed copies of such of those papers as I was able to get hold of in the Office and Reception Room of the Congress. Some of these deal with problems that lie very near to the life of our University in Bombay and deserve most careful attention at the hands of those who are endeavouring to advance its development.

There was only one occasion, I think, on which the Congress seemed disposed "to let itself go" and to launch out fairly on the sea of debate. After a plea for instruction with a view to graduation in Commerce as a branch of Univer-

sity education, advanced with great emphasis by Sir William Astley, Professor at Birmingham University, Sir Theodore Morison, Principal of Armstrong University College, Newcastle, when he rose to summarise his paper, asked leave to depart from the usual procedure and to begin at once with the debate. He then threw down the gauntlet to the advocate of the degree in Commerce asserting that there was no place for such a degree in the Scheme of University Education. The worthy defender of the Commerce degree seemed staggered by the boldness of the adversary and there was some prospect of an Homeric battle; but the speakers who followed gave little support to the daring challenge and, so far as this Congress was concerned, the degree in dispute escaped any immediate danger.

This incident reminds us of things that have happened in our Bombay University and emphasises the necessity of its adhering to the policy by which it has hitherto been guided in respect of its degree in Commerce. It was hinted in the Oxford discussion that there was some danger of this degree being sought by those who desired what they considered to be an easier avenue than the degrees in Arts and Science to other than commercial careers. I remember how narrowly we escaped this result when an attempt was made to obtain from the Senate the same recognition for the B. Com., as for the B.A., in relation to the LL.B. degree. I trust our University will continue to maintain the position which it took up when this attempt was made and will confine the B. Com. to its own field as a special degree intended for those who intend to devote themselves to professions associated with commercial life.

You will see from the papers I have sent that the Congress gave some attention to the question of the relation of Universities to the training of teachers. This is a question to which the University of Bombay has only recently directed serious attention. These papers will give you some indication of the importance attached to it in widely separated sections of the empire and may supply some guidance to those who are seeking

to improve the qualifications and the status of the educators of the people.

The subject of University Finance excited considerable interest. Sir Alfred Ewing, Vice-Chancellor of Edinburgh University, proved very conclusively that Scotland was less favourably dealt with in the allocation of public funds to the Universities than the other parts of the Kingdom. Perhaps if Bombay were to pursue the same comparative method, it might discover a similar inequality; but after the manner of Scotland it will not make a grievance of it, but will endeavour to show that with less subsidies it can do equally efficient work.

One fact stood out in all the discussions on finance and I trust Bombay will take note of it. It was taken for granted and universally accepted that it is the duty of the State to subsidize its Universities. British finances like those of India are to-day not in a condition to respond adequately to the claims of the University. In India the needs of elementary education are most urgent, yet we must not cease to keep before the Government the title of the Universities of the country to assistance from the public exchequer to the extent that is possible in these days of stringency. This is a question in which I have long been interested and I can claim to have had something to do with the initiation of grants to Universities made by the Government of India. While on the University Commission of 1902, I drew the attention of the Commission to this matter and was asked to draft a financial section for the Report. My draft was adopted in the form in which I prepared it and the result of our recommendations which I pressed upon the Government of India in subsequent correspondence was the voting of an annual grant of five lakhs of rupees (Rs. 5,00,000) to the Indian Universities at the time when the Universities Act of 1904 was passed. The share which came to Bombay was not large; but this beginning has led to increased grants in the years which followed. I trust that this generous policy will continue. To the University of Bombay owes, along with other important developments, the

establishment of its Schools of Economics and of Sociology which are now slowly coming into being.

To conclude my reference to the Congress I would only add that the great benefit of such a periodical assembly is, after all, not that which is directly contributed by its discussions but, as every member of the Congress would admit, the inspiration that comes from meeting face to face with the representatives and leaders of University movements in all the sections of the empire to which we belong. And in this connection may I be permitted to suggest to the Syndicate that in its future selection of delegates it should make a point of including Indian members of the University? All the delegates of the Calcutta University who attended were, if I mistake not, Indians. It would be a distinct advantage to our University that Indians who would attend the Congress and carry back with them something of the inspiration to which I have referred, should have a place amongst the appointed delegates. I have no doubt that when the next Congress comes round an endeavour will be made to repair this omission. When Oxford and Edinburgh desiring to honour India conferred their honorary degrees on one and the same delegate, a representative of Calcutta University and a most worthy recipient of the honour, I felt sorry that none of my Indian friends was there from Bombay to share this distinction.

II.

But I must pass now to the Second Section of my report. The tour of the British Universities is a most valuable adjunct to the Congress—more instructive to many than the Congress itself—and I was glad to be able to take part in it from the beginning to the end. Certain alternative routes were suggested as it was not possible in the four weeks allotted to the tour for all the delegates to visit all the Universities. Let me give my own tour. It included the following:—

Reading (University College), Bristol University, Cardiff (University College, University of Wales), London University, Oxford University, Cambridge University, Edinburgh University, St. Andrew's University, Durham University, Manchester University and Birmingham University.

From this list it will be seen that very little in the British University line was excluded from it.

The Universities of Ireland, in lieu of those of Wales and the South of England, were allotted to another party. Only four of the delegates, however, made an attempt to carry out this part of the programme. The condition of Ireland made it impossible for them to get beyond the capital and even in Dublin their stay in a city in which armoured cars and other military precautions were still in evidence was less pleasant than it would have been under happier conditions.

The only Universities in addition to those of Ireland not included in my programme and those of N. Wales which had to be struck out by reason of the reduced railway service were those of Glasgow and Aberdeen with which I was already well acquainted, and the Universities of Liverpool, Sheffield and Leeds. As these last are very similar to those of Manchester and Birmingham which I visited, I was able to see every type of University at present existing in England. At each of these University seats the overseas delegates were most hospitably received not only by the friends who entertained them but also by the Universities in their corporate capacity. In London the Government entertained the delegates to luncheon. This function was presided over by the Right Honourable Mr. Arthur Balfour in his most genial manner. Several members of the Cabinet were present to meet us and among the guests I saw the aged Lord Morley and Lord Haldane as well as many other distinguished persons. Mr. Balfour, in his message of welcome, assured the members of the overseas portions of the Empire of the desire of the British Universities to throw open their

doors to students desiring to prosecute advanced study in Europe, stating that this was now more than ever necessary in view of the fact that for some years to come there would be an unwillingness on the part of many to visit those German Universities that formerly attracted them to their lecture-rooms and laboratories. At the luncheon given at University College, London, on the first day of our visit to London University, it will interest members of the Bombay University to know that Lord Reay was in the Chair. So keen was his interest in the University that although unable to walk, he was eager to do his part in welcoming the visitors and was borne to the Chair, from which he addressed us with that simplicity of manner and sincerity of heart which won for him long ago the enduring affection of India's people. That was, I believe, his last public utterance. Two days ago the papers contained the sad news of his death in Scotland whither he had just gone in search of more invigorating air. Nowhere will his passing be more deeply mourned than throughout our Presidency in which after more than 30 years the memory of his great services to Western India still lives in the hearts of multitudes.

In speaking of the various Universities which we visited I shall content myself with those features in their work and its methods which struck me as being suggestive to those who are facing University problems in India.

As I pointed out on several occasions when I was called upon to speak on behalf of India, it is from the younger Universities that our Universities in India, which like them are also still modern, have most to learn.

Take, for example, Bristol, Cardiff, Manchester, Birmingham. From these we of the great Indian cities have to learn what civic patriotism can accomplish on behalf of a University. Nowhere was this more conspicuous than in the comparatively recent creation—the University of Bristol. That University has a great future before it be-

cause it rests on the affection of a community that is proud of its ancient city and feels that its University ought to be one of its glories. Some of the citizens have lavished gifts on this University in the form of magnificent sites and equally magnificent donations in money for the erection of noble buildings and the equipment of well-appointed laboratories, as well as for students' Halls of Residence. As one of the results of this public-spirited liberality, Bristol will soon have a Physical Laboratory constructed and equipped on a scale surpassed by no other University in Britain outside the city of London.

In Birmingham I found the same civic spirit—an intense loyalty to the city and a great pride in its traditions. The city owes its University in great measure to Mr. Joseph Chamberlain's devotion to his city. The lofty tower of the University which dominates the landscape all around is his most conspicuous monument. And it was evident to all of us that the citizens of this busy city humming with productive activity are determined to stand by their University. It possesses already some of the best designed laboratories that came under our notice and it means to add others of similar efficiency.

Manchester University is an older foundation which bears witness to the long continued generosity of its wealthy citizens who may be trusted not to fail it in the future.

Shall we able to say the same regarding Bombay and its University? Not yet, I fear. I remember that when the University of Bombay placed before Government its desire to have the Royal College of Science placed under its control, it was urged by some of us, including your present Vice-Chancellor, that the University would be able to attract to this institution a more abundant stream of liberality. There is wealth in our city of Bombay sufficient for all this; but there is not yet that contact between the University and the city which we found in the modern Universities of Great Britain and some of the more ancient

also. This contact cannot be established until the University is felt to be a working educational institution. Some of us often wondered why the late Mr. J. N. Tata did not offer his magnificent gift to the University of Bombay for the purposes of higher research. My own impression is that it was the absence of direct independent activity in the University of his city that led him to give another direction to his munificence. The University will not attract the support of the city, on the scale seen in the great British University centres, until it learns to regard the University not as an institution planted in the midst of them by Government but as in a peculiar sense their own and as one of the crowning ornaments of their civic life. The ancient Universities of Oxford and Cambridge and those of Scotland owe their origin to the unworldly ideals of an ancient past. But they appeal also to the modern spirit and are being widened in their horizon and strengthened in their equipment for the tasks of the present by the liberality of a later generation to which their activities make a continuous appeal. Surely it is not vain to dream of such things for the University of our city, to hope for them and to work for their achievement.

London University is a thing that stands by itself. There is something oppressive in its vastness. One can think of it only in terms of the numerous great institutions that are united in this enormous structure. Its separate departments are most of them on the same imposing scale. The Imperial College of Science is one of its greatest units. Its magnificent buildings in South Kensington and the great laboratories and museums housed in them are an index of the large and advanced work which it is carrying on. University College and King's College can show work of the same order including some of the best examples of the highest types of research. Yet London University can also show us things that appeal more specially to those who have to deal with Indian conditions. I was fortunate in

selecting from the list of the numerous institutions to be visited, the East London College. I found there an institution with about 600 students, drawn from the surrounding East End districts, 200 of whom were women. This College is maintained by the funds of the Drapers Company, which now has no special relation to the trade from which it originally took its name, but is simply one of London's wealthy corporations, deriving its wealth from the sites which it possesses in the heart of the city around the Bank of England. These are enormously increased in value and the wealth which they bring has enabled this corporation to engage in great philanthropic activities. One of these is the provision of University education for the uplift of the working classes in East London. With what result? At the Honours Examination of the University the Working Men's College showed a greater number of First Classes than the Imperial College or University College. It stood highest in the whole University. The students, many of whom I saw, are drawn manifestly from the better working classes. The buildings, class-rooms and laboratories are plain and unpretentious; but they are admirably adapted for the work to be done in them.

