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By Prof. P. SESHADRI, M.A.,
The Benares Hindu University.

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learning, the Madras Religious Endowments Board will only be ultimately advancing the cause of Hinduism and strengthening the life of the people of the ancient faith. From the standpoint of Hindu religious and cultural advancement, as well as from purely academic considerations, this idea of a new University on essentially Hindu lines, should therefore receive a cordial welcome in Southern India. South India has been the home of Hindu culture for centuries and has preserved some aspects of it in a purer and more inspiring form than the rest of India, and it is appropriate it should now make an effort at conserving it for her people, making the Hindu University in course of time, a very effective and powerful comrade of the Benares Hindu University in the North, in the work of a great Hindu renaissance.

In view of the proximity of the shrine of Sri Venkateshwara at Tirupathi, the rich

* A Memorandum prepared for the use of the Madras Religious Endowments Board.

historical associations connected with it and the scope for future expansion it affords, Chandragiri is undoubtedly a suitable site for the proposed University. After the tragic debacle of the Hindus at the Battle of Talikota resulting in the almost total collapse of the Vijayanagar Empire, and after a brief trial of sovereignty at Penukonda, an effort was made at Chandragiri by the survivors of the dynasty to rally the forces of Hinduism and resuscitate the empire which had played such a prominent part in the History of India during the preceding two or three centuries. The palaces of the Vijayanagar Rajas still survive as dumb witnesses to this chapter of South Indian History and it is fitting that they should house a great centre of learning, aiming, in the main, at the resuscitation of Hindu culture and civilisation. Curiously enough, the spot is also associated with the beginnings of the British Empire in India, the hamlet of Madras, as it then was on the Coromandel Coast, as is well known, having been granted to the East India Company for the purpose of founding a settlement in the year 1639. The associations of Chandragiri also go back to some of the early legends of Hindu mythology and the place thus combines in itself rich traditions of various kinds to serve as a great inspiration for the future.

Whatever might be the details of University work proposed to be done at this centre, special stress must be laid in it on the development of Hindu culture, though in intimate contact with the critical and scientific spirit of modern times. The compulsory study of Sanskrit which is at the basis of all the valuable aspects of Hindu culture and civilisation, in the Faculty of Arts as well as in a special Faculty of Oriental Learning; the development of South Indian

languages, particularly, Tamil and Telugu, for which its location will offer special facilities; the pursuit of Hindu art which stands in particular need of resuscitation to-day; the advancement of the ancient Hindu sciences, particularly of the Ayurvedic system of medicine, and their establishment on a basis of scientific investigation; specialisation in such subjects as Hindu history and philosophy and economics in relation to Indian conditions—these are some of the directions in which efforts must be made by the University to advance the main purpose for which it is started. Otherwise, there would be little justification for the diversion of the funds of Hindu temples for the establishment of this University. The University would be considered successful by the Hindu community only to the extent to which it will work for the realisation of this ideal and it is hoped that nothing will be done to make the Hindu worshipper at the shrine of Sri Venkateshwara feel that the offerings he makes at the altar, in the fulness of his devout faith in the ancestral faith of his land, are being used for purposes inconsistent with or even very much outside the relationship of Hinduism and Hindu civilisation.

This emphasis on the conservation of Hindu culture is undoubtedly intended not to exclude the study of Western learning of certain kinds at the University, without which the *alumni* would be unfit to discharge effectively some of the most important obligations of modern life. The ancient learning itself will put on new life by association with this modern culture and prosper by the adoption of the critical and scientific spirit of to-day. It is also necessary to remember that the University cannot be a success unless the products are enabled by

their education and training to enter the various services and the learned professions of the Presidency like the graduates of any other University in the country. The young men trained by the new University will have specialised in some aspects of Hindu learning and culture, but in general education, they should be found as good as other graduates for these purposes. In view of some of the novel features of this University, which may have some unsettling effect on the public mind at least at the beginning, it would be desirable to have an assurance in the Act constituting the University on the lines of the following Section (No. 16) in the Benares Hindu University Act of 1915: "The degrees, diplomas, certificates and other academic distinctions granted by the University, shall be recognised by the Government to the same extent and the same manner as the corresponding degrees, diplomas, certificates and other academic distinctions granted by any other University incorporated by an Act of the Governor-General in Council."

More than in the provision for the teaching and the specialised study of some subjects having a bearing on Hindu culture, the essentially Hindu nature of the University must be apparent in the atmosphere and in the every-day life of the students in their hostels. It is hoped that religious instruction and congregational prayer will form a distinctive feature and there will be provision for Hindu worship and the observance of the great Hindu festivals at the University. It is only if the students of the University are in residence that it would be possible to evolve this ideal and create a condition of rich University life justifying the starting of a new institution.

Proceeding to a consideration of the subjects and the courses which will be taught at the University which will of course admit students only after passing the Admission or the School Final or some equivalent examination, reference must first be made to the Faculty of Arts containing provision for a two years' Intermediate and a two years' B. A. course with Honours courses for three years in a few subjects after completing the Intermediate. Sanskrit, English and Composition in the mother-tongue will be compulsory and students will be expected to take two other subjects at the Intermediate and only one other at the B.A. from the following:—Mathematics, Philosophy, Economics, History, Music, Painting and Architecture. It is hoped that the idea of providing for the teaching of the Fine Arts will appeal to many as a very desirable reform. It may be pointed out here that the Benares Hindu University has just laid down courses in Painting and Music for the special benefit of girl-students, and the recent University Reform Committee in Bombay has also recommended the inclusion of these subjects in University courses. It is hardly necessary to say that the latter subjects will be taught essentially from the Hindu standpoint, some very praiseworthy attempts having been made in recent years to revive the study and practice of the Hindu style even in architecture in many parts of India. In the Honours courses, syllabuses should of course be laid down for specialisation in single subjects, with, if possible, some knowledge of a subsidiary subject. While the graduates of the Faculty will not have read exactly the same courses as those now taught in the other Universities, of Madras and Mysore for instance, it is hoped steps will be taken to see that their

intellectual efficiency will, by no means, be less and they will be found to have the additional advantage of having been brought up upon a culture more related to their immediate surroundings and the land of their birth. It is, of course, understood that even in subjects like History and Philosophy, special stress will be laid on Hindu life and thought.

There are many Sanskrit Colleges now all over India and some of a fairly good type even in the Madras Presidency, but the proposed University should be able to run a Faculty of Oriental Learning eclipsing most of them in efficiency as well as in magnitude. Provision should be made for the teaching of all the main branches of Sanskrit learning, Sahitya, Vyakarana, Vedanta, Mimamsa, Sankhya-Yoga, Nyaya-Vaisesika, Veda, Karma-Kanda and Dharma Sastra, and an attempt should be made not merely to teach these up to the most advanced standards, but in doing so also combine the best methods of the indigenous Pandits and those of Sanskrit scholars trained in Western methods of research and investigation. This aim will be realised by the employment of a staff chosen from both these types for work in the Faculty of Oriental Learning and also by framing the courses in such a manner as to expect a knowledge of English and modern methods of criticism. Students should be admitted into this Faculty on passing the Matriculation or School Final, or some equivalent examination with Sanskrit as one of the subjects or on passing the *Pravesika* Examination in an Oriental Faculty with a knowledge of English equal to the Matriculation standard. There should be provision for a *Madhyama* course of two years corresponding to the Intermediate; another

two years' course leading to the *Sastri* corresponding to the B A. degree and finally, a two years' course for the *Acharya* on the same lines as the degree of Master of Arts. Sahitya, Vyakarana and English, the last not necessarily of the same standard or even type as in the Faculty of Arts, would be compulsory at the *Madhyama* and *Sastri*, and there will be provision for the optional study of others, while at the *Acharya* stage, the student will of course be expected to specialise only in one branch of Sanskrit learning.

I would propose that the University should start teaching two of the Hindu sciences, Ayurveda and Jyotish, branches in which Hindus have great achievements to their credit, either in the Faculty of Oriental Learning or in a separate Faculty of Science. A striking feature of the teaching of these two subjects in the University should be the combination of the scientific methods of the West with a knowledge of the best and most comprehensive ancient Hindu theory in each of them. The Science of Ayurveda cannot make any real advance unless there is an attempt on the most up-to-date lines at the chemical analysis of the plants and drugs of the system with a view to its being placed on a sound scientific foundation, while the University will also be expected to take advantage of all the recent advances of Surgery and Medicine in the Western world. A successful working of this department on these lines will by itself constitute a record worthy of the new University. The establishment of an Observatory and the use of modern astronomical instruments should strengthen the Faculty of Jyotish and bring back the glorious traditions of ancient India when the whole world had to carry astronomical lore from these shores. The encouragement

BUDGET ESTIMATES.

I
EXPENDITURE

1. THE FACULTY OF ARTS.

The expenditure on the Faculty of Arts may be roughly estimated as follows:—

Provision will have to be made for one high class University Professor with very superior qualifications, for each of the following subjects embraced by the courses, on a salary of Rs. 500-50-1000 per mensem:—English, Sanskrit, Mathematics, Philosophy, History and Economics. One of them should also act as the Dean of the Faculty. The head of the department of Indian languages (Tamil and Telugu) and the head of the department of the Fine Arts (which will include Music and Architecture) should also belong to the same cadre. It must be remembered that the duties of the head of a department in a University are of a more responsible nature than those of a College Professor, and it is not possible to get Professors suitable for the purpose on a lower scale of salaries. It may also be mentioned that these salaries are somewhat lower than those now obtaining in most of the Indian Universities.

The number of assistants in the various departments will depend largely on the number of students and sections in the various classes, but on a rough calculation, it may be said that about three assistants should suffice for each of the eight subjects, with an extra two, each for English and Sanskrit, in view of the fact that they will be compulsory subjects in the Faculty and the number of students taking them up will be comparatively larger. Of the twenty-eight assistants ($8 \times 3 + 2 \times 2$), ten may be lecturers on Rs. 300-20-500 per mensem, and eighteen assistant lecturers on 150-10-250 per mensem. The number will be found adequate enough for tutorial assistance also at least in the earlier stages.

Some provision is also necessary for scholarships or Under-Graduate and Post-Graduate students,

of research and advanced study must form an essential feature of all branches of the University and provision must be made in every one of them for a liberal supply of scholarships and research-fellowships.

It is obviously not necessary at this stage to enter into any great detail with regard to the constitution of the proposed University, which can be considered when its establishment is resolved upon and legislation for the purpose is actually contemplated. Provision will, of course, have to be made for a full-time paid Vice-Chancellor possessing wide academic experience and genuine sympathy with the objects of the proposed University. Much of the success of the proposed institution will naturally rest on the energy and tact and personality of the executive head, especially in the earlier stages. For the rest, it is desirable to have as simple a constitution as possible, containing a general body called the Senate and its executive the Syndicate. If necessary, executive matters of a non-academic type may be entrusted to an Executive Council with an adequate representation of those not engaged on the teaching staff of the University. It is hoped that the Mahant of the Tirupati Temple will have some honorary office of dignity in the new constitution in grateful recognition of the fact that the very existence of the University will be due to the ancient religious foundation over which he presides and so also the President, if not all the members, of the Madras Hindu Religious Endowments Board.

A tentative budget of recurring as well as non-recurring expenditure is also enclosed. It need hardly be said that estimates can become more definite only at a later stage.

especially in view of the fact that the University will be on somewhat new lines and it would be desirable to attract clever students by such facilities. There must also be a few fellowships for research without which there cannot be the right atmosphere for a University. A beginning may be made with fifteen scholarships on Rs. 15 each per month, 10 scholarships on Rs. 25 each per month and five research-fellowships to be distributed among the departments on Rs. 75 each per month. This provision will, of course, exclude the granting of free scholarships and half-free scholarships to poor students, who may be expected to come in large number to a University of the kind proposed. They may be granted, as is usual in many colleges, to the extent of 5% or even 10% of the total number of students in the institution.

A monthly budget of Rs. 250 should probably cover the expenditure on the clerical and the menial staff for the Faculty; the contribution to the Provident Fund of the staff should amount to about Rs. 1,610 per month, calculated at 10% on the salaries of the staff and Rs. 250 per month may be assigned for contingencies and miscellaneous expenditure for the Faculty.

The total expenditure per month will thus be as follows:—

Teaching Staff.