The students are there with a definite object—to work. With struggle and self-sacrifice they have secured the opportunity for higher education and their energies are devoted to the pursuit of it. They have worked for and deserved their success. I felt that in outward circumstances and in the spirit in which they carried on their studies they came nearer to the students of our Indian Colleges than the majority of those who attend the Universities in this country. The Indian students who have been the most strenuous workers and have brought the greatest credit to our University have, many of them, passed through struggles similar to those through which these East London students must in many cases have passed. They may have missed some things

that other forms of University life are able to give; but there can be no doubt that this College in East London has reserved for the country much brain power that might otherwise have run to waste. This was certainly a great object lesson as to the need for a democratisation of University education. It reminded me of what the Scottish Universities have done for Scotland, a country that has always honoured education and has been willing to deny itself much in order to possess it. There is much of the same spirit in India and it is entitled to all encouragement from those who have been favoured with worldly prosperity. The problem of mass education is one that must be solved by the State and all higher education must rest on a wide foundation of elementary instruction provided by the public funds; but the more specific task of the University is one in the fulfilment of which there is room and there is the demand for the assistance that private wealth can furnish. This is the record which British Universities have created for themselves and is an example to all countries that are embarking on the same career of University development.

Another feature of the British University, which during the last half century has assumed great prominence, is the place assigned to independent research in all departments of knowledge. Wherever we went we found this to be the dominant note. The University's highest function was everywhere assumed to be the enlargement of human knowledge and a University that could not claim to have any share in this task was considered to be unworthy of the name. In every College which we visited we found the researcher, advanced student or professor, generally both. And in this work it was manifest how much depends on the personality of the teacher. These leaders in research had, no doubt, behind them the resources of admirably equipped laboratories; but their individual work seemed to depend more upon the arrangements they themselves improvised than upon fine and costly instruments.

Those who come after them will enter into their labours with all this apparatus reproduced in finished instruments based upon their results; but only the man who can devise and extemporise such contrivances accomplishes much in this region. These are things that our Indian students must take note of as so many are inclined to think that nothing can be done without costly equipment. You can imagine the amazement, mixed with feelings akin to despair, which seized me while I was in the midst of these inspiring scenes. The newspaper reports of the Proceedings of the Bombay University Senate came to hand and I learned that application for the affiliation of the Royal College of Science in certain undergraduate courses had been made on behalf of this institution which was projected and erected for the purposes of Scientific research. I trust that our University will never consent to a proposal which would bring so much discredit. For it would mean that this Royal College in spite of the name which it bears and the hopes held out by those who conceived the project of such a College is willing to allow itself to be turned aside from its highest function. The Colleges in the Bombay University which have found that the demands of undergraduate teaching are so absorbing as to leave little energy or time for research have long been looking forward to the development of this higher work in our institution of its own. They must view with despair a proposal that, they know too well, will only defeat the real purpose for which the Royal College was called into existence. To such a proposal may our Senate never assent. It would almost seem as if the atmosphere of Bombay contained in it some sinister influence that was destined to frustrate scientific progress. Calcutta seems to have escaped from these depressing conditions for it has already done much to promote research of the best kind within its University. There the personality of eminent Indian Scientists has been a great stimulus. There is no reason why Bombay

should lag behind and those who put the least obstacle in the way incur a great responsibility.

It is men imbued with the spirit which is so largely to be found in the Universities of Britain to-day that are needed to awaken the University to a consciousness of the things that are now within its power. In this connection let me refer to what I saw in the University of St. Andrews—the smallest of our Scottish Universities and in former years not reckoned as the most awake. Established in a small picturesquely situated town of great ancient fame it continued to live mainly on its literary and philosophical reputation. But it had on its staff a devoted Professor of Chemistry who when he died bequeathed a large endowment for the department over which he presided and especially for its higher work. He had drawn to him as his student and ultimately his successor Dr. Irvine who is now Principal of the University. During the years of the war the Chemical Laboratory of St. Andrews was active with the new activities. Some of the most important pieces of research that had to be attempted on behalf of the Ministry of Munitions were carried out in Dr. Irvine's laboratory very quietly and with brilliant success. The organiser of all this work was selected for the Principalship of the University when that office fell vacant. The Principal still presides over his department and now that it is confining itself to the arts of peace, the University finds ready to its hand an organised system capable of training and turning out research experts of the best type. The entire cost to the University of turning out the finished product was, the Principal informed us, £2,400—a sum which he said was less than one-fourth of the cost in one of the other Universities. I do not know how he arrived at this estimate of the cost. It must be calculated from the total expenses of the department. We were assured that this was an extremely small cost for the entire training of a highly qualified expert.

If the University desires to see Chemical Re-

search started under the best form of organisation, it could not do better than invite Dr. Irvine to come out for a short term and set it going on the lines which he has devised for his own University.

I should feel disposed after what I have seen (but not speaking as a Chemical Expert) to place St. Andrews in the front rank of our Universities in this department and this was the impression of a number of my fellow delegates on this tour. To an Indian student desiring to train for research work in Chemistry I should say "Select St. Andrews as your University." It is an ideal place for Indian students—a healthy city sufficiently small and quiet to favour steady application to work, provided the student does not succumb utterly to the attractions of its famous golf course, a danger which is not likely to prove serious to our Indian students. That I am giving an unbiassed opinion may be inferred from the fact that I am passing by the claims of my own *Alma Mater* which has a pre-eminence of its own in some other departments.

There is another observation of a general character that I should like to make in reviewing these experiences. It refers to the place that University education has now come to occupy in the general estimation of the community. I can remember a time when it was otherwise. To-day, the University stamp carries a weight which it never did before. In Britain to-day, as it has been in India from the first University days, a University degree is a passport to many positions or at least the possession of it secures a higher place for its holder in many of these positions, while for some of them it is an indispensable qualification. The largeness of the number of women students is a feature of University life all over the country. In some Colleges about one-third of the students were women. Alone of all the Universities, Cambridge continues to resist the pressure of women for admission to its degrees.

despite the fact that in Cambridge in the Mathematical and in the Classical Tripos women students have secured on more than one occasion the foremost place. But it is expected that Cambridge will soon have to yield to the pressure of the new age. It has already begun to offer a compromise which is frequently the first step to complete surrender. It was with peculiar satisfaction that at our last Cambridge function when I was asked to reply on behalf of India to the parting message of Cambridge to its visitors I quoted that striking clause which for so many years has had a place in the Charter of our Bombay University—"wherever the word 'he' occurs in these statutes it shall also mean 'she'." I trust Cambridge will not much longer lag behind our Indian Universities and all the other British Universities in its recognition of the rights of women.

The growing belief of the British people in "the University" is evidenced by the demand that is springing up in so many quarters for new Universities. Reading University College has already placed before Government its petition for incorporation as a University. Cardiff University College is meditating a similar step and Armstrong University College, Newcastle, now affiliated to Durham University, is likely speedily to follow suit. These are significant movements. Many of the more recent Universities have sprung out of University Colleges affiliated to one of the older Universities. The process is likely to continue and to result in the addition of new Universities to the growing list.

Bishop Welldon of the Deanery, Durham, whose guest I had the good fortune to be, during our visit to the University of Durham, is exercised as to the future of Durham University in the event of Newcastle achieving its independence. It is so situated that it cannot fulfil the functions of a University, embracing a number of faculties, of Newcastle with its facilities for Medical and Engineering studies be disjoined from it. Bishop Welldon appeared to think that Durham might

have to concentrate on Theology. In some respects it occupies an ideal position for certain departments of University life. The Cathedral provides a strong intellectual life and the students housed in the ancient Norman Castle with its magnificent Baronial Hall and its river flowing past the Castle walls can boast of a habitation in some respects more picturesque and inspiring than any possessed by the Colleges of Oxford or Cambridge. But unlike the more modern Universities it has a limited population in its immediate neighbourhood. Oxford and Cambridge are independent of the surrounding population for their traditions enable them to draw upon the whole of the British Empire. But Durham cannot exert an attractive influence comparable with this. The problem that is arising for Durham has some bearing on the situation in our Bombay University. The question of the sub-division of the University of Bombay has often been mooted; but unless Universities become in some sense specialized institutions it is not easy to see how this sub-division can be effected on the scale that has been from time to time suggested. I have heard proposals for a University to be established not only in Poona but also in Ahmedabad, Karachi and Dharwar. Before accepting so extensive a programme one must consider the disadvantages attaching to Universities which minister to small areas. One could imagine a flourishing University in Poona ministering to the whole of the Deccan area, but I doubt whether any larger scheme of partition is thinkable if we remain true to the old University ideals.

Even the ancient and now prosperous and growing University of St. Andrews has been able to achieve its present success only through the close proximity of a great city in which one section of its activities is carried on.

Great Britain is one country but as one travels from University to University one becomes conscious of the existence of distinct national types. Amongst these the Welsh stands out

with a marked distinctness. Wales has maintained its ancient language amongst its people and the ancient spirit is still to be met with in its University. At Cardiff the Professor of Celtic, a Welsh enthusiast, declared at an informal conference arranged for our benefit by the Principal that only a Welshman could teach Welshmen. With intense nationalism blazing out of his fiery eyes he maintained his thesis to the amazement especially of our Colonial fellow-delegates. All his colleagues who belonged mainly to the alien English nation dissented from his view; but I feel sure that he holds it still. In our Scottish Universities the national spirit is still alive; but it is fortunately associated with a catholicity of disposition which welcomes teachers and their message irrespective of the nation from which they come.

As we passed from University to University we heard echoes of the consultations that have been held at various University centres by the Committee appointed to inquire in the position of Indian students in the Home Universities. So far as I could learn, the general conclusion which has been reached, was, that Indian students should be encouraged to come to this country only for post-graduate courses. I do not suppose that this view implies that Indians should be precluded from availing themselves of the education to be obtained in the Home Universities at any stage of their course; but in all quarters the view was very strongly expressed that, on account of the difficulty of finding accommodation in Universities already overcrowded, the Indian student in his own interest should defer visiting this country until he had completed his ordinary graduation course in India. From the point of view of his own welfare it is held to be inexpedient that the Indian student should leave home and be exposed to the risks of a sojourn in a distant country at an early stage of life and should be advised to pass his first tests of intellectual fitness for advanced

study in India. This opinion should be made known widely throughout India in order that Indian students may not be sent at too early a period in life to face the disappointment and delays which await so many in their search for admission to a Home University. I believe that the time is not distant when it will be possible for the Indian student to find greater facilities for advanced study in his own country than have hitherto been provided. In several of the professions Indian students, who have never left India for study in this country, have attained the highest distinction. Let us hope that in the future such cases will be numerous. But for the present a very large number of Indian students are to be found here many of them engaged in post-graduate study. Many of these have visited me and I have visited them in the homes which they have made for themselves here.

During the visit of the delegates to the London University, our Indian students organised a reception for their past and present professors. At this reception I met a number of Bombay graduates, both men and women, and graduates of other Indian Universities also. This year they have been successful in winning high degrees. Quite a number of men with the D.Sc. and the M.Sc. of London are returning (or have just returned) to their native land. I trust they will be cheered by the reception which awaits them and that honourable careers are before them. Among them are some of my own former students who enjoyed my confidence and affection in their early student days and in whose well-being and success I continue to rejoice.

THE FUTURE OF INDIAN EDUCATION.

A LECTURE BY PROF. P. SESHADRI.

On the invitation of the Canning College Literary Society, Prof. P. Seshadri, M.A., of the Benares Hindu University, delivered an address recently on 'The Future of Indian Education,' in the Physics Theatre of the Canning College. Dr. Radhakumud Mukerjee, M.A., PH.D., presided.

Prof. Seshadri said that Dante consigned people who ventured to read the future to a curious punishment in inferno; their heads were turned backward on their limbs and they were thus compelled to walk behind though they intended to move forward.

And because

None might before him look, they were compelled,
To advance with backward gait,

He did not therefore want to prophesy and he would content himself with merely suggesting some lines on which Indian education was to advance in the future.

At the outset he wished to emphasise the fact that the educational system which had existed in India for more than half a century had not been such a bad failure as it had been depicted to be. Almost all the great men in India who had played a prominent part in national life in recent decades were products of that system and they had sought inspiration from Western culture. As Bishop Hooker complained in the *Ecclesiastical Polity*, the man who went about denouncing the existing order of things generally had a wide hearing and that was how the present fashionable condemnation of the educational system of the country had received support from certain quarters. The foundations of Indian education had been well and deeply laid and it would be folly to break away violently from the past.

INDIANISATION OF STUDIES REQUIRED.

There were however many directions in which

reform was desirable. The Indianisation of the studies and the atmosphere of our educational institutions was a pressing need. Our young men knew more of foreign history and of foreign literature than of their own land. Political economy and philosophy were subjects in which the Indian bent should receive strong recognition and the modern Indian languages had to be fostered very much more. He protested against the way in which the Indian languages had been neglected by the Universities in Northern India. It was possible in the Universities of Madras, Bombay and Calcutta to study the vernaculars, as independent subjects of study in the University, up to the M.A. degree, but Hindi and Urdu, the two great languages of the North, had not received any impetus at the hands of the Allahabad and other Universities in the neighbourhood. The Benares Hindu University had just made a desirable departure in the direction and it was hoped that Lucknow, Aligarh and Allahabad would follow suit.

INDIAN EDUCATION SHOULD BE
SELF-CONTAINED.

Indian education had to be made self-contained and there should be no need for young men of the land to have to go to Great Britain to qualify themselves for the higher services. The best training necessary should be made available in the country and there should not be the pathetic spectacle of a great continent depending on a country eight thousand miles away for higher education of the best kind. They had attached an artificial value to foreign degrees and that aspect of 'slave-mentality' also had to go, before there could be real progress. He was not disposed to shed tears over the refusal of the Imperial Assembly to grant two lakhs of rupees to enable Lord Lytton's Committee to come to India this winter. The solution of the Indian students' question in England lay not in waiting at the gates of the British Universities 'with bated breath and whispering humbleness,' with

abject requests for the admission of at least a few students in each college, who had passed through the humiliations of innumerable certificates and guarantees, but appraise the foreign degrees at their proper value when they would not be in such demand, though foreign travel was a fine accomplishment and some individuals would go for purely personal reasons. The resources of the country were not inadequate to make the system more self-contained.

Increased attention to women's education, the introduction of some elements of professional training into the Intermediate classes with a view to separate those who wanted to enter service from those who wanted to pursue higher education, were other necessary reforms. By merely separating the Intermediate classes they should not lay the flattering unction to their souls that they had effected a great reform. A material reform suggested by the Calcutta University Commission was that the Intermediate courses should be so bifurcated as to provide scope for two different purposes, professional training and equipment for the higher courses.

A PLEA FOR THE INTRODUCTION OF FINE ARTS.

Prof. Seshadri put in a strong plea for the introduction of the Fine Arts into the University courses. He could not understand what looked almost like a conspiracy on the part of the Indian Universities to exclude aesthetic education entirely out of the range of their vision except what could be had through poetry and literature generally. He congratulated the University of Calcutta on being the first to create a chair for the Fine Arts and on appointing the distinguished Indian painter, Mr. Abanindrabhath Tagore, to the place. The cultivation of the Fine Arts was of very great moral value, for as Plato said people's minds passed from the appreciation of beautiful objects to the appreciation of beautiful ideas and thus to virtue. That was an aspect overlooked by most students of education.

They had also to work up to the ideal of securing absolute autonomy to their Universities as in the case of Oxford and Cambridge. Freedom from excessive Government control had been secured in some measure in the constitutions of the newer Universities, but they were at the mercy of such miscellaneous bodies as Legislative Councils. Great corporations of learning should not be subject to such control at all and only independence could secure to them the atmosphere necessary for the unhampered growth and invest the men of learning, who constituted them, with the sense of high responsibility necessary for drawing out their best faculties.

University extension lectures and the education of the adults in the community was the last question touched upon by the speaker. Progress was greatest in a community where the general enlightenment was keen and it was not students only that should be receiving the benefits of education. He gave an account of the adult education movement in England and America and concluded with an inspiring passage from Lord Morley's address on popular culture in which the noble Lord had pointed out that if the average educated individual could not emulate the examples of the gifted masters of the world he could at least swell, by extending his education facilities to others, that common tide on the force of whose currents depended the prosperous voyaging of humanity.

The meeting dispersed with a cordial vote of thanks to the lecturer by Dr. Radhakumud Mukerjee who referred to the lecturer's presence on some of the Lucknow University bodies and hoped for even greater co-operation between the neighbouring Universities in the future. —*The Leader*.

UNIVERSITY OF BOMBAY.

Report of Dr. Moos on the Indian Institute of Science, Bangalore.

As a representative of our University on the Board of Visitors to the Indian Institute of Science, Bangalore, a visit was paid by me to the Institute on Friday and Saturday, the 15th and 16th July 1921. Dr. Alfred Hay, the Acting Director, showed me over the Institute, and I am indebted to him also for the data and information cited in this report as also for full facilities afforded to me for inspection in detail of the working of the various departments in which I am glad to be able to state I witnessed great activity and abundant signs of original work.

2. The Institute, founded primarily for the purpose of training Indian youths to methods of modern scientific thought and research, owes its existence, as is well-known, to the foresight and munificence of one of India's greatest sons, Jamshedji Tata. The scheme as originally proposed by him so far back as 1900 after years of unavoidable delay was at last taken in hand in 1906 when the first Director, Dr. Travers, selected for the post by the Royal Society of London, took charge, followed in January 1908 by the appointment of Professors and Assistants in the three departments of (1) Electrical Technology, (2) General and Inorganic and Organic Chemistry, and (3) Applied Chemistry, with which departments fully equipped in staff and laboratories, the Institute started initially its work of training. Owing, however, to various unfortunate circumstances not relevant to this report the execution of the scheme was considerably hampered, as much initially in the incipient stages of its growth as in its subsequent development. Dr. Travers, the Director, resigned and was succeeded in October 1915 by Sir Alfred Bourne, and since the retirement of the latter in April 1921, Dr. Alfred Hay has been placed in charge of the Institute pending the appointment of a permanent Director. And though actual educational training was commenced in July 1911, even now after the lapse of ten years the Institute does not seem to have fully recovered from the set-back. It seems problematic besides if the present activity of the Institute which is admittedly virile and of great value otherwise is rightly directed in fully fulfilling the purpose for which the Institute was specifically endowed and founded. Imperative as it must be for the purposes of training up students in research, that the Professor and student alike

should engage in original work, specially in pure Science, or failing that, in the solution of outstanding problems in Applied Science, it is obvious nevertheless that such work, when undertaken should be as a means to an end and not an end in itself. Any adventitious activity hence especially noticed in the Chemical Department which aims at turning the Educational Institute into a Bureau of Research, pure and simple, for the solution of outstanding industrial problems on semi-commercial basis with little of educational value, cannot be regarded as indicating a healthy development in the right direction. To this question which tends to subordinate the educational function and to detract so much from the scope of usefulness and efficiency of the Institute as a training school of Research—the specific work in which alone our University as such can feel interested—I shall presently recur.

3. This department ever since its commencement has been working under Department of Dr. Alfred Hay, D.Sc., M.I.E., Electrical Technol. and an Assistant Professor, Mr. Kaun, B.Sc., in the Mechanical Engineering branch. The laboratories and workshops attached are fully and efficiently equipped in separate buildings, supplying the full educational and technical essentials, appliances and requirements, which compare favourably with those of any other similar institution in the country.

The programme of instructional work for training Engineers is also well formulated. The department unfortunately, however, labours under certain disadvantages. For practically all the students admitted in this department are graduates in Physics and Mathematics, but unlike those in the Chemistry Department where the Chemistry graduate goes straight to the laboratory for original research without any prolonged preliminary training, the student in this department has almost invariably to pass through a three years' preliminary course in the theory and practice of Electrical and Mechanical Engineering with specialised practical training in the laboratory and workshop, before he can be admitted to research work proper. Original work, besides, is difficult in these branches of Science and admittedly requires a much higher capability and order of intelligence in the student than is demanded for ordinary research in the domains of Applied Chemistry. A very small number only of the students admitted in this department hence proceed to the research stage and the full

period of such training thus extends to five years and more. In the main therefore the function fulfilled by the department has been to train up qualified Engineers—Electrical and Mechanical.

On an average from 35 to 40 students apply every year for admission. The number of students actually working in the department has varied from 10 to 17; 10 in 1911-12, 12 in 1912-13, 17 in 1913-14, 12 in 1914-15, 15 in 1915-16, 15 in 1916-17, 11 in 1917-18, 16 in 1918-19, 11 in 1919-20 and 12 in 1920-21. Some of the passed students, I understand from the Director, occupy positions of responsibility on good emoluments which well testifies to the sound instruction given in the department. As shown in the report of 1921-22, this department has passed out to date 1 Associate and 22 Certificate Holders. Though daily routine in the work of training up Engineers in the special branches of Electrical Engineering which are dealt with by the department, namely, Generating and Transforming Plants, Power Transmission Lines, Distribution Systems, and Electric Lighting and Traction, must necessarily take up a considerable portion of the time of the Professors and the Assistant, research work has also been attended to as much at least as is possible in the disadvantaged conditions referred to. The reports and papers published in the Institute Journals as also, in other scientific publications show that good work has been done and that any way the basic idea of post-graduate research work has not been lost sight of entirely in the department in spite of the difficulty above referred to.

4. The Department of General and Inorganic Chemistry started its work originally under Dr. Travers, D.Sc., F.R.S., with Dr. Watson, D.Sc., A.I.C., as Assistant, and the Organic Chemistry Section worked under Dr. Sudborough, D.Sc., Ph.D., F.I.C. The Department of Applied Chemistry was placed under Professor Rudolf, M.Sc. On the retirement of Dr. Travers and Prof. Rudolf, Dr. Sudborough and Dr. Watson have remained in charge respectively of the Sections in Organic Chemistry and General and Inorganic Chemistry, assisted recently by Messrs. P. Iyer, M.A., and B. Rao, B.A., as Assistants. Dr. Fowler, D.Sc., F.I.C., was placed in charge of the Department of Applied Chemistry. The latter department is now called the Depart-

ment of Bio-Chemistry, as for some time past considerable portion of the work carried on in the department has been in the main of Bio-Chemical character. As this kind of work, which includes considerable amount of bacteriological work as well, demands special laboratories and special appliances and apparatus, the Western Wing of the Library building which is suitable for such requirements has been made available and is being fitted up for the purpose. Owing to certain difficulties however, of securing suitable fittings, considerable delay has occurred, but it is hoped the Laboratory will be adequately equipped and be in working order before the end of the year. A portion of the old building will still be needed for the requirements of the new Laboratory but the greater portion of it will be available for use for any developments that may be forthcoming. Dr. Marsden, the Industrial Chemist to the Government of Madras, is at present in charge of this department during the absence on leave of Dr. Fowler.