	Rs. A. P.
8 University Professors on Rs. 500-50-1000 or an average salary of Rs. 750 per month ...	6,000 0 0
10 Lecturers on Rs. 300-20-500 or an average salary of Rs. 400 per month ...	4,000 0 0
18 Assistant Lecturers on Rs. 150-10-250 or an average salary of Rs. 200 per month ...	3,600 0 0
Clerical and menial staff	250 0 0

Contribution to Provident Fund ...	Rs. A. P.
Contingencies and Miscellaneous ...	1,610 0 0
Scholarships and Fellowship:—	
15 Under-Graduate Scholarships on Rs. 15 per month ...	Rs. 225
10 Post-Graduate Scholarships on Rs. 25 per month ...	Rs. 250
5 Research Fellowships on Rs. 75 per month	Rs. 375

Total 16,560 0 0 per mensem
Or 1,98,720 0 0 per year.

2. THE FACULTY OF ORIENTAL LEARNING.

Provision will have to be made in the Faculty of Oriental Learning for the appointment of a Dean on Rs. 500-50-1000 and for the appointment of an adequate number of high-class Pandits to represent the various departments of learning. The person in charge of the Faculty of Oriental Learning must be thoroughly conversant with Western methods of study and criticism, in addition to being a profound scholar of Sanskrit on indigenous lines of scholarship.

There will be ten departments in the Faculty representing the various branches of Sanskrit Scholarship, excluding Ayurveda and Jyotish, which are dealt with in the Faculty of Science. Sahitya and Vyakarana will claim the first attention and will contain the largest number of students. The six *Darsanas* will fall into four departments as follows:—

Vedanta
Mimamsa
Sankhya-Yoga
Nyaya-Vaisesika

Veda, Karma-Kanda and Dharma Sastra will form the three departments pertaining to Theology; the Agamas may be provided for in connection with *Karma-Kanda*. A section relating to Purana and Itihasa should furnish valuable training to

Pandits for the work of preaching and performance of Kathas.

An average supply of three Pandits for each department will probably be enough, though sections like Sahitya and Vyakarana may need an extra hand each which will be compensated for by possible reductions in other subjects. The financial provision for Pandits may be as follows:—

Ten Pandits on Rs. 200-10-300, or on an average salary of Rs. 250 per mensem. Rs. 2,500.

The provision for stipends and scholarships will have to be more liberal in the Faculty of Oriental Learning than in the other departments of the University and the following scale is suggested:—50 stipends at Rs. 10 per mensem; 25 stipends at Rs. 20 per mensem, and 5 research fellowships at Rs. 50 per mensem, bringing the total expenditure to Rs. 1,250 per mensem under this head.

Other items of necessary expenditure are:—Clerical and menial staff, Rs. 250 per mensem including one or two Copyists for copying manuscripts; Provident Fund contribution at 10% of salaries, Rs. 650 per mensem, and Rs. 100 for contingent and miscellaneous expenses. The total expenditure under this Faculty will be as follows:—

Staff:

	Rs. A. P.
Dean of the Faculty on Rs. 500-50-1,000 or an average salary of Rs. 750 per month ...	750 0 0
10 Pandits on Rs. 200-10-300 or an average salary of Rs. 250 per month ...	2,500 0 0
20 Pandits on Rs. 100-10-200 or an average salary of Rs. 150 per month ...	3,000 0 0

Clerical and menial staff including one or two copyists ...	Rs. A. P.
Provident Fund Contribution ...	250 0 0
Stipends and Scholarships ...	650 0 0
Contingent and Miscellaneous Expenses ...	1,250 0 0
	100 0 0

Total ... 8,500 0 0 per mensem
Or 1,02,000 0 0 per annum.

3. THE FACULTY OF SCIENCE.

Ayurveda.

The proposal to specialize in Ayurveda and to work for its being based on scientific principles will imply a staff containing medical men possessing high-class qualifications in Western Medicine and also high-class Ayurvedic Pandits trained in indigenous methods. The following staff will probably be found adequate to start with:—One Dean on Rs. 500-50-1000 and four other appointments as follows: one on each of the following grades: two to be held by Doctors with Western qualifications and two to be held by Ayurvedic Physicians:

Rs. 300-20-500
Rs. 200-20-300
Rs. 150-10-250
Rs. 100-10-200

The scientific analysis of Indian medical drugs and other aspects of research should receive special attention in this department and provision should be made for four research-fellowships on Rs. 75 each per mensem. The clerical and menial staff including compounders may be expected to cost Rs. 250 per mensem and medicines and other contingencies another Rs. 250 per mensem, while the contribution to the Provident Fund will amount to Rs. 200 per mensem. Provision may also be made for ten stipends at Rs. 25 per mensem.

The expenditure on this Section will therefore be as follows :—

Staff :	Rs. A. P.
Five appointments on average salaries of Rs. 750, 400, 200, 100, respectively ...	1,750 0 0
Clerical and menial staff including Compounders ...	250 0 0
Provident Fund Contribution ...	200 0 0
Research Fellowships ...	300 0 0
Stipends and Scholarships ...	250 0 0
Contingencies including Medicines ...	250 0 0
Total ...	3,000 0 0 per mensem Or 36,000 0 0 per annum
<i>Jyotish.</i>	

If it is decided to start a Section for Jyotish, the following additional provision will have to be made :—One appointment on each of the following grades, two to be held by those who have studied Western Astronomy and two to be held by Pandits of Jyotish :

Rs. 300-20-500
Rs. 200-20-300
Rs. 150-10-250
Rs. 100-10-200

It is understood that the department will work in close co-operation with the department of Mathematics, the head of which department may exercise supervision over this section. The items of expenditure on this department will, therefore, be as follows :—

	Rs. A. P.
Staff ...	1,000 0 0
Provident Fund Contribution ...	100 0 0
Clerical and menial staff ...	100 0 0
2 Research Fellowships on Rs. 75 per mensem ...	150 0 0

4 Scholarships at Rs. 25 per mensem ...	100 0 0
Miscellaneous ...	50 0 0
Total ...	1,500 0 0 per mensem Or 18,000 0 0 per annum

4. ADMINISTRATION AND MISCELLANEOUS.

One of the serious financial responsibilities involved in the creation of a new University is the expenditure necessitated for Administration and the numerous Miscellaneous activities for creating a University atmosphere and carrying on high-class educational work. A tentative budget is suggested here :

1. Administration :

	Rs. A. P.
Full-time Vice-Chancellor on Rs. 1,500-100-2,000 ...	1,750 0 0
Registrar on Rs. 400-20-600 ...	500 0 0
Staff for the Registrar's Office :	
A Head-Clerk, an Accountant, a Steno-Typist and two Clerks, on Rs. 150, Rs. 100, Rs. 100, Rs. 50 and Rs. 50 respectively and menial staff on Rs. 50.	500 0 0
Provident Fund Contribution ...	275 0 0
Contingencies and Miscellaneous ...	200 0 0

Total ... 3,225 0 0 per mensem
Or 38,700 0 0 per annum

Examination, net expenditure excluding examination fees ...	5,000 0 0 per annum
Travelling Allowances ...	2,000 0 0 per annum
Total ...	45,700 0 0 per annum.

2. The Library :

Librarian on Rs. 300-20-500 or on an average salary of Rs. 400 per mensem ...	400 0 0
Clerical & Menial Staff ...	100 0 0
Provident Fund Contribution ...	50 0 0

Total ... 550 0 0 per mensem
Or 6,600 0 0 per annum
Books ... 5,000 0 0 per annum
Total ... 11,600 0 0 per annum.

3. Medical Department and Department of Physical Welfare :

Two appointments on Rs. 300-20-500 or on an average salary of Rs. 400 per mensem ...	800 0 0
Two assistants on Rs. 100-10-200 or on an average salary of Rs. 150 p.m. ...	300 0 0
Gymnastic and Drill Instructors and Menial staff ...	150 0 0
Provident Fund Contribution ...	125 0 0

Total ... 1,375 0 0 per mensem
Or 16,500 0 0 per annum.

4. Public Works :

Staff at Rs. 250 per month ...	250 0 0
Provident Fund Contribution ...	25 0 0

Total ... 275 0 0 per mensem
Or 3,300 0 0 per annum
Repairs ... 5,000 0 0

Rs. A. P.

5. Hostels ...	5,000 0 0 per annum
6. Religious Instruction ...	5,000 0 0
7. Drainage and Sanitation ...	5,000 0 0
8. Miscellaneous and Unforeseen ...	5,000 0 0

5. TOTAL EXPENDITURE.

The total recurring expenditure on the proposed University will be as follows :—

Faculty of Arts ...	1,98,720 0 0
Faculty of Oriental Learning ...	1,02,000 0 0
Faculty of Science :	
Ayurveda ...	36,000 0 0
Jyotish ...	18,000 0 0
Administration including Examinations and Travelling Allowances ...	45,700 0 0
The Library ...	11,600 0 0
Medical and Physical Welfare ...	16,500 0 0
Public Works ...	8,300 0 0
Hostels ...	5,000 0 0
Religious Instruction ...	5,000 0 0
Drainage and Sanitation ...	5,000 0 0
Miscellaneous ...	5,000 0 0
Total ...	4,56,820 0 0

II

RECEIPTS.

It will be seen that the recurring expenditure on the University will be about four lakhs and a half per year. The amount must be met by surplus funds of the Tirupathi Devasthanam, grants from Government and fees from students. The last item may amount to Rs. 25,000 per year on a basis of 200 students being admitted in the University at the beginning. In view of the large demand for admission in the existing Colleges in the Madras Presidency, this expectation is not at all extravagant. In calculating the funds to be diverted from the Devasthanam, it is necessary to take into account the amount which is now being spent by the authorities of the temple on the

Sanskrit College and the Ayurvedic College now maintained by them, as they will merge into the corresponding Faculties of the University.

The two High Schools now maintained at Vellore and Tirupathi will, of course, continue and serve as feeders to the University, though actual affiliation may not be possible as the University will be unitary and residential. They may have to be strengthened to make them subserve better the needs of the University.

III

NON-RECURRING EXPENDITURE.

It is understood that the Palace of the Rajas of Vizianagaram at Chandragiri will be available for the purposes of the University. It is difficult to say, without an actual inspection of the buildings conducted with the help of Engineering experts, what amount exactly it will cost to transform it into a proper habitation for a modern University. There will also have to be Hostel accommodation provided for at least about two hundred students

to start with. As it is intended that the University should be a unitary and residential one, there must be a large number of residences for the members of the teaching staff. The clearing of the grounds, the laying of water and electricity, the preparation and the equipment of the play-ground and gymnasium are other necessary items of expenditure. The Library and Laboratory, at a very modest estimate, would cost a lakh of rupees each for equipment excluding the cost of the buildings. On a rough estimate, it may be said that at least a sum of rupees ten lakhs would be required for non-recurring expenditure to start the University and it would be necessary in the first five years to supplement the amount by further annual grants of one or two lakhs of rupees. It is understood that the Tirupathi Devasthanam has an accumulation of forty-five lakhs of rupees as savings and it should not be difficult to find this non-recurring expenditure for the purpose of inaugurating the University.

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NELLORE DISTRICT TEACHERS' GUILD: FIRST ANNUAL CONFERENCE.

WELCOME ADDRESS

By Mr. R. VENKATA SIVUDU, M. A., L. T.,
Principal, V. R. College, Nellore.

IN according to you the humble but hearty welcome of the District Teachers' Guild, Nellore, I would request you to bear in mind the fact that the Guild is hardly two years old, and that our strong point is not past achievement, but hope and aspiration for the future.

A NEW AWAKENING.

All around, there are unmistakable signs of a new awakening. Not only in matters political, but in all affairs pertaining to the country, there is a new spirit noticeable. People are no longer content to think and move in old grooves. There is a hearty discontent with the old order of things, coupled with a sincere desire to try "fresh fields and pastures new." The school-master may be proverbially conservative in his views and habits all the world over. But even he, if only in the interests of securing a better respect for his calling, is obliged to recognise the necessity for a change. Strictly speaking, his place is not in the rear, but in the very vanguard of the nation on its onward march. He is there not simply to guide and to warn, but actually to lead. It is not till then that a nation's condition is at its best. Amid the altered and altering state of things, he cannot afford quietly to sit with folded hands. He must re-examine his time-honoured first principles and practices, and see if they stand the latest scientific and psychological tests. He is under the necessity of making an impartial

survey of the whole field of education, rejecting all that is false, and restoring all that is true, irrespective of prestige or precedent. I do not for one moment contend that the present-day teacher in India is all that is expected of him; but merely observe that he is, more than ever, alive to the responsibilities of his profession.