The laboratories and research rooms accommodated in separate buildings for each of these three sections have been most elaborately planned and efficiently equipped. All possible care and attention have been paid as much to immediate essentials and smaller details as to larger requirements and possible future developments and I have nothing to write but praise for the design, appliances and equipment which so fully meet the educational wants of an Institute of this kind. In some cases, however, much too large space and heavier appliances with proportionate larger expenditure have been allowed where certain researches after the successful experimental stage have been continued on semi-commercial basis. This is objectionable, as the time, energy and money so spent are clearly antagonistic to the best interests and educational efficiency of the Institute as a School of Research.

The number of students actually working in the two Chemical Departments was 14 in 1911-12, 19 in 1912-13, 13 in 1913-14, 5 in 1914-15, 17 in 1915-16, 26 in 1916-17, 52 in 1917-18, 49 in 1918-19, 62 in 1919-20 and 72 in 1920-21. The number of applicants seeking admission every year to these departments varies, as stated by the Director, from 50 to 60. The last report of the Institute for the year 1921-22 shows that the Chemical Departments have turned out to date 13 Associates and 20 Certificate Holders.

In order to give a clear idea of the character of the work carried out by these departments, I cannot do better than append hereto two lists* forwarded by the Director which indicate in detail the research work carried on. It will be seen how vigorous is the activity some of which is being actually directed in continuing the research results on semi-commercial basis. In such cases as already stated the plant, appliances, etc., occupy much larger space and entail heavier expenditure than is justifiable or at all commensurate with their actual educative value.

5. The Library is accommodated in a spacious room in the main building and Library and Hostel. is fairly well stocked with text-books, Journals and other Technical publications. It contains in all 8,745 volumes. Arrangements for lectures in French and German have also been made to give facilities to students for acquiring sufficient knowledge of these languages to enable them to refer to and read technical books, papers and journals with ease. The duties of the Librarian, Mr. Tacchella, M.A. (Dublin), include such lecture work.

Residential quarters for students are provided for in a special building and an adequate staff of servants working under a steward supply the wants of the students. Separate communal messes have been allowed and charges for each mess have been fixed according to the wants of each community.

6. The list of past students of the Institute in all departments furnished by the Director, which gives the present position occupied and the emoluments earned by each student, shows that most of these students are employed on salaries ranging from Rs. 100 to Rs. 300. A few occupy positions of responsibility and earn fairly high salaries ranging from Rs. 500 to Rs. 1,000. The criterion of success of the Institute, however, does not lie so much in the amount of the emoluments earned by the student as in the output of subsequent research work in his after-career. The Institute has so far turned out 42 Certificate Holders and 14 Associates—56 students in all, and the Director points out that this number is considerably below the total number of students who have passed through but have frequently left without completing the course or without securing either a Certificate or Associateship.

* Not published.

The current expenditure in running the Institute in 1911-12 with 24 students then under training amounted to Rs. 1,49,155, while in 1920-21 with 54 students it was Rs. 3,34,201. The total amount spent on current expenditure in the last 10 years is 24 lakhs which indicates an average expenditure of 2.4 lakhs per year.

7. Recurring now to the question whether the educational efficiency of the Institute as a School of Research is to be the first consideration and should alone be kept in view in future developments which is what vitally matters if the purpose for which the Institute has been specifically endowed is to be fulfilled, or whether this ideal has to yield to the commercial aspect as well by such development of the Chemical Departments as may allow side by side with their educational activity research work in Applied Chemistry beyond the experimental stages on commercial or semi-commercial basis, it is obvious that even ten years after the commencement of the Institute's work, it cannot be too late even now to formulate and lay down some policy for action and guidance. This question, I understand, is to be taken up shortly by the Institute Authorities who are alive to the importance of developing the educational efficiency of the Institute on vigorous and healthy lines. For a glance at the lists appended shows that while the results of research carried on in these departments including not a few dealt with on semi-commercial basis, as also the Patents secured by the Professors in their own names, are assets undoubtedly of no little value and importance to the Institute, the actual trend of the activity is disconcerting in certain directions. If the relative educative value of these researches is not at the same time commensurate it is difficult not to feel that if the Institute once subordinates the high educational ideal, which above all must be kept in view, to the commercial, the basic ideal, namely, to so train up Indian youths to methods of inquiry and research as to fit them in course of time to carry on independently all such work themselves which the Professors are doing now, is bound to suffer a serious check. From this point of view the actual result of the ten years' working of the Institute is, it must be admitted, not very encouraging; more so when we find that 24 lakhs have been spent during the period in the training of 14 Associates and 42 Certificate Holders (56 all told) who have received the Institute's hall-mark, indicating an average expenditure of Rs. 43,000 per each student.

Viewing this complex question from such a dual aspect, a judicious co-ordination is not impossible, and it is hoped that before long a scheme may be formulated which, while not detracting in the least from the educational efficiency and importance of the Institute as a School of Research, may not only strengthen its financial resources but also satisfy at the same time all the legitimate aspirations of the Professors for their unselfish devotion to the high educational ideal aimed at.

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

COMMITTEE OF ENQUIRY.

TERMS OF REFERENCE.

The following resolution dated Delhi, Nov. 21, has been published:—

In consequence of a report of the Standing Committee of the Court of Visitors of the Indian Institute of Science, Bangalore, the Governor-General in Council, by virtue of the powers vested in him by Regulation 35 of the Regulations for the administration and management of the properties and funds of the Indian Institute of Science, Bangalore, has appointed a Special Committee to enquire into and report on certain matters relating to the abovementioned Institute.

The Special Committee has been constituted as follows:

Chairman.—Sir William J. Pope, K.B.E., F.R.S., Professor of Chemistry, Cambridge University.

Members.—The Hon. Sir Ashutosh Mukherji, Kt., C.S.I., M.A., D.L., Puisne Judge, Calcutta High Court, and Vice-Chancellor, Calcutta University; Sir Henry H. Hayden, Kt., C.S.I., C.I.E., D.Sc., F.R.S.; Professor C. V. Raman, Professor of Physics, Calcutta University.

Secretary.—Dr. Alfred Hay, D.Sc., M.I.E.E., Officiating Director, Indian Institute of Science, Bangalore.

The terms of reference to the Committee are as follows:

1. To examine the working of the Institute during the past ten years and to report on its present state.

2. To consider what changes, if any, are necessary in the constitution and scheme of management of the Institute in order to secure its government in the best possible way, and to make recommendations accordingly; in particular, to consider and make recommendations regarding the body or bodies in which the management of the Institute should vest, the powers which should be given to such body or bodies, including their relations with the Director and the professional staff, and the composition of such body or bodies.

3. To consider and make recommendations regarding the extent to which the principal contributors to the endowment, including the Government of India, should exercise control over the management and working of the Institute; in particular, to indicate whether the principal contributors should expressly be given the right and, if so, within what limits, to obtain the assistance of the Institute in the matter of the

Investigation of particular problems, the acceptance of students, or any other matter.

4. To consider and make recommendations as to what should be the future policy and lines of development of the Institute; in doing so, to estimate the present position of post-graduate and research work in pure and applied science in India, and to indicate the place which the Institute will occupy with reference to this; in particular, to indicate whether the Institute should confine itself to the investigation of such problems only as bear on the application of science to industries, or whether its scope should include investigation in pure science.

5. To consider and make recommendations as to whether, in view of the immediate and prospective increase in the income of the Institute, it should undertake research, training in research, or training generally, in additional branches of science.

6. To consider and make recommendations regarding the means of co-ordinating the work of the Institute with that of similar institutions in India and abroad.

7. To consider and make recommendations regarding the method of selecting and appointing the Director of the Institute and other members of the professional staff, the qualifications which should be required of candidates for those appointments and the terms which should attach to such appointments, including pay, leave, and allowances during absence.

8. To consider and make recommendations as to the relations which should subsist between outside bodies or persons, including Governments and Administrations, and the professional staff, in respect of the professional services of the latter; in particular, to consider whether the professional staff should be permitted to accept private practice; in the latter case, to propose rules to regulate the receipt of fees and the method of utilizing such fees; also the conditions which should govern the publication of the results of research undertaken for outside bodies or persons, with reference to patent rights and copy-right.

9. To consider and make recommendations regarding the subordinate staff necessary to assist the Director in the discharge of his duties.

10. To consider and make recommendations regarding the admission and training of students; in particular, to consider the best means to train Indian students with a view to enabling them to qualify themselves for appointment on the professional staff.

11. To consider and make recommendations regarding any other matter which the Committee may consider to be of fundamental importance for the welfare of the Institute.

EDUCATIONAL TOPICS.

Universities and State Control.

Principal Childs of the Reading University in his book on "Universities and their Freedom" calls attention to the menace of State-interference that threatens University freedom. The following summary with criticism of the work taken from the *Supplement to the Journal of Education* (Sep. 1921) will be found very useful:—

A large part of Principal Childs's work is devoted to showing from history how much of such interference there has been in the past, and how much harm it has done. In the Middle Ages, especially the latter part of that epoch, the Universities were under the domination of the Papacy, and at the time of the Reformation they passed, in countries where the Papal power was broken, under the authority of the State. A new spirit broke out in Germany at the end of the Seventeenth century with the foundation of Halle and Gottingen, but a hundred years or so later the reverse swing of the pendulum began, and for generations now the German Universities have been under the thumb of some *Kultusministerium*, with results that are not altogether satisfactory. In dealing with England, Mr. Childs attributes the lethargy of Oxford and Cambridge in the later seventeenth and the whole eighteenth century to the deadening influence of State interference. Here, no doubt, the author has been led by his fiery zeal for liberty into some exaggeration. Nothing, that any Government did, placed any hindrance in the way of the pursuit of knowledge at our ancient Universities. If they were the preserves of the aristocracy and the Church of England, that in no way prevented their professors from studying or their teachers from teaching. In fact the boot is rather on the other leg, and the moral to be drawn from the temporary decay of Oxford and Cambridge, as from that of the endowed schools, is the danger of leaving richly-endowed foundations entirely to their own

devices. Nor when the reawakening came was the State the sole enemy that had to be fought. Quite as often it was a powerful party within the University itself, whose opposition only the combined forces of the State and the reformers were capable of overcoming. Principal Childs, indeed, recognizes the important part played by the Commissions of Inquiry, though he says the State "was only striking off the fetters which the State had riveted." That is not true of all the changes made; in many cases the fetters had been riveted on the colleges by the founders, not by the State. In fact, the whole history of the older Universities shows that the relations between Universities and the State constitute a problem, which cannot be solved merely by ingeminating "Freedom, freedom," but only by mutual forbearance and a spirit of give-and-take. We wish, indeed, that Mr. Childs had given rather fewer of his fifty-six pages to his historical retrospect, instructive as it is, and rather more to a practical consideration of the question as it stands to-day. Universities are not likely to be confronted with a demand that they shall teach particular ideologies, though an effort to make them the expounders of some particular species of historical, social, or economic doctrine is, as our author hints, a possibility of the future. Such a requirement would have to be resisted with all the resources the colleges could command. And there is always the danger that industrial communities may demand a purely utilitarian type of education, and pay no respect to the things that belong to the highest intellectual life. A more immediate peril is suggested by the practice of giving grants for particular purposes, and the results of this policy no doubt will have to be carefully watched. In Universities, as elsewhere, eternal vigilance is the price of liberty and a call to be on our guard is never mistimed.