THE ANDHRA COUNTRY AND THE ANDHRA UNIVERSITY.

Perhaps of no other part of the country can it be said that it has emphatically become the battle-ground of things old and new, than the *Andhra Desa*. Here of late has the teacher been assailed and the respectability of his calling again and again openly questioned. Not simply by frantic crowds in moments of political excitement, but by hard-headed people in the subsequent period of a return to sober judgment, have the credentials of the teaching profession been discredited, so much so, that teachers of a sensitive nature are subject to serious heart-searchings. The rank and file of the profession, though not so panicky, are nevertheless more or less affected by the stormy atmosphere, and are convinced that things educational need a thorough re-casting.

The New Madras University Act and the Andhra University Act are partly the response, on the part of the Government and the Legislature, to this tension of feeling in the country. We are more directly concerned with the Andhra University. This is not the time, nor the place, however, for making any lengthy reflexions on an Act that has already been passed and that is shortly to be put into force. No useful purpose will be served by subjecting the measure to a searching criticism at this stage. Suffice it

A word has to be said about technical education in the district. The District Board again deserves our sincere thanks for the beginning made in introducing Weaving and Carpentry in some of their schools. The A. B. Mission too deserve our congratulations on the improvement of the agricultural side of education in their High School at Nellore.

It is in the expansion of technical education, and the technical side of education in our High Schools, that relief must be sought for the congestion of classes in schools and colleges. But there is a superstition in avoiding superstition. The functions of general and technical education are for the most part distinct and separate. It is only within certain limitations that the two can be made to go together. To expect that a student will become, at the end of his High School course, an expert weaver or carpenter, is as absurd as to expect that such a student becomes a proficient in arts or science! The utmost that can be expected of him is that, in addition to acquiring a general grounding in the subjects of study, he should obtain a working knowledge in regard to the handling of his tools and of his materials. If he has found a real taste for his technical subject, he has to complete a course of study in some technical institute.

The requirements of affiliation with the Andhra University demand that all colleges must, within a short time, develop into first-grade colleges. Our district has made a good start by raising the V. R. High School of Nellore into a second-grade college. If we really feel that our district should not go unrepresented in the Andhra University, the duty of developing the single second-grade college in the district into a first-grade institution devolves on us all. The delicacy

connected with a close association with the institution forbids me from speaking more at length on [the subject. But in whichever hands the immediate direction of the affairs of the college may be, the citizens of the district too, including the members of the teaching profession, have an important duty to discharge in the matter. All should work, each in his own humble measure, for the complete success of the institution, so that it may be worthy of being considered a representative college for the district.

THE TRUE FUNCTION OF THE TEACHER AND OF THE TEACHERS' GUILD.

I must ask my brother-teachers not to take too narrow a view of things educational, lest they should lose their souls entirely in things local and temporary, but occasionally to rise to a high altitude, and contemplate truths respecting the profession which are good for all time. The true teacher, like the poet's hero, may have his feet planted on the ground, but his head must oftentimes be lifted far above the cloud-land of world's sorrow and circumstance, into calm, serene, celestial regions. We are God's own missionaries charged with solemn, sacred work. Let the world, if they like, pride themselves on being the providers of food and raiment to us. But these are not things for which we mainly or primarily exist. We should not barter away for them the integrity of our souls which has to be dedicated to nobler causes, higher purposes. The true Teachers' Guild is an association of teachers who feel themselves charged with such a holy mission, and everything they say or do, must be calculated to keep before them constantly their high aims and aspirations.

May God make us such a band of earnest workers!

THOUGHTS FOR TEACHERS ON EVERYDAY SOCIAL PROBLEMS

By Miss CORRIE GORDON, ED. B. (Edin.),
Lecturer, Teachers' College, Saidapet.

I. THE PROBLEMS OF THINKING AND DOING.

"Lives of great men all remind us
We can make our lives sublime,
And departing leave behind us
Footprints on the sands of time—
Footprints that perhaps another,
Sailing o'er life's solemn main,
A forlorn and shipwrecked brother,
Seeing, shall take heart again.—

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How will they set about their task? Some of these questions have been asked by many generations, and no definite answers have yet been found. We must see to it that the Nation's Youth, like runners in a race, must begin early to train their bodies, to fit their minds, to develop their characters in order to tackle the problems aright.

There are three main lines of training that the writer has in view for this paper, along which the Nation's Youth must be directed, and directed well, if the nation is to take the high road to increasing greatness, wealth and justice.

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to state that people have to accept it on the principle of "half a loaf." It is not sufficiently liberal, not does it go sufficiently deep into the real needs of the people. It copies and perpetuates most of the weak points of the Madras University Act. But when we have said this, we have not said all. The wiser thing for us, under the circumstances, is to accept thankfully whatever good things it provides, rather than be sorry for those it does not. For one thing, the Act seeks to promote the development of the study of the vernaculars and their use as media of instruction and examination, and to cultivate and promote Arts, Science, Professional Studies and Technology. The Andhra University will, I understand, specialise in certain directions immediately, say, Engineering and Science. These are all good. If only sufficient financial help be forthcoming from the public and the powers that be, to realise the good things it provides, we must really feel grateful to the Hon'ble Sir A. P. Patro, the Educational Minister, who is its sponsor. The fact that the whole Andhra country will be united for the first time for University purposes, certainly augurs well for the rapid evolution of the Andhra genius under congenial circumstances, and may be safely expected to provide opportunities for the unification of the Telugu-speaking people in political and other matters.

OUR STRONG POINTS.

In the meanwhile, it is well that we should take stock of the needs of the district and of its strong points, so as to have an idea of the help we expect from, and the mite we have to contribute to, the Andhra University. Speaking of the last first, among the strong points of our district, may be mentioned the

great traditions to the credit of Nellore in the history of Telugu Literature. Not to speak of the many brilliant writers in the past, it has contributed the great Tikkana, prince among the Telugu poets. There are a good many distinguished writers at the present time, and if the district is only resolved to live up to its reputation in the past, I do not know if any other district can hope to excel her. We of the Nellore District must therefore be prepared to take our own share in the development of the literature which is so dear to us, and which constitutes one of the great objects of the Andhra University.

The picturesque landscape and beautiful scenery, which are a feature of the greater part of the district, ought to go a great way in fostering not only the poetical, but the practical talent, of the people. Hill and dale, stream and jungle, in which the district so largely abounds, should be a great incentive to study and research in sciences like Botany, Chemistry and Mineralogy. Our mica mines and forest tracts can be easily expected to supply raw material for new indigenous industries.

The reputation which our district commands in the matter of producing the finest rice in these parts will easily suggest another direction, in which the University and the Government can avail themselves of the resources of the locality. The Government must ere long make good its promise of opening an Agricultural Section to the already existing Cattle Farm at Chintaladevi. The Andhra University cannot justify its existence unless it has a college in this part of the country, corresponding to the institution in the sister University located at Coimbatore. Unless the Andhra graduate learns the

dignity of labour, and as a first instalment, engages himself in the profitable work of field and garden, agricultural backwardness cannot be banished, and the cry of unemployment among educated classes appreciably diminished.

As another strong point of the district may be mentioned the presence in it of a community of men who, though at present steeped in the darkest depths of ignorance, may, under more favourable circumstances, be made to contribute to the prosperity of the country. Better and richer by far than mere agricultural or mineral resources of a country, is its man-power. The *Yanadis*, a very strong sturdy race, are a feature of the district. How to overcome the physical and intellectual inertia of these people, and to turn to account their energy and resources for the betterment of the country, is an important problem with us. As things stand, the district benefits very little by their presence. On the other hand, the poor people, owing to their lazy and sedentary habits, have become an object of public suspicion. In some places, they are included among the recognised criminal tribes. If only the country can have access to the industry and co-operation of this community, many difficulties connected with the shortage of labour can be easily solved. What is now a source of trouble and annoyance, will then be metamorphosed into a positive blessing.

THE NEEDS OF THE DISTRICT.

Turning now to the other question of the needs of the district, we may say that some of these have been already hinted at. The backwardness of the people in certain places is really frightful. Among all the Coast Telugu districts, I fear our district fares worst

as regards Primary Education. I do not know if there is any other district in this part of the country which has fewer High Schools or Middle Schools. Female education too is in a very unsatisfactory state. The education of the backward classes including *Panchamas*, is also at a discount. Statistics respecting numbers in schools have, in certain cases, ceased to convey any real meaning. The average night-school teacher is generally believed to have become notoriously greedy and untrustworthy, so much so, that he has found it more paying to cook accounts than to take pains to teach! I do not know if things have reached such a woeful climax in other districts, but here a night-school has almost become a by-word for a hoax and humbug!

Then we must address ourselves to the question of High School education in the district. Thanks to the Nellore District Board, the number of High Schools has been recently increased. But even now, I fear that it is not at all adequate to the needs of the locality. Not till each Taluk town has at least a full-fledged High School, can the state of Secondary-school education be termed at all satisfactory. The congestion of High Schools in the District town is far from satisfactory. It is not at all desirable that a boy of 12 or 13 should be abruptly torn from healthy home influences, and sent to distant places for purposes of study. I am sick of seeing the thin and pale faces of young boys who, being half-starved on the scanty fare in hotels, make amends by haunting coffee restaurants! It is certainly not too much to expect a parent to take the entire care of the boy till at least the High School course is completed. I am no implicit believer in the moral atmosphere of hostels or the healthiness of hotels in the case of little school-boys in district towns.

A word has to be said about technical education in the district. The District Board again deserves our sincere thanks for the beginning made in introducing Weaving and Carpentry in some of their schools. The A. B. Mission too deserve our congratulations on the improvement of the agricultural side of education in their High School at Nellore.

It is in the expansion of technical education, and the technical side of education in our High Schools, that relief must be sought for the congestion of classes in schools and colleges. But there is a superstition in avoiding superstition. The functions of general and technical education are for the most part distinct and separate. It is only within certain limitations that the two can be made to go together. To expect that a student will become, at the end of his High School course, an expert weaver or carpenter, is as absurd as to expect that such a student becomes a proficient in arts or science! The utmost that can be expected of him is that, in addition to acquiring a general grounding in the subjects of study, he should obtain a working knowledge in regard to the handling of his tools and of his materials. If he has found a real taste for his technical subject, he has to complete a course of study in some technical institute.

The requirements of affiliation with the Andhra University demand that all colleges must, within a short time, develop into first-grade colleges. Our district has made a good start by raising the V. R. High School of Nellore into a second-grade college. If we really feel that our district should not go unrepresented in the Andhra University, the duty of developing the single second-grade college in the district into a first-grade institution devolves on us all. The delicacy

connected with a close association with the institution forbids me from speaking more at length on [the subject. But in whichever hands the immediate direction of the affairs of the college may be, the citizens of the district too, including the members of the teaching profession, have an important duty to discharge in the matter. All should work, each in his own humble measure, for the complete success of the institution, so that it may be worthy of being considered a representative college for the district.

THE TRUE FUNCTION OF THE TEACHER AND OF THE TEACHERS' GUILD.

I must ask my brother-teachers not to take too narrow a view of things educational, lest they should lose their souls entirely in things local and temporary, but occasionally to rise to a high altitude, and contemplate truths respecting the profession which are good for all time. The true teacher, like the poet's hero, may have his feet planted on the ground, but his head must oftentimes be lifted far above the cloud-land of world's sorrow and circumstance, into calm, serene, celestial regions. We are God's own missionaries charged with solemn, sacred work. Let the world, if they like, pride themselves on being the providers of food and raiment to us. But these are not things for which we mainly or primarily exist. We should not barter away for them the integrity of our souls which has to be dedicated to nobler causes, higher purposes. The true Teachers' Guild is an association of teachers who feel themselves charged with such a holy mission, and everything they say or do, must be calculated to keep before them constantly their high aims and aspirations.

May God make us such a band of earnest workers!

THOUGHTS FOR TEACHERS ON EVERYDAY SOCIAL PROBLEMS

By Miss CORRIE GORDON, ED. B. (Edin.),
Lecturer, Teachers' College, Saidapet.

I. THE PROBLEMS OF THINKING AND DOING.

"Lives of great men all remind us
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Footprints on the sands of time—
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First. The habit of thinking. Probably the majority of people on receiving a new book, glance rapidly through its pages to note the illustrations; often however the illustrations at the first glance do not enlighten them, but by the exercise of a fair amount of *earnest thought*, they will shed a flood of light on many important matters—The teacher should help the boys to give this amount of earnest thought to the illustrations and not consider them as being placed in a book merely for beauty or for taking up space. The word illustration is derived from

the Latin '*lustra*'—I make light'; hence illustrations should lighten up the dark corners of the mind.

In addition to pictorial light-throwers, there are numerous passages and words which cannot be revealed until they too have *earnest thought* expended on them. Words especially are often chosen for the underlying truths concealed in them, they contain within themselves marvellous stories of man's thoughts in the distant past, his actions and his progress. There is much pleasure and profit to be gained by a thoughtful study of words. This is one way of advancing our first object of training, namely, *to engender the habit of thinking*. Another way is by trying to see the two sides of every problem which arises. The Romans had a god Janus—after whom the month January is named—who was said to have two faces on both sides of his head, enabling him to see on both sides at once. "Janus, the spirit of good beginnings of all things.....with his two faces placed back to back, signifying most clearly to all men the two sides of every question, apparently opposite, but in deeper insight different and necessary aspects of one and the same common humanity." It is one of the first duties of a citizen to '*think earnestly*' for "More ills are wrought by want of thought than this world dreams of." Teachers of the Nation's Youth, I plead with you to engender the habit of thinking in your pupils

The second main object is to train the children to know for themselves that *Self-effort is the key of life*. There is a story told of a country carter whose cart wheel once struck in the mud, the carter, immediately fell on his knees and prayed to God to help him. God—it is said—looked down from Heaven and told the carter instead of praying he should put his shoulder to the wheel and

push, and then only would he get out of his difficulty—which he did. This story has for its motto those words which have become a proverb in the English language—"The gods help those that help themselves." Never let us as teachers encourage that attitude of mind which says "it is fate," "it was written on my forehead" and so forth, but let us rather encourage the attitude which says with Henley :

"I am the master of my fate,
I am the captain of my soul."

I remember Professor Adams telling us when I was a training student these words which I have never forgotten. I give them to the teachers to give their pupils: "You must not strike the iron only when it is hot, but strike the iron until it gets hot." Of course *thinking* is self-effort and so we might almost say our first object merges into the second one. Imagine the hard thinking of George Stephenson who invented the steam-engine or Lord Lister who discovered antiseptics or Kitchener who formed the largest voluntary army in the world, or Lloyd George who "won the war," and a thousand others whose names perhaps are not so well known.

But the thoughts of these men roused them to action, they were not *dreamers* only, but *doers*, and they have made valuable contributions to the world. The second object then is to establish in the minds and hearts of the children in our care the accuracy of the statement—Self-effort is the key of life. The third object is to clearly understand and make our boys understand that *co-operation is the mainspring of life*. Working together secures success in the home, in the school, at sports, at business, in peace and in war. Every school-boy knows how disastrous it is to a side if one boy plays selfishly, if he will not "pass the ball," what chance is there

of winning. The Great War of 1914—18 affords a glorious example of this power of working together to achieve a great purpose. History affords many other examples of whole nations working together with one common aim in the words of Macaulay :

"Then none was for a party,
Then all were for the State,
Then the great man helped the poor,
And the poor man loved the great,
Then lands were fairly portioned,
Then spoils were fairly sold
The Romans were like brothers,
In the brave days of old."

History also affords examples of the disastrous effects of each section working for its own ends. The downfall of the mighty Roman Empire was mainly due to the fact that one great class lived for themselves forgetful of the needs of others. We spoke of self-effort as the key of life and co-operation as the main-spring of life. The key of a watch imparts power by coiling the mainspring that sets all the works in motion. So too the self-effort of individuals can co-operate in powerful force for the general service, not only of our own family or our own class or our own nation, but for the general service of mankind.

The third main object of our work as teachers then is to train our pupils to understand clearly that co-operation is the main-spring of life.

A PLEA FOR THE SCIENTIFIC TEACHING OF GEOGRAPHY.

By

PROFESSOR G. DAVIES-WATKINS, B.Sc. (ECON.),
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Christian College, Madras.

OF all the subjects in the school curriculum, the one presenting the most enlightened view of life is geography. In fact in this respect it stands almost alone, for geography offers the most chances to bring enlightenment to the mind of a child. The aim of all geographical teaching is to arouse interest in man's life and work in the world. Viewed from this angle the subject lives, in complete contrast to the deadly treatment of the subject so prevalent in some of our schools to-day. Everything depends upon the teacher of the subject, for the work to be done must be scrupulously and critically selected, and the facts presented in so ordered and coherent a fashion that the pupils absorb the work as vital and suggestive food for a vigorous and growing mind. The teacher must feel a personal enthusiasm for arousing the interest of his pupils in the warp and weft of the matter he is presenting. Geography is so essentially a "thinking" subject in which the various aspects of a country are shown to be inter-dependent, being traceable only by a careful following of the chain of cause and effect, that the "live" teacher is the only successful one. So geography is no longer the "memory training" task of by-gone days, when long lists of names were its chief form and substance, but now it has come to its own as the best logical method of interpreting the world about us. What we need in India is a new emphasis in our schools on the importance of teaching geography, and

teaching it aright. The question is, "How best can we do it?"

We have said that the secret lies first of all in our choice of matter, and then secondly in our mode of presenting that chosen matter. Geography is now a science, and as such possesses fundamental principles and general laws. It would be possible even to teach some of these without reference to any particular country but that would not be the most desirable means. The learning of geography, like charity, begins at home, and it is the observation of the home country that is the first step in geography. Even in the earliest classes observations of weather and of the surrounding hills, roads, rivers, etc., can be done. Here we can also use great contrasts such as life in an Indian village and town with the life and country of the Eskimo. The broad contrasts of vegetation belts in the world might be taught at this stage, and then later the underlying principles of the interaction of climate and relief will be more easily taught. But always from the earliest stages to the most advanced the application to the human side of the problem must be emphasised. Geography is essentially the study of the home of Man, and that must never be lost sight of in our work. Between district and district there exist differences of climate, soil and surface, and these give rise to a diversity of products. What is grown in one district is needed in another, and so springs up the trade which occupies such an important part in the modern study of geography. Man however is not idle, and by his skill and labour he seeks to modify his surroundings and the products grown there. He becomes more and more the dictator of Nature and decides what commodities will

best serve his purposes. Thus our modern geography treats more especially of the influence exercised upon the economic activities of Man by his environment and more especially by the form and structure of the land in which he lives, the climatic conditions which prevail upon it, and the place relations in which its different parts stand to one another. It is a study of the control exerted by geographical factors upon the economic life of man and of man's response to that control.

So the student of geography must have a general knowledge of geographical principles. He must know something of the chief rocks and soils found in the crust of the Earth, causes which determine the distribution of climate, and the influence of soil and climate upon vegetation and more especially upon the growth of plants of economic importance. This is best done by a systematic regional study of the interaction between Man and his environment. The processes of thought involved in, and not merely the result of, that study, should be presented to the student.

The most attractive study of a region is one that disregards political boundaries and considers a portion of the earth's surface as a geographical unit, called a natural region. Geographical form and structure, climate, vegetation and place relations must be taken into consideration before a country can be divided into units each of which will exercise its own distinctive control upon the human activities within it, and each of which will provoke its own distinctive response to that control. The treatment of the subject will then be as follows. First a knowledge of the physical features of the area must form the basis of all further study of it. But to under-

stand topography some attention must be paid to geological structure and the morphological processes which have operated to create the present form of a district. The distinctions between folded mountains and dissected plateaus, plains of accumulation and plains of denudation, longitudinal and transverse valleys, young and mature river systems are all important, and cannot be ignored. The study of climate, which is probably the most important of all geographical controls, must be based upon physical features and place relations of the country under consideration. The distribution of vegetation within the country and the conditions affecting the growth of plants of economic value must be studied in relation to the soil and climate upon which they depend. It must not be forgotten however, that human response to these controls varies with the racial origin of the people and the standard of civilisation to which they have attained, and that the influence of geographical controls varies with the progress of science as well as with changes in the historical and economic position of a country. So history and economics must always be the hand-maidens of geography in this connection.

It will be seen therefore that geography in its study of the influence of terrestrial conditions and place relations upon the economic life of man draws upon all branches of learning useful to its purpose. But it does more in that it uses these contributions to demonstrate the interaction which always and everywhere takes place between man and his environment.

As a brief example of this method of treating geography, the case of India may be taken. Here we have a land mass that can be

easily divided into natural regions, for the divisions are seen to be broadly these:—The Northern Mts., The Indo-Gangetic Plain, and the Peninsula Mass of India. These may be further sub-divided for more detailed study, but for broad outlines this division will suffice. Each of these natural regions may then be treated in the approved manner. We will take the second division as an example of this method of treatment, and since the area Indo-Gangetic Plain is rather large, the case of the Ganges Plain alone will be treated.

The soil of this district is alluvium brought down by the Ganges from its upper channels. West of Rajmahal, the velocity of the stream carries off silt from the banks and bed of the river, but East of this place the slope of the river-bed ("thalweg") is more gentle and flooding ensues. Here therefore we find the recent alluvium and finally at the mouth of the river the swampy Sundarbans are found, a delta the natural result of the change of angle in the slope of the river-bed. So the first element in the geography of the Ganges Plain is the alluvial soil of the entire basin. If this were all that determined the products of this district, then the whole of the basin would produce the same crops. But the next factor in differentiating products in this area is the rainfall. West of Allahabad, the rainfall is less than 40 inches per annum. East of this town the rainfall increases to between 40 and 50 inches, and on the recent alluvium as far as the Brahmaputra the amount is between 50 and 75 inches. Beyond this river the amount is as much as 75 to 100 inches per annum. So the crops of the whole basin are sub-divided according to the humidity of the different parts. West of the bend of the river at Rajmahal the vegetation is

that of a dry country, and further West still where the Ganges basin merges into that of the Indus the trees are leafless in the dry season and the grass is burnt up. East of Rajmahal where the rainfall is higher, the mango, fig, bamboo and palms flourish in abundance, and finally in the region of the greatest rainfall, the Sunderbans itself, the vegetation is luxuriant and mangroves and other evergreens abound. Thus do the two primary factors of soil and rainfall interact to produce the various types of vegetation.

But indigenous vegetation is always secondary to cultivated lands in the geographical study of a district, and so we must next discover what influence man has upon these varying regions of the Ganges basin. It may therefore be well first of all to look at the ethnical make-up of the district and from that to observe the reactions of the various races to their environments. The basins of the Ganges and the Jumna from the Eastern frontier of the Punjab to the Southern boundary of Bihar, contain an inter-mixture of Indo-Aryan and Dravidian races. The former race is confined almost exclusively to the upper classes and the latter is the poorer type of worker. Here it is that the caste system is almost fully developed. The delta of the Ganges is occupied by a Mongolo-Dravidian people which probably demonstrates the fact that the Dravidians were driven by the more warlike invaders of their land into the swamps of Bengal and there mingled with the Mongols entering India by the Brahmaputra.

It is rather interesting to note how all these factors contribute to the differentiation of the crops found in these districts. Of course in all the three sections agriculture is the chief

occupation and the population dense. In the West, irrigation is necessary on an extensive scale, and man has done much here, helped by the British Government. The Upper Ganges Canal waters 1,000,000 acres in Upper Doab and the Lower Ganges Canal is designed to supply over 860,000 acres in Lower Doab. In addition to these canals there are thousands of wells and all the natural depressions in the alluvial plain are used also for storing water. By this means the district is able to support a population of 410 per square mile. The principal grain crop is rice, and wheat is raised as a winter crop, though millet is the staple food of the people. Other crops are cotton, which covers 3 per cent. of the cropped land, and sugarcane which occupies a similar proportion of the area under cultivation. In the United Provinces which may be taken to be representative of this area, 68 per cent. of the population is dependent on agriculture for a livelihood.