The Oxford English Dictionary.*

This gigantic work has a continuous history of more than half a century behind it, ever since Dean French in 1857 laid the foundation of the work by calling the attention of the Philological Society to the inadequacy of existing dictionaries to obsolete words, to lack of the history of words and their sense, etc.

The members of the Philological Society threw themselves eagerly into the plan proposed for supplying these deficiencies, and an army of volunteers set about the systematic examination of the whole body of English literature. At length a dictionary was projected (in place of the upplement first suggested, which it was realized would be much larger than the works it was assigned to supplement), and Mr. Herbert Coleridge was appointed editor. Fresh volunteers were enlisted, and the work made progress. But it could hardly have taken shape without the immense industry and indomitable courage of the text editor, Dr. Furnivall, who saw, but did not shrink from, the immense preparatory labours yet to be faced. Furnivall realized that an English Dictionary could not be made until the roots of the language could be examined in the mass of its early literature, which was then hardly known; and to provide this, essentially he founded in 1864 the *Early English Text Society*, the immense list of whose publications, still growing, may be read in the Clarendon Press catalogue.

But even the enthusiasm of a Furnivall did not avail to prevent a growing sense of despondency when the work seemed to lengthen out indefinitely with no promise of performance. No private publisher could be found to undertake a work so vast. It was decided to invite the co-operation of the Clarendon Press. The Philological Society and Dr. James Murray, who had thrown himself to the work with an energy equal to Furnivall's

own, and was by acclamation designated as editor, entered into negotiations with the Delegates of the Press, and an agreement was signed.

It is fortunate that the magnitude of human undertakings is seldom perceived by those who engage upon them. Coleridge had intimated that it would be time to begin the Dictionary when a hundred-thousand quotations had been pigeon-holed. The efforts of Furnivall and Murray brought the total to three and a half million quotations, selected by thirteen hundred readers from the works of five thousand authors. The work of accumulation has gone on for forty years and to-day the Dictionary contains about one and three-quarter million printed quotations, selected from a very much larger number. Dr. Murray himself agreed with the Delegates for a work of between 6,000 and 7,000 pages. The total will exceed 15,000. He expected to complete the book in ten years with a small staff. To-day, thirty-five years after printing began, the work, to which Murray himself contributed more than 7,000 pages, is being carried on by three editors with twelve assistants; and the end is not yet.

The great *Deutsches Wörterbuch* started by the brothers Grimm in 1838 and begun to be printed as early as 1851, only of the size of $\frac{2}{3}$ of the Oxford scheme, still has a sixth to finish. The Dutch *Woordenboek* is less advanced; and the Dictionary of the Swedish Academy had not passed the letter D.

The state of the work to-day is that of the ten volumes, nine are published, and of the tenth (Ti-Z) substantial parts are complete, namely, Ti-Ty, and V; X Y Z, and the first sections of U and W, are on the eve of publication. The end, however, is not so near as might be thought; U is a large section, and W is in many respects the most difficult letter in the alphabet, consisting as it does almost entirely of words of Teutonic origin, and therefore of obscure etymology and complicated history. A lexicographer makes

* Taken from The "Christian College Magazine" (July 1921).

light work of *parallèlepipèd* and *supralapsarian*; it is when he comes to words like *wealth* and *work*, *war* and *waste*, *wild* and *wilful*, that his powers of discovery and of discrimination are seriously taxed.

Sir James Murray (he was knighted in 1908) died 26th July, 1915. His ambition to see the completion of the work on his eightieth birthday in 1917 was not fulfilled, and even if he had lived to devote to it his amazing powers of application, could not have been fulfilled. He lived, however, to see the end of his life work in sight, and more than that of any other man his name will be associated with the long and efficient working of the great engine of research. The volumes produced by him have characteristic excellence which cannot be exactly matched, though they may be rivalled by merits of another kind.

The work is now carried on by three editors, working independently on different sections of the alphabet. Dr. Henry Bradley, whose period of work on the Dictionary now rivals Murray's in point of time, is by common consent the greatest of living English philologists. He has been an editor since 1888. Professor W. A. Craigie, who has been an editor since 1901, and Rawlinson and Bosworth Professor of Anglo-Saxon since 1916, brings to the work of the Dictionary a rare combination of qualifications. He is especially eminent as a Scandinavian scholar. Mr. C. T. Onions, appointed an editor in 1913, had been on the staff since 1885. He is also known to scholars as the author of the *Oxford Shakespeare Glossary* and for his editorial part in *Shakespeare's England*.

Children's Fears.

The Pedagogical Seminary, an American review of educational literature and progress, insists on the necessity of removing the fears commonly entertained by children whose happiness is largely wrecked by such fears and one of the great problems of the mother is to prevent the fears from arising in the first place or overcoming them as

they appear. The child who is constantly afraid often fails to grow up and develop as he should and has no spontaneous instinct for play.

If the child is nervous and timid, the mother must temper the story somewhat to the child's sensitiveness, and take off a little from the terror of the bears and wolves and the robbers and giants who infest the fairyland of childhood, for she must remember that the world in which the child is living is much more this world of fairy tales than it is the work-a-day world of hers.

There is only one way to overcome fear, and that is to face it. The dangers we hide from, or run away from, become thereby the more terrible, and also the more dangerous, because there is an instinctive trait in the whole animal world to pursue the thing which runs away, to stop before the thing that stands still, and to retire before the thing which advances upon us. Our running increases the courage of our opponent, and decreases our own. The danger that we face always seems much less terrible than it did when we tried to put it out of our minds. It is said that the women who looked down on the battle from the city wall were always much more afraid, and suffered more than their sons and husbands who were fighting on the plains below. This is certainly true of life in general. When we are in the midst of the combat, we forget the danger, and in many experiences of life where immediate action is required, we do not realize the danger, until after it is passed. There is a beautiful illustration of this principle in the recent novel of H. G. Wells, "The Research Magnificent." Benham is afraid of the bull; and on this account he determines to cross the field in which the bull is, and all through life he makes it his guiding principle that he will face each danger, will do the thing he fears to do, and as soon as this impulse is acted upon, the fear and the danger largely disappear.

Great care should be taken to see that the children are not frightened or given conceptions which are a little too terrible for their nervous organiza-

tion, but when fear has once come to the child's mind, the only successful way of dealing with it, is to face the fear. Take the child by the hand and lead him into the dark corner where he thinks the bear or Indian is hiding, and show him that it is not there.

European Student Relief.

The Y. M. C. A. Student Movement is carrying on relief work in 11 different fields; the movement was started in August 1920 by representatives of students of 39 nationalities and has produced within a year co-operative restaurants, farm-colonies, wood-cutting camps, students' work-shops, printing and book-binding establishments, student clinics, study-rooms among other things; besides, thousands have been fed; relief is administered impartially without regard to race, creed, etc., and in every field, work is done in accordance with the national spirit and methods. We give descriptive accounts of a few schemes below.

The German Student Land Colony. A scheme directed by the *Studentendienst*, the students' welfare organisation, which does all the buying and transport for our relief in Germany. It runs several institutions in Berlin and the neighbourhood, for which the Colony-farm supplies vegetables, flour, butter, milk, eggs, cheese, poultry, bacon, lard, etc. Amongst other institutions supplied are: A student house and restaurant where 400 students dine daily; a small home where four students live and 60 dine, and a hostel where 40 students live and eat. An auto-truck takes provisions from the farm to Berlin, and carries back to the farm all the kitchen scraps from the restaurants to feed the farm pigs. During the summer students spend time there digging potatoes, getting good food and air and earning a little money.

In Hungary, our Student Committee has given special attention to vacation employment, and has found jobs for nearly 500 students on farms or in factories for the summer of 1921.

Near Vienna we are running a breakfast and an evening meal in a small college where women students are trained in scientific gardening, and domestic stock-rearing, with a view to the development of intensive agriculture in Austria.

The Czech Student Barracks Scheme. Czechoslovakia has set a fine example. To meet the housing crisis, our representatives initiated the idea of a Student Colony in Prague. Four million crowns were given by the Government, the Red Cross promised beds and blankets, the city gave the ground, and 500 students worked every day building ten barracks to house 750 students, while women students helped in the kitchen and dining room, which was hastily put up to feed the student workmen. All received two meals a day. 'No work, No meals,' is the motto. Only students who took part in the building are allowed to live in the barracks. So new a feature was this in University life that these ingenious students raked in money, by charging an entrance fee to the townsfolk, who flocked to see them at work on Saturdays and Sundays.

In Germany, the readiness of the students to undertake manual work is a remarkable feature of the new era.

Another very sound scheme was the *Austrian Wood-cutting Camp*. Last summer, for five weeks, 45 men and 12 women students, with one of our relief workers, as their commandant, went into camp to cut wood for the hospitals of Vienna, and to help to clear a bit of forest land for growing corn. They cut and stacked 150 tons of wood, had a healthy holiday and plenty to eat, and started the winter with a little reserve of strength and money.

There are lots of other schemes on hand. Austrian women students have been employed to knit wool, supplied by the Red Cross, into sweaters and jumpers. Our Polish Student Relief Scheme includes a tailoring and shoemaking department, where students are learning these trades, and a University Printing Press and Bookbinding esta-

ishment, where all the work is to be done by students. Zürich and Berne are running successful Student Co-operative Kitchens, one especially for Russians; every student receiving help from us in Turkey and Asia Minor is systematically provided with wage-earning work.

The whole student body in certain countries is evolving nation-wide schemes of student self-help on a co-operative basis. In Germany all our relief functions locally through the *Wirtschaftshilfeder Deutschen Studentenschaft*, to which all German students belong. This is a National Student Co-operative with branches in every University. All help in food and clothing which we give locally functions through this organisation, and their definite aim is to so administer the economic life of the University that it shall as early as possible become entirely independent of all State or private aid. At a Conference, held on July 1-4, 1921, the *Deutsche Studentenschaft* passed a resolution that all German students must learn a trade of some kind, and exercise it at least one year of their academic life, both for their own sakes, that they may have the means of self-support, and for the sake of the nation that its academic citizens may take a direct share in building up its economic welfare.

In Poland, the home of student co-operative enterprises, for years past the *Bratnia Pomos*, or 'Brotherly Help,' a student co-operative society which is found in every University, has carried on all manner of student welfare work, medical aid, the buying of books and other academic supplies, canteens, hostels, employment bureaus, etc. Much of our relief work in Poland is carried on in the closest co-operation with the *Bratnia Pomos*.

Literary Reforms in Germany.

The following extract from *Book-Post* (Aug. 1921)—a weekly organ of book-sellers, publishers and book-lovers, published in London will be found amusing and at the same time instructive regarding certain projected Government reforms in Germany.

PLAN TO TAX BOOKS.

The "Borsenblatt" and other organs of the book world in Germany are much agitated by certain projected Governmental reforms, ranging from spelling to taxation, which will affect the printed page.