In the Eastern section where the rainfall is greater, rice is the staple food, and it covers about half of the cropped area. Irrigation is easy by damming the smaller streams, and the population of this area is over 490 per square mile, most of whom are agriculturists. Unfortunately there is little surplus supply of productions for export and the lack of trade renders the people poor.

On the recent alluvium where the surface is level and the rainfall great, no artificial irrigation is necessary in many parts. Rice and jute are the staple crops, and 75 per cent. of the area is occupied by these crops. Economically, the jute is the most important crop as it can be exported, and so this district can support 550 persons to the square mile

and agriculture occupies 70 per cent. to 80 per cent. of the persons outside the towns.

So important is the Gangetic Plain in the economic geography of India, that it contains 40 per cent. of the population of India. The old alluvial soil is the most important and the diversity of products and the favourable climate made it attractive to the invaders from the North-West. The confluences of great rivers afforded suitable sites for economic reasons for the growth of urban communities. Hence the number of important cities in this proportion of the plain. The recent alluvium on the other hand is flooded every year and the people are of a lower type of civilisation due to the less favourable conditions. We therefore find that in the United Provinces, a type of the first area, there is 11 per cent. of the population living in towns, and in Bengal a typical district of the latter area, only 5 per cent. of the people are town-dwellers.

This brief outline study of a district will show how geography can be used as a reasoning subject and made to live in the hands of a good teacher. The whole of the foregoing would be taught with suitable diagrams and sketch maps showing rainfall, density of population, crops, chief towns, and soils, one map for each of these aspects of the subject, or perhaps two aspects on a map in some cases. These would be built up by the students themselves working with the teacher and thus in a co-operative search the class would come eventually to an intelligent understanding of the life of the district, built up causally.

In conclusion the whole argument may be summed up thus. Geography is now a science and its method is therefore scientific.

It has general laws like any other science, and the work of the student is to learn these laws and then to apply them, observing carefully the interaction that exists between factors, each obeying the particular laws of its kind. So geography becomes the great co-ordinating science utilising the laws of all the other sciences and applying them in detail to the life of man. Meteorology, Physics, Chemistry, Biology, Economics, Agriculture, and a host of other sciences give cheerfully of their wealth, and geography uses these gifts and gives to man an instrument for his using that will make his living fuller and his outlook broader, and will give him that sympathy for his fellows that is so needful in this present age.

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AFFILIATED COLLEGES AND THE MADRAS UNIVERSITY.

By

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OF the 49 Arts Colleges affiliated to the Madras University, 27 are concerned only with the Intermediate courses and 22 have also the Degree courses. The Andhra University Act is going to remove from the Madras University jurisdiction 7 Intermediate Colleges and 4 Degree Colleges so much so that the Madras University will in future have 20 second-grade and 18 first-grade colleges. The proposed institution of the Tamil and Kerala Universities would, if soon realised, make the Madras University practically a teaching one and it might then concentrate all its attention and resources on the constituent colleges. But as long as affiliated colleges remain within its fold, the Madras University is in duty bound to see that the rules of affiliation, the educational and academic interests of the mofussil colleges are safeguarded. Further, even if besides the Madras and Mysore Universities, three more Universities are soon to be instituted, most mofussil colleges are bound to continue under the category of affiliated colleges controlled by the new Universities that naturally derive all their inspiration from the parent Madras University with regard to the traditions of control and the rules of affiliation. Such being the case it behoves the Madras University to so deal with the affiliated colleges and their academic interests and general educational policy as to reflect credit on the parent University. The highest ideal, if not the impracticable dream of the educationist, is that every affiliated college should one day develop

into a full-fledged teaching and residential University of an admirable pattern. Pending the realisation of such a pious hope of the optimistic educationist, the Madras University should see that each affiliated college has a resourceful and regularly constituted governing body, a well-qualified and well-paid teaching staff, suitable college buildings and hostels, well-furnished library and adequate provision for the physical welfare of the students, for debating societies, tutorial work, lecturing and library work, reading-rooms and above all a well-organised discipline and a well-conceived maintenance of the necessary academic ideals which can be secured only by a harmonious co-operation of the University, the governing body, the Principal and the teaching staff of the college.

There can, I presume, be no two opinions with regard to the general requirements outlined above but, instead of being satisfied with a formulation of ideals and some provision for their realisation in the statutes and laws of the University, if anybody turns his earnest attention to the astounding revelations made in the University Calendar, Vol. II, and the actual impressions of the members of the occasional Commissions appointed by the University to inspect the affiliated colleges and report on their working, he cannot but feel that there is a world of difference between what ought to take place and what is actually taking place in the colleges affiliated to the Madras University. The passing of the recent University Act by our Provincial Legislature, Chapter XVIII of the Laws of the University dealing with affiliated colleges and the rules of affiliation, the presence of most members of the teaching staff of the affiliated colleges in the University bodies (the Syndicate, the Senate, the Academic Council and the Council

of Affiliated Colleges)—all these promise no doubt a bright future for the affiliated colleges but unless and until the University, the governing bodies, the Principals and the teaching staff of the various colleges change their angles of vision, learn to understand one another better than they seem to have ever done before, consent to have the existing statutes and ordinances of the University amended wherever necessary so as to see that formally constituted staff council and respect for their deliberations by the Principal and the governing body become most normal features of every college, and three at least of the duly-elected representatives of the teaching staff are admitted into the governing body and unless the University exercises a more vigilant care of the affiliated colleges and the governing bodies show a more sympathetic attitude towards the representations of the Principal and the teaching staff, I am afraid that the prospects of the affiliated colleges are destined to be very very gloomy.

The poor pay and prospects of most of the college teachers, the absence of regularly constituted staff-councils in many institutions, the most inadequate provision made for tutorial and library work and library equipment in several colleges, lack of sufficient arrangements for the physical welfare of the students, the frequent combination of work in both the High School and College classes which a lecturer in most institutions has to tolerate, owing, of course, to the financial exigencies of the management, the absurdly poor salaries of the Vernacular Pandits who are perhaps saddled with more of high school work, the absence in most colleges of tutorial work, the presence in some colleges of tutors who are expected to do well many kinds of work entrusted to them but who, as a matter of fact,

are often reported to be capable of very little useful work, sixteen or even seventeen hours of Intermediate and B. A. work for lecturers, scant courtesy shown to the representations of the teaching staff by the management with regard to many academic matters which, though often trivial to them, form the very life-blood of true college education, the step-motherly affection of the University that every year spends a good deal of money for what are called University lectures of a high order the benefit of which is denied to the poor mofussil affiliated colleges and their students and teaching staff—these and many more might be said to constitute the chief defects in the affiliated colleges. The exact scope and latitude of the University control over the affiliated colleges, the sort of representation of the college teaching staff in the governing body, the ideals, if any, that the University has been holding out to the affiliated colleges—these and many more things should be clearly known before anybody thinks of adequate remedial measures. It is with this object that I have asked some members of the University Senate to put the following questions at the forthcoming annual meeting of the Senate. I trust they will considerably add to my list so that the answers which they elicit might form better raw material than is now available for manufacturing some *really effective* statutes, ordinances and laws of our University.

QUESTIONS TO THE SYNDICATE.

Question 1:—With reference to Law 8, Clause (a), Chapter XVIII of the University Laws, will the Syndicate be pleased to state—

(a) the method of representation contemplated by the word, "represented" and the exact significance which the University

has been attaching to the said word in the matter of granting affiliation to colleges;

(b) the names of the affiliated colleges in the governing bodies of which the teaching staff other than the Principal of the college is represented;

(c) the names of the colleges in the governing bodies of which only the Principal represents the teaching staff;

(d) the names of the colleges the governing bodies of which refuse admittance to even the Principal of the college;

(e) whether the Principal of the college is expected by the University to be an *ex-officio* member of the governing body of the college; if so, whether he so represents the teaching staff as to satisfy the requirements of the said law;

(f) the names of the colleges that elect in regularly-constituted staff councils their representatives for the governing bodies of the colleges;

(g) the names of the colleges that do not have any regularly-constituted staff councils but yet the teaching staff of which meet occasionally for electing their representatives to the governing bodies;

(h) the reasons for the phrase "except in the case of a Government college" in clause (a) of the said law;

(i) what steps and with what success have the Syndicate taken to enforce in the affiliated colleges the recommendations, if any, of the University Commissions regarding the exact observance of the said law;

(j) the maximum and the minimum number of representatives of the teaching staff which an affiliated college is expected to send to the governing body thereof;

(k) whether the Syndicate has from time to time been issuing any circulars to the affiliated colleges regarding the methods of

sending representatives of the teaching staff to the governing bodies of colleges?

Question 2:—(a) Will the Syndicate be pleased to state if it issued before or after the passing of our present University Act any circulars calling upon the affiliated colleges to form regularly-constituted staff councils for advising the Principal and the governing body with regard to academic and other matters where harmonious co-operation is required?

(b) If so, will any typical copy of such a circular be placed on the table?

(c) If not, can the Syndicate under Section 18 of the present Madras University Act see that every affiliated college has a regularly-constituted staff council with a well-defined constitution?

*Question 3:—*With reference to Clause (d) of Law 8, Chapter XVIII of the Laws of the University, will the Syndicate be pleased to state—

(a) whether it has been receiving for its approval and suggestions from every affiliated college a printed copy of the library catalogue of the college;

(b) whether any lists of the essential books necessary for the libraries of the affiliated colleges teaching any special subjects for the degree classes have been sent to the affiliated colleges;

(c) whether the books mentioned in the library catalogues (as revised and brought up-to-date every year) of the affiliated colleges are being certified to be satisfactory enough with reference to any minimum ideal requirement;

(d) whether every affiliated college is supplied free of cost with the yearly volume of the University Calendar having examination papers?

Question 4:—(a) With reference to Laws 9 and 16 of Chapter XVIII of the University Laws, will the Syndicate be pleased to state the important general headings covered by the phrase "and other information"?

(b) Has the Syndicate been obtaining from every affiliated college regular information with regard to the following:—

(i) the number of hours a week every college lecturer is working;

(ii) the number of hours a week devoted by any college lecturer for regular work in the High School classes;

(iii) the exact arrangements made for (1) tutorial work by persons other than college lecturers, (2) the physical welfare of students, (3) debating societies, (4) library classes and (5) reading rooms for students;

(iv) the grades and details of the time-scales of salaries of the Senior and Junior Lecturers, Principals and Vice-Principals, and Vernacular Pandits?

Question 5:—(a) With reference to Laws 9 and 14 of Ch. XVIII of the University Laws, will the Syndicate be pleased to state if it has been issuing to the heads of affiliated colleges any general circulars regarding the items mentioned in the question *supra*?

(b) If so, will any typical copy of such a circular be placed on the table?

(c) What steps has the Syndicate been taking to successfully enforce on the affiliated colleges its recommendations, if any, regarding the items in the question *supra*?

*Question 6:—*With reference to Law 10 of Ch. XVIII of the University Laws, will the Syndicate be pleased to state—

(a) the names of the colleges that have been granted conditional affiliation or recognition;

(b) the exact conditions insisted upon in the case of such colleges;

(c) whether the Syndicate is prepared to refuse any further recognition to such colleges in the event of the stipulated conditions not being exactly fulfilled;

(d) or whether the Syndicate is prepared to reconsider its conditions?

RESOLUTIONS CONCERNING AFFILIATED COLLEGES.

I have myself given notice of my intention to move the following among other resolutions at the forthcoming meeting of the Academic Council of the Madras University:—

That it be a recommendation to the Syndicate, the Senate and the Council of Affiliated Colleges that the following be added to Law 8, Clause (a), Chapter XVIII of the Laws of the University:—"by at least three of its elected members besides the Principal of the College who should always be an *ex-officio* member of the said governing body."

My study of the constitutions of some 35 colleges as they stood a few years ago has convinced me that the word "represented" in the said law is understood by some colleges in a broad sense and by others in a very narrow sense. To some, "representation" means representation by nomination merely, while to others, it means representation by election. The latter sense is decidedly superior to the former, especially as the adoption of such a connotation in the interpretation of the statute tends to better safeguard the academic interests of the affiliated colleges.

Even as Law 8 stands at present, no matter what construction we put on the word "represented," I am afraid that it is being

for all practical purposes, honoured more in breach than in observance. Some years back, our Madras University gathered officially in the course of its discharge of inspectorial functions in an important first-grade college that the Principal was not a member of the governing body nor was he permitted to be present at meetings of the said body except by special invitation. The said Principal was of opinion that his presence at meetings of the governing body would be of much assistance in the disposal of matters relating to the college and it appears that he once suggested to the governing body that he should receive a general invitation to attend; the suggestion was ignored and our University Commissioners in their report observed about their inability to conceive reasonable grounds for the attitude of the governing body in that matter. Most Missionary colleges observe the letter of the Law 8 most beautifully inasmuch as there are, besides the college academic interests, many more things common to the teaching staff and the governing body; but one peculiarity is the preponderance of the Christian members of the staff in the governing bodies: some of them besides doing teaching work in the college are connected with the management not because there is Law 8 in Chapter XVIII of the University Laws, but because of their vested interests in the work of the particular Mission to which they belong. Whatever this might be, it is a fact that Law 8 is being respected more satisfactorily in Christian than in non-Christian colleges affiliated to our University. In some other colleges, the governing bodies have some committee called the Executive Committee into which the Principal is generally admitted more to satisfy the observance of the letter of the Law 8 than the real spirit thereof. In the case of still other colleges, the general bodies thereof extend a special invitation to the Principal to know something about the actual state of affairs; for the lay members of those august bodies very often know nothing about such things and their interviews with the Principals are magnified into or spoken of as meetings of the governing bodies in which "the teaching staff is represented." But is this really representation of the teaching staff? It may be easily pointed out that if the head of the college, the Principal, who is also very often the chief professor in some department of study in the college, is not a sufficient representative of the teaching staff, who else can be a true representative, etc.? True if he is often the representative that he is reported to be. I don't mean indulging in a tirade against the credentials of Principals being representatives of the teaching staff in governing bodies, but I beg to submit that the Principal has often two characters, that of a member of the teaching staff and that of one directly or indirectly connected with the management. It very often happens that these two characters come into conflict and the natural tendency is for the managing 'character' to domineer over the other 'character' and hence with due deference to many really well intentioned and most amiable and respectable Principals of colleges, whom I personally know, I beg to submit that the presence of some of their colleagues in the governing bodies would considerably strengthen their hands and lead to a better and a more adequate urging of the academic claims on the attention of the governing bodies, the members of which, in spite of their generous and liberal tendencies, are often unacquainted unfortunately with the academic aspects of

college requirements. There can be no fear that in important financial debates which might take place in the governing bodies the Principal and the proposed 3 members of the teaching staff would outvote the governing body members proper. Even if there is such a fear the governing bodies can very easily amend their constitution and fill those bodies with enough people and command a numerical majority. The moral strength that the presence of duly elected representatives of the teaching staff headed by the Principal and their contentions would give to the governing bodies is really immense and it can be so conceived only if things are viewed in a proper spirit and if no absurd presumptions or invasions of sovereign rights of governing bodies are imagined with all their illusory imagery. My amendment which speaks of some definite number of representatives and yet enables the governing bodies to admit more of the teaching staff into their midst (I very guardedly used the phrase "at least") and which speaks of the most popular and democratic method of representation by election would, I hope, be accepted by the University, the Principals and governing bodies of colleges. A special advantage of accepting my resolution is that it would do away with the anomaly of the University statute running in one direction and the actual practice running in a parallel direction.

One objection that can be easily raised against my proposition is that neither the existing law nor the proposed improvement applies to the Government colleges and it is unjust to trouble only the non-Government colleges with all the proposed constitutional machinery. My reply to this objection is that Government colleges form a *sui generis* class

by themselves—the control of the Director of Public Instruction and the Department of Education which is now a transferred subject and the systematic attention that the Department has been bestowing on the few Government colleges in our presidency speak for themselves and so Law 8 Clause (a) with the excepting clause deleted is not only incapable of doing any good to the affiliated colleges maintained by the Government but will also interfere with the even tenor and systematic routine of the working of the Department of Education. In many well-known aspects, non-Government colleges compare most unfavourably with the Government colleges.

Another resolution which I intend moving at the ensuing gathering of the Academic Council runs thus:—"That it be a recommendation to the Syndicate, the Senate and the Council of Affiliated Colleges that the following be added as Law 17 to Chapter XVIII of the University Laws:—

(a) Every affiliated college should have a formally constituted staff council consisting of the Principal and the other members of the teaching staff which should meet at least three times every term for discussing such matters as time-tables, holidays, promotions, scholarships, syllabuses, discipline, general educational policy, etc., and electing representatives to the governing body of the college, the Academic Council and the Council of Affiliated Colleges of the University.

(b) The Principal of the College shall be the *ex-officio* President of the said Council; the Secretary and any other office-bearers deemed necessary for the said council shall be elected ordinarily once every year; detailed rules of the Council shall be framed by the teaching staff and submitted to the Syndicate

for their approval; regular minutes of the meetings shall be maintained by the Secretary and the President who shall submit an annual report to the Syndicate in the forms that may be prescribed by the University.

(c) The functions of the staff council shall be advisory and not mandatory. But where the Principal and the governing body of the college cannot accept any resolutions passed by the staff council on any academic matter concerning the college, they shall state their reasons in writing which may be communicated to the Syndicate, the decision of which shall be final."

In most of the affiliated colleges both in the Telugu and Tamil districts, there are no formally constituted staff councils but the staff is summoned for consultation by the Principal whenever he thinks desirable or necessary. In some other colleges, there are staff councils existing by the mere will of the Principal but all questions of college policy are discussed by the said councils and minute books are being maintained regularly with regard to promotions, syllabuses, selections of students to be sent up for the examinations of the University, etc. In one Andhra College I gather that certain administrative functions are definitely entrusted by the Principal to committees of the staff; there are committees such as the time-table committee, scholarship committee, etc. The staff council of a college in the Malayalee parts meets once every month, consists of the Principal and the lecturers and discusses and passes resolutions on all questions of interest for the college. Some affiliated colleges in the Native States have regularly constituted college councils consisting of the Principal, the professors and the lecturers; it is said that the Principals of the said colleges shall ordinarily be bound by the decisions of the councils but have the power of overruling their opinions. Regarding an important Government college, I gather that there is a College Council consisting of the Principal as President and the Professors as members, one of whom is elected as Secretary; the Council is a purely advisory body though the Principal usually accepts its decision in various matters that are referred to it; it can consider and report on any

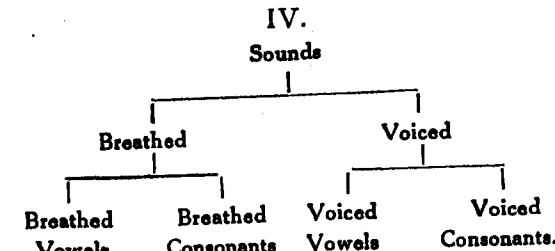
question concerning the college. There are many colleges where there are no formally-constituted staff councils at all nor is the teaching staff of those colleges often consulted by their Principals who however conduct the affairs of the college as "benevolent despots." The University Commission regarding a first-grade college in the Telugu parts expressed the opinion that an advisory staff council "meeting regularly for certain definite purposes is in most cases decidedly useful; there are many matters which would commonly come before such a body in the ordinary course and which concern more than one member of the staff.....In normally healthy conditions a college council decidedly strengthens the Principal's hands and facilitates harmonious working and steady progress."

Such being the actual facts and no mere fancies of mine, I would earnestly commend my resolution to all the bodies of the University. My mention of the Syndicate of the University as the final authority in any case of disagreement between the staff council and the management on any academic matter is only a constitutional solution to any possible or probable dead-lock but I am sure that there will in actual practice arise no such extreme contingency. The details of the constitution of the staff councils can be worked out by the various individual colleges. My resolution attempts to lay stress only on the general principles which shall apply to all affiliated colleges, Government or non-Government.

There seem to be many more ways in which affiliated colleges can be improved but apart from what is possible under paper constitutions and ideal formulations, I am sincerely of opinion that a harmonious co-operation of the University, the governing bodies, the Principals and the teaching staff is the only royal road to a bright future for the affiliated colleges in the Presidency of Madras.

LESSONS IN ELEMENTARY ENGLISH PHONETICS— COMPARATIVELY TREATED.

BY MR. L. V. RAMASWAMI Aiyar, M.A., B.L.
(Continued from p. 663—Dec. 1925.)



What is a breathed sound? It is only the forcible expulsion of air from the lungs through the glottis when the vocal chords remain separate and do not vibrate. These breaths issuing from the lungs may be modified by the shape of the mouth-cavity or resonance-chamber into all the forms and varieties assumed by the vowels; similarly all consonants which are usually voiced, have their corresponding breathed sounds. In the process of yawning (சொட்டாவி), usually only a strong out-growing breath results, although sometimes voice accompanies the breath on account of the vibration of the vocal chords. In whistling, the vocal chords do not vibrate but the forced expiration of air passing through the small opening formed by the lips, produces the characteristic sound. The easiest means of distinguishing a *breath* from a *voice* is to place the palm of our hand against the ear so as to close it and note the sensation when the sound is uttered. Voiced sounds will then always produce a buzzing sensation, while breathed sounds will not produce any such sensation. Contrast the sensation produced by prolonged i-sound and prolonged *ai* [s] sound. Another way of distinguishing between breath and voice is to try to sing voiced and breathed sounds; it will be found on trial that voiced sounds alone could be sung while breathed sounds could not be.

Both voiced and breathed sounds exist in English*; in pure Tamil the voiced sounds preponderate over the breathed ones; voicing of sounds is not so frequent in Malayalam as in Tamil. Vowels in English are all voiced except in *breathed* sounds. *Whispers* of which the most characteristic variety is the English *stage whisper*, form an intermediate class between breath and voice. Amongst consonants there are both breathed and voiced ones. In Tamil the breathed consonants occurring between vowels on either side partake of the sonority of the vowels and become voiced. For instance, in a word like *உட்கு*, the vocal chords vibrate for the *u* and *ku* sounds and they have to vibrate again for the *u* sound after *ku*; as it is usually a little difficult for the chords to stop vibrating for a very short time to allow the production of the pure breathed sound *u*, they go on vibrating from the production of the first *ku* sound after *u* up to that of the *u* after *ku* without any break, and consequently the *u* becomes voiced into a [d] sound. Such inter-vocalic voicing of breathed consonants is not so common in Malayalam as in Tamil.

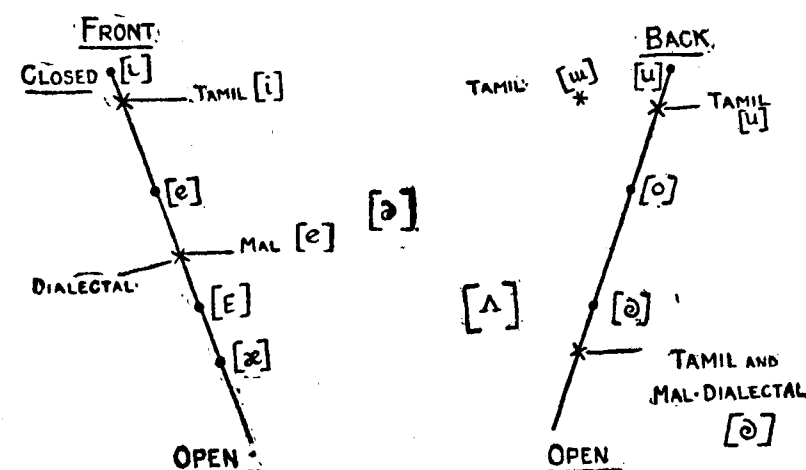
It is this inherent tendency to voice breathed consonants that leads many South Indian speakers to incorrectly pronounce words like *congratulation*, *impossible* and *content* without retaining the breathed character of [p] and [t] here.

* Sounds have also been classified according to the various possible positions assumed by the vocal chords:—

1. Complete contact and sudden break with or without sound, as in clearing the throat or in the attempt usually made by certain people to make others understand their presence without speaking (அஃ).
2. *Voiced*:—Vocal chords not completely closed, but sufficiently closed to enable the air to set them in vibration. This results in pure *voiced* sounds.
3. *Whisper*:—An intermediate variety of sound produced when the vocal chords are in close contact and the air-current forces its way through a by-passage.
4. *Breaths* of different kinds produced when the vocal chords remain apart in various positions.

VOWELS.

COMPARATIVE VALUES OF ENGLISH AND TAMIL VOWELS.