Mark Twain (whose appendix to the "Tramp Abroad" on "The Awful German Language" has awakened chords of sympathy in most of our bosoms) would undoubtedly have found something to say about the suggested abolition of those capital letters for substantives which used to be such a help to the foreigner beginner.

GERMAN TERROR.

They are welcome to suppress *ai, x, and y*, though one wonders what these harmless little creatures have done, and to simplify the rules for the separation of syllables, complex enough in every language—but there is a suspicious sound about "abolition of the *h* used to lengthen the vowel, except in certain cases." It was always those vile exceptions which used to make the hour for German a terror, and not make for simplification.

As for the "simplification and unification of words of foreign origin"—well, if Sweden has "*salong*" for "*salon*" and "*sheslong*" for "*chaise longue*," Germany will doubtless have a right (say) to naturalise "*gentlemen*" as "*tsobentlemann*"—but the word will scarcely be recognisable to foreigners. Joking apart, it is obvious that, as the book trade organs point out, these reforms will involve the trade in serious difficulties, since large stocks of school books, dictionaries, and so forth, will necessarily become obsolete. They also emphasise the fact that this time, of all others, is peculiarly ill-chosen for augmenting the trials of the bookseller.

TAXATION AND BENEVOLENCE.

The second part of the project concerns a tax of 10 per cent. on all publications, and the creation of a fund for assisting the publication of works on which publishers, under present conditions, do not feel justified in risking their capital. The fund is also to circulate "works of value" at a reduced price, and to assist necessitous authors. The scheme for this "*Kulturbajade*" was laid before the sub-commission of the Imperial Council of Economics on February 16 last, by Dr. Rösch. The opposition it has aroused is increased by the fact that, in order to spare the public, the tax is to be levied in part on the profits of retail booksellers.

Reviews and Notices.

READINGS IN ENGLISH SOCIAL HISTORY. VOL. III. 1485-1603. (CAMBRIDGE UNIVERSITY PRESS). 4s. net.

We cannot praise too much this excellent series of volumes which helps to throw light on English life of past times. Before these fascinating accounts, warped with the living blood of past generations, Dry-as-Dust must flee in shame. The present volume comprehending Tudor England is remarkable for the variety of side-lights it offers. General descriptions of English characteristics, we get from foreigners and they show as perhaps how English character has remained very much the same these several centuries. Illuminating details are afforded again by native writers on trade guilds, monastic life, on feudal relationships in society, on life at school and University, on physical exercises, the use of tobacco, the different items of social entertainment, the stage, and on the treatment of crime. Realism rises to heroic heights in Raleigh's account of the "Revenge," and even contemporary literary taste can be measured from the extracts from appreciations on Shakespeare. "Readings" of this kind are most valuable for the real study of history. We wish similar efforts were made to present Indian life in the past, to modern readers.

LITERARY ESSAYS—SELECTED AND EDITED BY H. G. RAWLINSON. (MACMILLAN & CO., LTD.) 3s. 6d.

This is a collection of essays, from the nineteenth century writers, of a highly literary value. The urbanity of Matthew Arnold is made clear by his illuminating remarks on "Wordsworth," a brief account of the Emperor Marcus Aurelius is offered by Myers, Pater's account of the Renaissance is laid under debt by the sketch of Leonardo da Vinci, Green, the historian, conjures up 'The Florence of Dante,' Froude, who figured so prominently in the Oxford movement offers us "Words about Oxford" and Stevenson refreshes us with various little papers. The collection will make good reading for students of English prose and it should be also mentioned in its favour that the essays typify a variety of styles.

CONTRIBUTIONS TO THE HISTORY OF EDUCATION: V—SECONDARY EDUCATION IN THE NINETEENTH CENTURY, BY R. L. ARCHER. (CAMBRIDGE UNIVERSITY PRESS.)

This is indeed a very precious 'contribution' to the growing volume of educational literature.

English schools were dominated in the beginning of the century by undue importance accorded to classical studies and memorising, and to a linguistic rather than literary or human training. A very informing chapter on the "Revival in the Public Schools" gives the reader the important features which men like Arnold added to public school life. The boarding-houses being in the charge of assistant-masters, the introduction of prefects and of games, and the broadening of the curriculum taking in French and Mathematics, were among the reforms. Among other chapters, one traces the story of State efforts in education which date only from the second half of the nineteenth century. Legislation and administration, it is pointed out at the beginning, are but tools used by movements of the human mind and aspirations of the human heart. The State department in elementary education was found to be a soulless machine which all genuine educationists despised rightly.

This history which begins about the year 1789 and stops with 1918, the year of the passing of Mr. Fisher's Bill, follows up developments in the different lines, of female education, technical education, Welsh education and such others. The book is richly conceived and splendidly written and will form an illuminating volume of study to all who are interested in educational problems. The wide learning and broad outlook of the writer are united to a most engaging style, such as may be rarely expected in educational books of the kind.

ARNOLD'S MODERN GEOGRAPHIES: IV—ASIA, BY A. A. DAVEY. (LONDON: EDWARD ARNOLD.) 9d.

This is a book in a series of manuals dealing with the geography of the various continents of the world with special attention paid to England and Wales, the British Isles and the British Empire. 39 pages of the book are taken up with the physical features: vegetation, population, mineral resources, etc., of the continent as a whole, and this is followed by a more detailed treatment of the various portions of our continent. India comes in for a fairly adequate treatment. The orographical maps of Asia and India are specially good, especially the latter. The book lacks detailed instructions to teachers, exercises for students and such other useful features as usually accompany each chapter in such books. The amount of matter given is fairly abundant and marked by discrimination.

THE BEGINNER'S HISTORY OF ENGLAND TO THE END OF THE GREAT WAR, BY E. W. MILLER. PP. 279. (LONDON: GEORGE G. HARRAP & Co.): INDIAN AGENTS: P. T. I. BOOK DEPOT, BANGALORE.

This book, as the name suggests, is only an introductory treatment, presenting the course of history in very broad outline. "For this purpose events have been grouped as far as possible round great outstanding characters," while stress has been laid on the side of the life of the people. As illustrations, we may quote the headings of certain chapters, St. Augustine, the Father of the English Church; Canute and the Danish Conquest; Edward I, the Great Law Giver; Edward III, King of Chivalry; Jeanne d'Arc; William Caxton and so on. In a few chapters here and there the book attempts to depict the social life of the people as they lived in the various ages. One good feature for which the author is to be given credit is that he tries to explain the story of England's growth in relation to the story of Europe's life, and as it has been dominated by European ideas and personalities like Jeanne d'Arc, the Crusades, Napoleon, etc. The book treats succinctly of the war to which two chapters are devoted and the narrative is continuous and clean. Important dates at the head of each chapter and questions and exercises at the end enabling the pupil to summarise events and think for himself are additional good features. The illustrations are numerous, many of them contemporary with the times they illustrate and all of them instructive; the maps and genealogical tables are clear and simple.

A SHORT, SOCIAL AND POLITICAL HISTORY OF BRITAIN, BY R. L. MACKIE, PP. 420. (LONDON: GEORGE G. HARRAP & Co.); INDIAN AGENTS: P. T. I. BOOK DEPOT, BANGALORE. 4s. 6d. net.

This book, as the author says, is designed for use in the upper classes of English Elementary Schools and the lower classes of their Secondary Schools. It may be used with benefit by teachers and pupils of our High Schools. This is exactly a companion or successive volume to the book reviewed just above where the emphasis is laid not so much on the vital movements in the history of the nation, as on picturesque personalities, striking personalities and romantic episodes which linger in the mind of the people. This book does not eliminate altogether striking personalities and romantic episodes, but only deals with them in a more business-like manner. Continuous topics, like the Anglo-French wars of the 18th century, the growth of Irish troubles in the 17th century are treated in whole chapters instead of

being split up into parts distributed over the several chapters dealing with contemporary English History. Description of the chief features of social and economic life of the people which alone would give a correct historical background appropriate to each period, has been made a prominent feature. Descriptions, for instance, of Roman Britain, England under Alfred and his successors, life under the Normans, town-life in the Middle Ages, etc., have all come in for adequate and even more than adequate treatment. As the author picturesquely adds, the book is not merely of

The great and well-bespoke
But the mere uncounted folk.

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The Educational Review.

Saturday, the 17th inst., was a red-letter day in the calendar of the Calcutta University when a Special Convocation was held for the purpose of conferring degrees *honoris causa* on twenty scholars of eminence in various branches of learning. It was a happy idea of the University to commemorate the visit of H. R. H. the Prince of Wales in this manner. Twenty doctorates were conferred of which two had to be conferred *in absentia* on Professor A. A. Macdonnel, Boden Professor of Sanskrit in Oxford, and the Right Honourable Sir Syed Amir Ali, Member of the Judicial Committee of the Privy Council.

Among those that attended to receive the degree were H. E. the Viceroy, and H. E. the Governor of Bengal. As was carefully pointed out by the Vice-Chancellor in his address, the degree conferred upon the Viceroy had special reference to the great success with which he expounded and administered the immutable principles of jurisprudence that constitute the priceless heritage of mankind whether it be in the East or in the West during the time that he held office as the highest judicial officer of the Crown. Similarly in the case of His Excellency the Governor of Bengal, the Vice-Chancellor took care to point out that it was the academic side of a distinguished career that came in for this kind of honour from an academic body rather than the

official and administrative position held by the distinguished recipient. Due emphasis was laid upon the educational attainments and experience gained by the vast travels of the Earl of Ronaldshay, and the consequent breadth of vision and width of sympathy with which he could handle the problems that confront him as an administrator. As he pointed out very well 'the Earl has been an observant student of human nature in the East whether in the innermost recesses of the villages of Bengal, or on journeys of exploration to unknown corners in the Eastern Himalayas and the glaciers of Kanchinjangha. But more than all this he has appreciated the unfathomable difficulties which surround the metaphysical problems propounded by the sages of Buddhism on the one hand and Vedantism on the other; and few, even amongst those of his countrymen who have felt attracted by eastern ideals have gained an equally deep insight into the basic problems of Indian Philosophy and Religion, which are indissolubly associated as much with our spiritual life as with the true advancement of the Indian nation.'

The work of Professor Macdonnel in the field of Sanskrit literature is too well-known to require description. It is perhaps equally well-known that the Right Honourable Sir Syed Amir Ali adds to his immense knowledge of law and jurisprudence, ripe scholarship in Islamic learning which have fructified in a few treatises expounding Muslim history, law and jurisprudence.

Those others that attended to receive their degrees were scholars in varied branches of learning which included a large variety of subjects. Professor Sir W. J. Pope, the eminent Chemistry Professor of Cambridge, was the recipient of a D.Sc. Following him came a representative of the other ancient English seat of learning, Oxford, in the person of Professor W. A. Craigie, Rawlinson and Bosworth Professor of Anglo-Saxon in the Oxford University. A versatile scholar who could appreciate alike the Icelandic Saga and the best works of Robert Burns, he is chiefly known by his association with the monumental work, the Oxford Dictionary, and is by common consent one of the most eminent philologists in England. He received the Doctorate of Literature.