The main distinction between a vowel and a consonant lies in the fact that the air-current in the case of the production of the vowel, is not obstructed so much as to cause stop or friction, whereas in the production of the consonant there is some kind of stop or friction. As we have already seen, the shape of the mouth-cavity and the position of the tongue determine mainly the character of the particular vowel-sound produced.

The classification of vowels is usually based on the following three positions :—

(1) According to the position of the highest point of the tongue in relation to the palate.

If the highest point is against the hard palate, then the vowel is a front one, e.g. [e] as in [get], [red], etc.; if on the other hand, the highest point of the tongue is against the soft palate, then a back vowel is produced, e.g. [u] sound in "put," "boot," etc.

(2) According to the vertical position of the highest point of the tongue. If the tongue occupies the highest vertical position (without

of course producing any friction, in which case a consonant results), then a closed vowel is produced, e.g. [i]; if on the other hand, the tongue occupies the lowest possible position, then open vowels are produced, e.g. [u] in "father."

As the following table will show, between the one extreme and the other, all gradations exist.

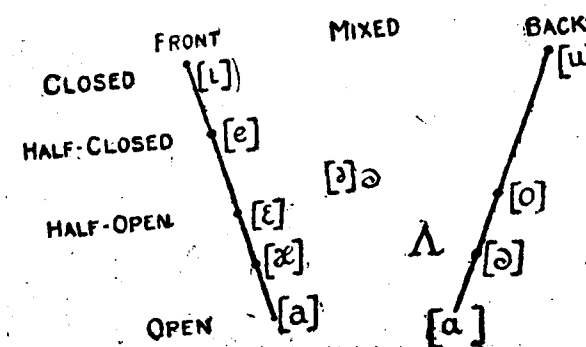
(3) According to whether there is rounding of the lips or not. In vowels like [u] in "put" and [ɔ] in *not* and [o] in *note* lip-rounding is essential, whereas in [i] in "pit" and [e] in "pet," lip-rounding is absent though the lip-position is definite and characteristic in each case. It should be noted here that the lips of the natives of South India are generally thicker than those of Europeans and hence it is only natural for us to feel a certain amount of strain in the production of sounds where accuracy demands lip-rounding. For instance, in the production of the [u] sound in "put," "tooth," our lips do not sufficiently well round

themselves and, as a consequence, the [u] sound borders on the [ɔ] sound as in the second syllable in *வந்து*. Can we not even hazard the view that the predominance of [ɔ] sound medially and finally in Tamil words over the [u] sound, though in such cases the spelling indicates [u], is due to the corruption of [u] into [ɔ] necessitated by the physical peculiarity of the lips referred to above?

(4) Another kind of classification is on the basis of the degree of muscular tension (spannings grade) of the tongue and the lips when the vowel is produced. Those vowels as in *leap* in the production of which there is this muscular tension are known as *tense* vowels, and those in the production of which this tension is absent are known as *lax* vowels as in *lip*, *bit*, etc.

The state of tension can more or less be noted by feeling with the hand the throat 'between the larynx and the chin. For practical purposes, this classification is not, however, so important as the above.

Vowel sounds which do not exist in our own vernaculars, e.g. [ɔ] as in "not," "caught," etc., cause us some difficulty which could be removed only by a proper analysis of the respective positions of the mouth-organs in the production of the sounds.



ROUNDED.	UNROUNDED.
[u]	[i]
[o]	[e]
[ɔ]	[æ]
	[a]

[i] — *pit* [a] — *father* [ɔ] as in *first*
 [e] — *pet* [ɔ] — *but*
 [ɛ] — *there* [o] — *over* [a] — *Scotch pat*
 [æ] — *man* [u] — *put*
 [ɔ] as in *not*, *cot*, etc.

A list of the English vowels is given above. Literary Tamil is wanting in at least two of these sounds [ɛ] and [ɔ]; while Malayalam lacks [ɔ] and [ɛ], though all these sounds are found in dialectal Tamil and Malayalam. Tamil, however, has got a peculiar vowel of its own besides the above, and this is the half-sound [ɔ] in the second syllables of *வந்து*, *பட்டு*, etc., termed by native grammarians [குற்றியலுகம்]. The Malayalam sound corresponding to this Tamil [ɔ] is [ɔ]; the spelling of [u] represents these half-sounds in both Tamil and Malayalam.

FRONT VOWELS :—As we have seen above, front vowels are those in the production of which the position of the highest point of the tongue is against the front portion of the mouth, i.e., the hard palate. Amongst front vowels, there are fully closed, half-closed, half-open and fully open vowels. Moreover, as we proceed from the fully-closed vowel in the direction of the open vowel, the front vowel becomes more and more "mixed" in character. The various tongue-positions for the production of vowels can easily be

observed by a hand-mirror being held against the mouth when the sounds are uttered. The Tamil sound [u] may be described as an [u] uttered without the rounding of the lips.

[i:] — *marine* = a closed front unrounded vowel, represented in English by the spellings 'i' (marine), 'e' (eve), ee (eel), ie (field), ei (deceive), ea (sea), eo (people) ey (key), uay (quay). The long sound [i:] is as long as Tamil or Malayalam long [i:] as in இழை. As shown above, various spellings represent the sound in English. Sometimes, in the pronunciation of the Southern districts of England, the [i:] is followed by a short [j] sound [= ɨ] as in [si:j], etc. This short [j] is called a glide or vanish. This arises as a result of the necessity to glide over from one sound to the next or to give a euphonic finish to the sounds of words.

(2) [i] short: represented in English by the spellings 'i' (pit), 'e' ('pretty', 'England'), ia (carriage), ie (collie), ey (valley) y (lucky), ee (coffee), ui (build), o (women).

The English short [i] is shorter and more closed than Tamil or Malayalam [i]. This difference in length and quality may be due to (1) climatic influence of the cold regions, which always tends to the restriction of the length of sounds, (2) the existence of strong stress-variations in English which reduce the length of [i] in unaccented syllables. [Stress-variations in Tamil only play a subordinate part]. A word like "India" becomes in the mouth of a Tamilian or Malayali [Indiə]. Tamil [i] crops up in the beginning of certain Sanskrit borrowings, like இலக்கணம் [ilakkanam], இரத்தணம் [irattunam] etc.

Short [i] has two varieties in English as in 'city' where the second [i] is more open than the first [i] and almost bordering on [e]. A

scientifically accurate script would demand the use of a different symbol [I] for this sound, but for practical purposes [i] would suffice. This open sound occurs in the unaccented second syllables of *basket, casket, language*, etc.

The distinction between the *closed* and the *open* varieties of [i] is observed by careful speakers, e.g. between the sounds (in the second syllables) of *socket* and *sordid*, *porridge* and *barrage*.

Malayalam [i] in certain dialects becomes quite open and sometimes turns into [e] as in திண்டு, செண்டு, ஸெண்டு (= *thy*). This tendency to make [i] an open sound in Malayalam should not be allowed to influence the pure enunciation of the English [i] sound.

(3) [e] represented in English spelling by 'e' (reign), 'a' (name), ai (aid), ea (great), au (guage), Tamil and Malayalam [e] is nearly similar to Eng. [e]. Dialectally the South Indian sound occasionally borders on [ɛ] which is a more open sound. In "day" [dei], [e] forms almost a diphthong with [i]. In "name," "case," etc, the [e] sound is followed by a short [i] sound [neim], [keis], etc.

(4) [ɛ]—is the characteristic sound in English:—words like 'care,' 'parent,' 'fair,' 'heir,' etc. [ɛ] is also the value sometimes given to words like 'let,' 'ready,' 'leisure,' 'said.'

In dialectal Tamil and Malayalam, [ɛ] occurs in the first syllable of words like மேடு, போய்; Malayalam பேர், மேச.

Ordinarily the South Indian finds this sound difficult of utterance and so he has to carefully practise the articulation.

[ɛ] is the peculiar sound heard in shouts or "halloos" set up by coachmen and rickshawallas in South India: ஈ-ஈ-ஈ! [ɛ:i].

The English words 'there,' 'care' will have to be represented thus [ðeð], [keð]; the [ɛð] becomes very nearly a diphthong.

The words "there," "where" are often uttered by South Indians as [ðer], [wer]. This is not the accurate pronunciation of the vowel sound.

(5) [æ] is the English sound in "bad," "manor." Malayalam has this sound in குளம்*—Dialectal Tamil too has [æ] e.g. ஈயம் பழம். Unaccented [æ] in English always tends to become [ɛ].

(6) [a] is represented in English spelling by 'a' (father), au (aunt), ea (heart), e (sergeant), ua (guard). This is the most open sound amongst all the vowels. The short sound [a] does not exist in Tamil or Malayalam—the short *அ* of Tamil and Malayalam is really equivalent to the English [ʌ] in 'but,' 'cut,' etc., and Sanskrit अ.

Long *அ* of Tamil and Malayalam is the same as [ɑ:]. Some South Indians distort [ɑ:] into [æ] as when they say [fæðər], [klæs], etc., these words should be properly sounded [fɑ:ðər]; [kla:s]; etc.

[ɑ:] should not be corrupted into [æ] as some Indians do, in *master, last, task, larger, farther*. *Plant, class, dance* have all [ɑ] in English, though dialectally [æ] is sometimes favoured. The [ɑ] sound really covers a number of varieties all of which are met with in the dialects.

(7) [ɔ] is a back half-open sound produced with lip-rounding. It is represented in English

* In Malayalam குளம், the vowel is [æ] though it is not so close a sound as English [æ] in *man*. Some purists pronounce the vowel in the Malayalam word as [ɑ] but this is a purism.

(Vide my book on "Malayalam Phonetics" published by the Calcutta University).

spelling by 'o' (order), ou (thought), au (cause), aw (awe), o (got), a (was). Lip-rounding is not so great for this sound as for [u]. This sound is hardly found in literary Tamil or Malayalam but is common dialectally in both these languages in words like Mal. [ஊம்] Tam. போலம் ஊ, போலா, ஸாப்பாடு, etc.; the sound occasionally appears in ஸாம்பா, மா, and ஸா

Lip-rounding is essential for this sound. Tamilians and Malayalis omit to round their lips properly in uttering the sound, which then becomes a variety of [ʌ].

(8) [o] is always accompanied by a short guttural vowel vanish [ou] in English, in words like 'robe,' 'mould,' 'coat,' 'flow,' 'go,' etc. Short and long [o] and [o:] exist in Tamil and Malayalam. The presence of the vowel glide or vanish is often missed by South Indian speakers. "November" is [nəvəmbə] and "oh! no!" is [ou nou]. Unstressed [ou] becomes [ɔ] in the Universities, e.g. [winnə] for "winnow," etc.

(9) [u] short is represented in English spelling by u (put), oo (book), ou (could), o (woman). The English short [u] is shorter and more closed than Tamil or Mal. *உ*. The Malayalam and Tamil *உ* has a tendency in unintoned syllables to become [ɯ] and [ɔ] respectively, e.g. Tamil ஈயல், Mal. போருக்கு.

(10) Long [u:] represented by English spellings 'u' (ruse) 'oo' (pool), 'ou' (soup), o (move) 'ew' (flew), 'ue' (blue), 'œ' (Boer), 'ui' (fruit), is always accompanied by the short glide [w] in the above words.

In "Tuesday," *stew, July*, etc., a [j] sound is developed before [u:] on account of the influence of the preceding consonants,

"Poor" is [puɔ], the [uɔ] forming very nearly a diphthong; Sometimes, "poor," "sure" become [pɔ:], [ʃɔ:]—

(11) [ʌ] is the sound in English 'but,' 'cut,' 'done,' 'blood,' 'tough.' This sound is quite the same as Tamil and Malayalam அ or Sanskrit अ. Unaccented [ʌ] tends to become [ɔ] in English; so also unintoned syllables with [ʌ] in Malayalam show [ɔ] while in Tamil we have in such a case [u] or [ɔ].