Next followed the eminent Vice-Chancellor of the Mysore University, the holder before that of George the Fifth Professorship of Philosophy in Calcutta itself, whose vast, if somewhat ponderous learning, is held in veneration by the students of Bengal where he worked in various centres for a long period of time. Next followed Principal R. P. Paranjpye of the Fergusson College, whose genius for Mathematics, his special subject, shines no more luminously than the self-sacrifice which prompted him to forego the prospects of a brilliant and distinguished career in the public services, in favour of service to his *Alma Mater*. It need hardly be added that he has now to devote his energy to the cause of Edu-

cation as the Minister for Education of the Western Presidency. Professor Cullis, Hardinge Professor of Mathematics in the Calcutta University, has been for a generation the expounder of the highest truths of Mathematics to the most brilliant among the *alumni* of the Calcutta University. Sir Gilbert T. Walker, the genial and brilliant Director of Meteorology, has filled with distinction the position occupied by his eminent predecessor Sir John Eliot, and has added lustre to the position which he occupies in India after a brilliant academic career in Cambridge. Sir M. Visveswarayya achieved distinction as an Engineer of the Bombay Presidency and returned to his native land of Mysore as the Chief Engineer of the State where the conception and execution of the Kannam'adi Dam might be ascribed to him altogether. His name is also associated intimately with the construction of the dam across the river Musi in Hyderabad. It is his work as one of the foremost of Indian Engineers that came in for this academic distinction. These five gentlemen received the D.Sc. degree.

Sir John Marshall, the eminently cultured and sympathetic head of the Department of Archaeology in India came with a brilliant record of studies in Cambridge, and of achievements in the archaeological field in the British School of Hellenism in Athens. He has during a score of years striven with marked success in the conservation of the ancient monuments of India in a manner worthy of their historical asso-

ciations. He has contributed largely also to the advancement of our knowledge of Indian antiquities both by his own work and by the sympathetic stimulus which he always gave to the work of his colleagues and assistants. Pandit R. Shama Sastri has for sometime been known to fame by the difficult achievement of an edition of the *Arthashastra* from almost a single manuscript, and what was more difficult, by its translation into English. As the learned Vice-Chancellor very aptly pointed out his work has been more used by others to achieve distinction than to bring him the distinction that he eminently deserved. Professor D. R. Bhandarkar, the Carmichael Professor of Indian History in the Calcutta University, is a son of that veteran Orientalist, Sir R. G. Bhandarkar. He has laboured hard if somewhat unobserved in various fields of Indian archaeology and literature, and the very large number of his contributions have suffered the disadvantage of being buried in archaeological and other publications comparatively little seen of the public. He was aptly described as 'the path-finder in trackless regions of the boundless field of Indian antiquarian research', and has been a great deal responsible in the founding of the Department of Ancient Indian Culture in the Calcutta University. Professor Henry Stephens has enjoyed the affectionate devotion of a large band of Bengali students for forty years. He could expound with equal facility the problems of life in the light of "Aristo-

phenes and Shakespeare; of Plato and Kant; Aristotle and Emerson, and symbolises the wisdom of ages and races." These four gentlemen received the Doctorate of Philosophy.

Rao Saheb Dineschandra Sen is well-known, at any rate to the Indian public, as the author of the History of Bengali Literature, and of the Life and Times of Chaitanya. These works have long been considered monumental in their character and true to the reputation of the Calcutta University as fostering the mother-tongue, he comes in as the recipient of a Doctorate of Literature. Professor Abanindra Nath Tagore has long been known for reviving interest in Indian art by his foundation of a school of Indian painting. It is only very recently that he was appointed to the Bhāgeswari Chair of Indian Fine Arts at the Calcutta University as a result of the Khaira bequest. He was similarly a recipient of a Doctorate in Literature. Professor Sylvain Levi, the recipient of a Doctorate of Literature as well, is the foremost French Orientalist of the day. He is a scholar of the most varied accomplishments knowing most of the Asiatic languages, and has contributed vastly to the knowledge of Indian History chiefly in her relation to other Asiatic countries. He happens to be in Calcutta at the invitation both of the Calcutta University and the Visva Bharathi of Dr. Rabindranath Tagore. He was one of the Readers appointed by the Calcutta University in 1919, but the war came in the way of his fulfilling

the engagement to deliver his Readership lectures. It is expected he will deliver those lectures during his stay in Calcutta.

We have reserved for the last two names which come nearest to us. In this distinguished list of twenty, it is matter for satisfaction that there are four *alumni* of our Madras University included. Sir M. Visveswarayya took his B.A. degree in the Madras University before proceeding to study Engineering at Poona. Pandit Shama Sastri is a Madras graduate also, and these two together with Professor S. Krishnaswami Aiyangar graduated from the Bangalore Central College. While we are gratified that four of our graduates should be thus honoured, our gratification is greater in respect of Professors Raman and Krishnaswami Aiyangar. Professor Raman is a distinguished graduate of our University, and entered the Government of India Financial Service by open competition. After some years of service in the Financial Department he resigned a lucrative position and the assured prospects of advancement to the highest positions in the department, to accept the Professorship of Physics of Sir Taraknath Palit foundation at the Calcutta University. The sacrifice that he thus made in his devotion to Science is quite as great as that of the Hon'ble Mr. R. P. Paranjpye; we might even say greater. He has been working steadily in various fields of Physics and has contributed a large number of papers to various scientific journals both in India and in Europe, on

the results of his researches. What is more than his own work, he has had under him a number of young graduates of the Calcutta University prosecuting research work, whose contributions were considered worthy of the Doctorate Degree. Examiners chosen from English Universities have testified in glowing terms to the value of the work of some of these, and the Calcutta University has conferred Doctorate Degrees upon them for work done or thesis submitted. He was one among the four representatives of the Calcutta University deputed to attend the Congress of Universities which assembled in Oxford recently. The value of his services were recognized by Government which nominated him one of the Committee of Four recently appointed to report upon the working of the Indian Institute of Science in Bangalore. The Degree of D.Sc. is but a fitting recognition of valuable work already done in the realm of research at the Calcutta University by a distinguished graduate of the University of Madras. It is matter for regret however that our University here which is as old as the Calcutta University could offer no scope for the exercise of his talents which had to go to Calcutta to find the opportunity to unfold themselves, and meet with deserved recognition there sooner than at his own *Alma Mater*. That is an irony of fate which we may regret, but the dons of our University apparently consider this honourable to themselves and to the University whose destinies they guide and control.

DEC. 1921.]

We pass from him with satisfaction to the distinguished Professor of Indian History and Archaeology at the University of Madras, who has been the recipient of an Honorary Ph. D. degree in this distinguished group. Our satisfaction in this case is due to the fact that our own University at Madras has in a way recognized his work in the field of research outside, and thought it worth while to appoint him to the recently-instituted chair of Indian History and Archaeology, and thus provided him with the means to carry to fuller fruition his researches in the important fields of Indian history and culture which he has had to pursue for very near a score of years under the gravest difficulties. While we feel gratified that Madras did its part well by him, we cannot but condemn the folly of the Government of H. H. the Maharaja of Mysore that was not able either to appreciate his worth or even his work and thus allowed him to transfer himself to Madras on the eve of starting work on the Mysore University. His publications which gave him a position among those doing research work go back almost to twenty years and his first book was published more than ten years ago. It is on the strength of this publication that he was appointed to the chair of Indian History and Archaeology in 1914. He has during the period of seven years that he has occupied the chair added to his reputation by a number of publications which have added vastly to our knowledge of South Indian History. It is matter for

peculiar gratification to us to see that the Vice-Chancellor of the Calcutta University was able to make such a true and just estimate of the value of his work as he has in the following sentences of his address:—

“He has endeavoured to estimate the value of the contributions of Southern India to culture and civilization in ancient and mediæval times, and his successive works.....have notably helped to dispel the illusion that Northern India and Northern India alone has been the most potent factor in the growth and expansion of Indian culture in all its varied manifestations.”

He has by his work not only clearly proved that the history of South India has its value in the study of Indian culture, but is rapidly establishing his position as the one scholar who could with justice be regarded as capable of bringing about the necessary correlation between the Sanskritic and Dravidian civilizations of India, a co-ordination which had long been regarded as a desideratum, chiefly owing to the absence of scholars with adequate equipment in both Sanskritic and Dravidian studies. We congratulate the Calcutta University on their judgment in the choice of this body of scholars, and the scholars themselves on the eminently fitting public recognition of their varied work which has, in many cases, been its own reward hitherto. It is matter for peculiar gratification that there is at least the Calcutta University in India that could do this.

There is great resemblance between Ireland and India in the matter of the problem of the use of the vernacular as the medium of instruction in educational institutions. There have been complaints in Ireland, similar to the complaints we have had in India, about the undesirability of endeavouring to impart instruction through the medium of a foreign tongue. The following changes adopted by the Irish Nation in the matter will therefore be of some guidance to educational reformers in India as well :—

1. That all Intermediate papers be set bilingually; (2) that candidates have the option of answering papers on all subjects in Irish or in English, or partly, in both; (3) that heads of schools and colleges take this into consideration in appointing teachers; (4) that questions set on history and geography enable students to obtain full marks for knowledge directly affecting Ireland; (5) that in grouping subjects Irish must be put on a level with English, and that the modern literary group consist of Irish and two other languages; (6) that Inspectors be appointed to visit and inspect all secondary schools and colleges; (7) that certificates be awarded in accordance with Inspector's reports, and that in each school a book prize or medal be given to the student in each grade who shows greatest proficiency in Irish.

The havoc which blind caste-prejudice is causing to public life

A Conscience clause in Education. in Southern India was visibly demonstrated the other day in the

Madras Legislative Council, on the question of the introduction of a Conscience-clause in our educational institutions.

If there is one question on which enlightened educational *Indian* opinion in this country has been unanimous for a long time it is that of the introduction of a Conscience-clause. It was only the official majority in the various Councils which was always available to the European Christian Missionaries in India, that prevented Indian publicists, from carrying out a measure of that kind. But in the *reformed* Madras Council we find that the situation has become worse and the non-Brahmin Councillors have more or less voted solidly against the resolution, though it was intended to safeguard the consciences of all Hindus and Muhammadans whose children are often compelled much against their will to undergo instruction in Christian theology in Mission institutions. The members who voted against the resolution did not probably realise that in all the advanced democratic countries of the West to-day, the State affords such protection to the individual and in giving their vote in the wrong manner, they were striking at the root of one of the fundamental liberties to which mankind is entitled. In course of time the Madras Council, continuing at the present rate, will get discredited as not keeping pace with the liberal aspirations of its countrymen in several directions.

One of the desires expressed by His Royal Highness the

The Prince's Addresses to Students. Prince of Wales even before arriving in the country has been that

of coming into touch with the students

and the younger generation in the country. The political circumstances of the country have unfortunately prevented the fulfilment of such a desire and at the important University centres which have been visited, Bombay, Lucknow and Benares, the students have not assembled to hear His Royal Highness, as was fondly expected. This circumstance does not however detract from the value of the excellent advice to students which the Prince gave in his addresses at these places. Speaking at the Bombay University, His Royal Highness said to the students in the course of his speech :—

You are particularly fortunate in your equipment of life. You have University training, you have drunk at the fountain of knowledge, you have learnt the value of work, you have lived in institutions where order and discipline are a part of the system and you have experienced their advantages. You have joined together in games which promote friendly rivalry and in which individual play must be a combined work for the success of the side. All that your University career gives you will be of particular service to each of you both as men and citizens. The qualities you have acquired here will make for success in a great city like Bombay. They will be of inestimable advantage in commercial and civic life and in wider spheres of political life of this presidency. They are qualities on which the British Empire has set the seal of approval, and by the exercise of which its unity and strength rests assured. It is the privilege of youth to be able to some extent to mould the future. Let us make a beginning here and now, and see that as years go on, the ardour of youth is preserved and sustained in the practice of those high qualities. Let us keep undimmed our love, learning, hard work, discipline and order and friendly co-operation.

Let us have our bond of brotherhood in our common enthusiasm to serve our country and our King.

At Benares, His Royal Highness recalled his own College days at Oxford and exhorted the students of the University to cherish warm love and reverence to their *Alma Mater*.

The Calcutta University must be congratulated on the scale on which it has made arrangements for the satisfactory medical inspection of its students. The statistics which have just been published as the result of the first inspection are very instructive and bear testimony, once more, to the real need there is for the introduction of such a feature into all our educational institutions. The number of students examined and dealt with in the statistics which have been published is 2000 and the following is a summary of some of the more important features :—It was discovered that only 64 per cent. of the students had normal vision and the Inspectors also remark on the unsuitability of the glasses worn by some of the remaining number. It is satisfactory to note that the University has made arrangements for the supply of glasses to students at cost price under expert supervision. The teeth also show a very large percentage of defects, only 68 per cent. having normal, healthy teeth. In view of the great influence of teeth on the general nutrition, the risks run by the remaining 32 per cent. of the students can be well imagined. The concluding

observation of the report is discouraging indeed. "It has been found that if we take all defects into account, the students who are free from any trouble, come up only to 36 per cent. Roughly speaking we might say that only 33 per cent. of the students are free from defects and about 67 per cent. are defective in some way or other. *This means that two-thirds of the student population have got some disorders to be attended to.*" Will these experiences make our educational authorities all over the country to be up and doing?

A certain amount of irritation has rightly been caused to educational reformers in England recently by a decision of the Judges of the King's Bench who laid the somewhat astounding proposition: "We cannot see that the theatre is a place of educational interest." The decision arose in connection with the expenditure of money by certain County Councils from the educational cess on taking children to theatres. The decision only shows that there are obscurantists even in such an enlightened country as England in the twentieth century, some of them occupying seats on the judicial bench. The taking of children in school to dramatic performances was the result of a well-considered scheme of educational expansion. It was considered desirable, for instance, that pupils in schools should have the chance of seeing Shakespearean performances, as well as select educational films under

the guidance of their teachers, being taken to theatres in groups. This decision of the Judges will unfortunately put an end to this practice, unless something is done to remove the supposed legal obstacle to the spending of money from the educational cess on such a really educational purpose. Even as the Judges were pronouncing this decision, the Committee appointed by the Board of Education to consider the teaching of English in England, presided over by Sir Henry Newbolt, was recommending the educational advantages of the theatre in its report. The members declared that the drama was an ancient and honoured form of literature that had afforded rational delight to a hundred generations of civilized beings, and urged that the sooner a child became familiar with the best forms of theatrical amusement, the less likely was he to be permanently attracted by the worst. They definitely recommended "visits by pupils to professional performances of suitable plays." But the Lord Chief Justice and Justices Sankey and Acton have decided that "a theatre is not a place of educational interest"!

Special interest attached itself to the recent Convocation of the Allahabad University as it was the last to be held under the present constitution. Since its foundation in 1877, the University has striven hard to keep up high standards of educational efficiency in spite of temptations to the contrary and it is just assuming new shape in accord-

ance with the new Allahabad University Act. The Hon. Mr. Justice Gokul Prasad, who presided on the last occasion as Vice-Chancellor, reviewed the history of the University since its foundation and expressed the hope that it will be no less successful under the new order of things. Steps are already being taken to arrange the inauguration of the work of the Allahabad University, the Hon. Mr. C. F. de la Fosse already being placed on special duty for the purpose. We must draw attention in this connection to an insistent demand made elsewhere in the United Provinces for a University of its own, at Agra whose claims are not less strong than those of Allahabad or even Lucknow. We hope that we will soon hear of some advance with regard to the project of a University for Agra.

On the occasion of the recent visit to England of the distinguished French *Entente Intellectuelle* President, M. Poincaré, he was entertained at a banquet by the Franco-British Inter-University Group. M. Poincaré pleaded for an *Entente Intellectuelle* between the two countries:—

Well, we must try to understand each other better and better, and to do that we must learn more of each other. There can be no question of trying to assimilate what neither of our peoples desire or could tolerate. Each country will preserve always, with its language, character, originality, traditions, and customs, its scientific methods, literary preferences, and conceptions of art and beauty. But better instructed about the minds of other people, they would no longer be exposed, through ignorance, to mistrust of their

intentions and motives. Each would continue to cultivate his own garden, but each would have a wider and clearer view of his neighbour's garden. I have myself experienced the benefits of this complementary education. Before the students of Glasgow University had the gracious thought to confer upon me the dignity of Lord Rector, now held by Mr. Bonar Law, I had little conception of the interior organisation of a great Scottish University. Now, when I think of the British Universities, a familiar image reappears before my eyes and I feel that among my friends of Scotland and England I am not altogether a stranger.

Let us, then come closer together more and more, by our voyages, by the community of our books, by the exchange of professors and lecturers, as has been agreed this week between our Faculties of Medicine. Let us come closer together by the reciprocal exchange of our scientific discoveries and our artistic and literary works. Surely we may love at the same time Shakespeare and Molière; Milton and Racine; Byron and Victor Hugo. Our mentality can lose nothing by such a mutual penetration. Far from that, it would assuredly gain in breadth, in elevation, and in variety.

We need hardly add that the appeal is of really wider application and has a point for India where frantic efforts are made in certain quarters to reduce the country to a position of intellectual isolation.

Writing of the need for *Entente Intellectuelle* among the civilized countries of the world, one is pleased to

The Vishwa Bharati.

note the recent formation at Bholpur, under the auspices of Sir Rabindranath Tagore, of a centre of education and research in which scholars from East and West will co-operate. It is a lofty

ideal which has been aimed at by the poet and even if he should be able to realise a part of the aspiration, he should have rendered signal services to the cause of intellectual progress. Since his return from Europe, Sir Rabindranath Tagore has rightly been insisting on the need for intellectual co-operation between the East and the West. The Vishwa Bharati—that is the name of the institution—has already made an excellent start by securing the services of some eminent scholars: Prof. Sylvain Levi, the great French Indologist, has already arrived to take charge of the Oriental section; Dr. Bay of France, a well-known Chemist, is another distinguished worker; two German scholars, Prof. Pahl and Dr. Winternitz are also to join. We are glad to see that the Fine Arts have not been neglected and Dr. Tagore has secured the services of Mr. Nandalal Bose, the well-known Bengali Painter, whose work must be familiar to all readers of the *Modern Review*, through the reproductions of his pictures which have appeared in its pages.

The recent Convocation of the Benares Hindu University was of more than usual interest, as His Royal Highness the Prince of Wales received the Honorary Degree of Doctor of Letters at the function, and, as he declared to members of the University, thus became one of themselves. The ceremony was apparently of considerable interest and His Royal

Highness roused enthusiasm from the large audience as at the top of the old gold and scarlet academic robes, he put on the Hindu *turban* to complete the costume. It was graceful of the authorities of the Benares Hindu University to have conferred about the same occasion, the Honorary Degree of Doctor of Letters upon Mrs. Annie Besant, whose services to the Central Hindu College, Benares, and to the cause of education generally need not be recapitulated here as they are well-known.

In spite of the somewhat troubled beginning which the Rangoon University had, the University has been able to progress at least to the extent of celebrating its first Convocation and conferring degrees on 58 of its *alumni*. Sir Reginald Craddock, who presided on the occasion as its Chancellor, gave an exposition of the aims of unitary, residential Universities which, that of Rangoon endeavoured to be and explained the relationship which ought to exist between Universities as Corporations of Learning and the Government of the land—the remarks on the need of liberty for Universities receive added significance from the circumstance that Sir Reginald has never been identified as an administrator with liberality of sentiments:

Turning to the subject of the relations which should exist between the Government and the University, His Honour made an important pronouncement. He told his hearers that in this country the State must take an active part in

creating the institution and organisation of the new University, and it must see to it that the foundation was well and truly laid, and that the lines upon which it would be erected, and the hands and minds through which its activities are to be built up, are essentially sound and trustworthy. But once the organisation was established it must then govern itself. It must perfect its own system, it must adjust its own machinery to the varying conditions and requirements of the time, it must work out its own destiny, it could not be subjected either to the autocratic decrees of any outside authority or to the varying breezes of popular caprice, or the ephemeral demands of the hour. When once the bodies who were charged with the governance of the University had been selected, haphazard interference, either by the State or people, could not but be subversive of orderly progress and entirely destructive of the authority of the responsible bodies that the State itself had set up. The University was and must be a self-governing body, if it was to reach its full stature and produce that pure atmosphere of learning, that harmony and good fellowship and those accurate traditions of duty, which gathered round a seat of learning and gave it a living character of its own.

It is necessary that this ideal must always be kept before the minds of our officials who would not hesitate to interfere with Universities on every possible occasion.

The celebration of the Fourth Anniversary of the Bose Institute was the occasion for another striking

address by its distinguished founder, Sir J. C. Bose. The highest aim of Indian culture, he said, was the search for a great synthesis in the discovery of an underlying unity

amidst diverse manifestation. That was to be achieved not through unrestrained speculation, which led to the grotesque perversion of truth, but by positive and verifiable knowledge, to be tested at every step by rigid experimental methods. The apparent dormancy of intellectual life in India had been but a temporary phase. What India had conserved by inheritance, culture and temperament, was not lost, but remained latent and was again ready to spring forth into renewed activity and in the full blossoming of knowledge.

Remarkable impetus has been given to the use of English as a world-language within the last one or two years.

Both in Denmark and in Sweden, English is now established as the first foreign language to be taught in the Lower Secondary Schools. Since the Armistice, parties of Danish students have visited England and English students Denmark, to study agricultural methods. A movement is spreading even in Germany for the substitution of English for French as a foreign language to be learnt by students. The same is happening in Greece and in Eastern Europe. In the Italian Secondary Schools, English may now be chosen as an alternative for German. Spain, Japan and China have recently sent deputations to England to report on the possibility of developing the English language and English ideas in their educational system. The American Universities which are being started in Peking and Canton are sure to give a

great impetus to the use of English in China. The new Baltic States of Lithuania, Latvia and Estonia are curiously enough setting up English schools and asking for English teachers. An English Professor is now attached to the University of Bucharest and the Roumanian Government has lately invited an Educational Adviser from England.

The use of English alternatively with French at the recent Treaty of Versailles has broken up the old tradition of the monopoly of French as the language of diplomacy and it thus looks that English is fast becoming the most influential language in the world. Indians need not therefore regret the strong root which English has taken in this country.

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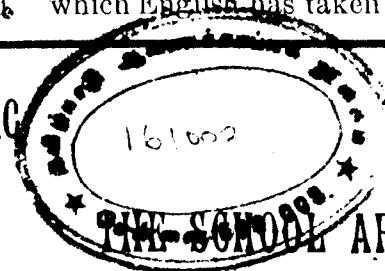
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