Malayalam மாம் and மாம் if puristically uttered would be [maram] and [ra:man], but commonly the [ʌ] of unintoned syllables always becomes [ɔ] which therefore might be given fixity in phonetic representation.*

(12) [ɔ] occurs as such and also represents the value of the unaccented variety of many English vowels. It is represented by the English spellings 'u' (burn), 'o' (work) 'e' (observe), 'i' (girl), 'ea' (heard). [ɔ] occurs in English in (a) words like *bud, but, work, bird*, (b) initial unaccented syllables of words like *above, again, observe*, (c) medial and final unaccented syllables of words like *cupboard, moment, ordinary, gladstone, etc.*

All vowels in unaccented syllables give rise in English to [ɔ]; careful observation will establish slight differences in the quality of the [ɔ] so produced. In Malayalam and Tamil, the literary dialect permits only [ʌ] in unintoned syllables to change into [ɔ]; the colloquial, however, allows the change of [i] and [u] into [ɔ] as in Malayalam அவிடு, கசாடு where the [i] in the second syllable of the first word and [u] in the second syllable of the second word become [ɔ].

* Robert Bridges has in a contribution to the English Association papers vehemently attacked the tendency to make too much of [ɔ] in English. Phonetic development however, alas! never takes stock of puristic diards and goes its own way!

There is an exactly similar sound in Malayalam in words like வன்னிட்டு, பத்து, etc., the corresponding Tamil vowel being [u] in words வந்து, பத்து, etc.

(13) [a] is a vowel very much like the vowel in the second syllable of Malayalam words like சத்த, மாங்க, etc.; in English it occurs only in Scotch pronunciation, though in the diphthongal sound in 'by,' the first element is [a] and not [ɑ].

Diphthongs are combinations of two vowels which have so coalesced as to form one single syllable or part of one single syllable. There are strictly speaking, only three diphthongs in English represented by the sounds in 'by,' 'bough,' 'boy'; but in "fire" [faɪə] power [paʊə], there are near triphthongs, and [uɔ] in "sure" is a near-diphthong.

[ai] is represented by the spellings 'i' (mine) y (cycle), 'ei' (height). This diphthong exists in Tamil as in the words மைகை, கையல், பைதல், etc. In "hire" [haɪə], there is a near-triphthong.

[au] in 'house' and 'now.' This diphthong exists in Tamil, e.g. ஓவியம், தொலை, etc. In "hour" [aʊə], there is a near-triphthong.

[ɔi] in 'soil' and 'boy'—not common in Tamil except dialectally.

There is a tendency both in Tamil and Malayalam to break up the pure diphthong into two separate vowels. Such a tendency to break up pure English diphthongs into their component parts should be resisted. It is quite common for Tamilian and Malayali speakers of English to pronounce the English words "mile," "soil" and "now" as மயில், ஸாயில் and நவு. This practice should be given up and the pure diphthongal character of the English sounds should be recognised.

(To be continued.)

EXERCISES WITH A RIBBON OF PAPER

By

Rao Bahadur T. SUNDARA RAO, I.S.O.
Coonoor, R. S.

1. The ribbons of paper folded into a series of equilateral triangles and squares can be folded into triangles and squares with open figures of the same description in the middle, the sides of the two polygons being parallel.

In fig. 1 the corners will have two layers of the triangles, one three-fold and the other two-fold. With one two-fold layer we get a semi-regular hexagon as at the top of the figure.

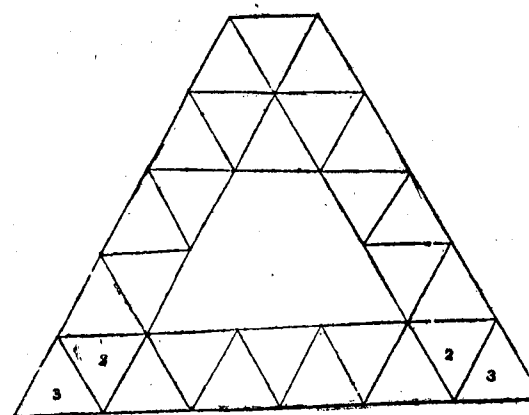


Fig 1.

In fig. 2, the right-angled isosceles triangles marked with a cross contain three layers. If the corner squares are doubled upon the dotted diagonals we get a semi-regular octagon.

2. Any regular polygon of five or more sides can be made with a ribbon of paper made up of trapeziums which have three of the shorter sides equal, and the middle short side and the opposite diagonal parallel. Each trapezium has two diagonals.

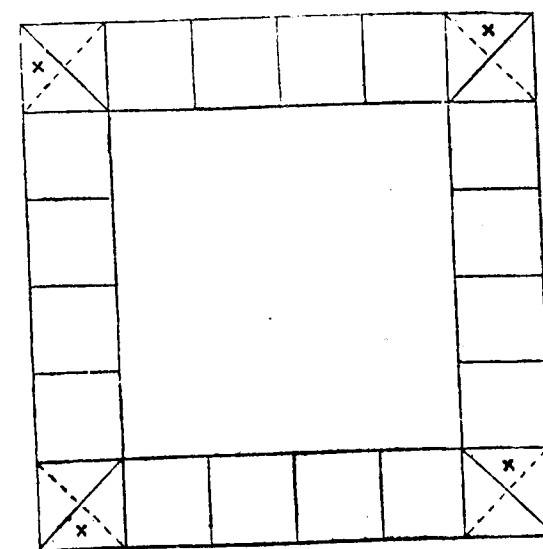


Fig. 2.

By folding the ribbon upon successive diagonals of the trapeziums, the diagonals lying zig-zag upon the ribbon, we get a regular polygon of the corresponding number of sides with a similar open polygon in the centre. When the number of sides is odd the altitudes of one polygon bisect at right angles the sides of the other. When the number of sides is even the diameters of the one bisect at right angles the sides of the other.

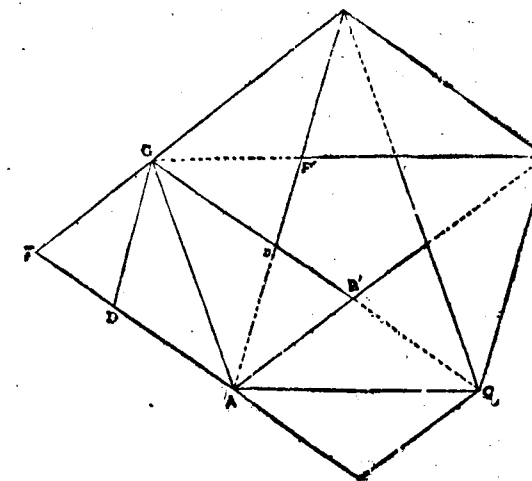


Fig. 3.

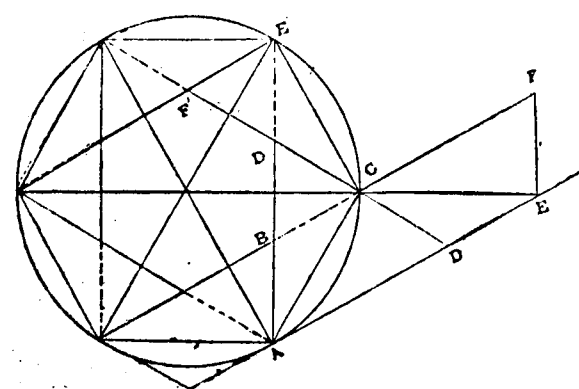


Fig. 4.

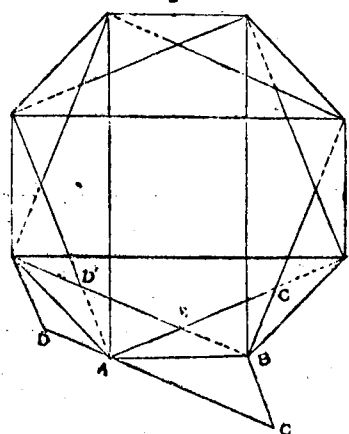


Fig. 5.

Figs. 3, 4 and 5 illustrate this for the pentagon, hexagon and octagon.

3. Let a be the length of the diagonal of the trapezium and side of the outer polygon.

n the number of sides of polygon,

The diagonal of the outer polygon

$$= 2a \cos \frac{\pi}{n}.$$

$$\text{Short side of trapezium} = \frac{a}{2 \cos \frac{\pi}{n}}$$

Side of inner polygon

$$= 2a \cos \frac{\pi}{n} - \frac{a}{\cos \frac{\pi}{n}}$$

$$= a \cdot \frac{\cos \frac{2\pi}{n}}{\cos \frac{\pi}{n}},$$

The long side of the trapezium

$$= \text{short side} \times \left(1 + 2 \cos \frac{2\pi}{n}\right)$$

$$= \frac{a}{2 \cos \frac{\pi}{n}} \left(1 + 2 \cos \frac{2\pi}{n}\right)$$

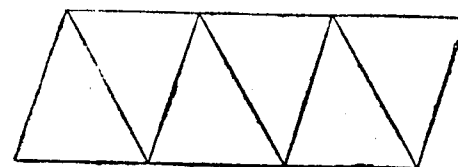
Breadth of ribbon $= a \sin \frac{\pi}{n}$.

4. For the pentagon, the ratio of the sides of the inner and outer pentagon is $\frac{1}{2}(3 - \sqrt{5})$.

For the hexagon $\frac{1}{3}\sqrt{3}$.

For the octagon $\sqrt{2} - \sqrt{2}$.

5. A ribbon of paper with the short edge obliquely inclined to the long edges can be divided into a series of parallelograms and these can be divided into equal triangles by diagonals which are parallel.



These triangles will not be superposable by folding upon the diagonals or sides. Alternate triangles which have their bases on the same edge can be superposed by translation, but triangles which have a pair of their equal sides on opposite edges can be superposed by rotation through 180° about the point of intersection of the diagonals of the parallelogram.

When the first triangle has been folded the side of the parallelogram on the opposite long edge is obtained by doubling the short edge upon itself until this long edge passes through the angle on the other long edge. This divides the parallelogram into a trapezium and an isosceles triangle. Successive parallelograms can then be easily folded, and then the diagonals.

Four of the triangles make an oblique pyramid or tetrahedron with equal faces.

One of the triangles together with a trapezium made up of three of the triangles make a triangle.

A series of the triangles go to make an oblique drum with regular polygons for the parallel ends.

NATURE STUDY IN PRIMARY SCHOOLS.

By Mr. S. NARAYANA MURTHY, B.A.,

Assistant Inspector of Education, Tumkur.

NATURE Study has largely to be introduced in all Primary schools as a protest against too much study and book-work to which the boys are now subjected. The education in schools should consist not merely in the study of 3 R's but in developing the power of observation and appreciation of beauty in nature and art. Nature study is the chief expedient to promote this aim. It opens the eyes of the children to the wonders and beauties of the world around them, makes them take a living interest in all creation, animate and inanimate, and brings them into close contact with things and phenomena of which they study in books in the four walls of the class-room. It also serves as a preliminary substitute for their later study of sciences. It gives a lively interest and a realistic turn to the study of school subjects and forms a valuable contrast to the study of mere grammar and language lessons that form the major portion of a school curriculum.

Yet it is a pity that nature study has not found an appreciable entry in all schools, and in many of the schools where it has found an entry it is still in an unorganised and chaotic state. Some schools have confounded nature study with object lessons, some with Kindergarten games, and garden work, and some with the mere collection of curios for the school museum. Even in schools where lessons on observation are given, attempts have been made to observe natural objects out of their natural relations. A bird, or a frog or a plant is brought into the four walls of a class-

room and is minutely examined or discussed. But this sort of instruction will not enable the children to know nature in its pristine grandeur, to wonder at the marvellous beauties of sky and meadow, of brooks and fields, of sunrise and sunset, of marvellous instincts and adaptabilities of birds and animals, of plants and trees. These observed out of their natural environment may not infuse in children the genuine love for nature study.

Nature study must, of course, vary very widely with other studies in the class-room as well as with the localities in which the schools are situated. No one set of syllabus can satisfy all schools. Here the aim is not to give to the boys accurate or full information but to develop their power of observation and appreciation of the beauties and wonders of nature. Here the main object must be not instruction but to arouse interest and enthusiasm in all that is about them. For this end the study must be out of doors, in the school gardens, in the open fields, under the open sky. Excursions are therefore one of the excellent means for developing their interest and acuteness of observation. There is no part of the world, be it a country or a town, which has not its natural beauties of birds and trees, of flowers and fruits, of clouds and storms, of stars and rainbows, of springs and brooks, which invite them to appreciate. The study of these must open the eyes of the children to the marvels of nature, make their heart quiver with joy and ennoble their mind with sympathy, wonder and awe and turn their devotion towards the Great Magician of the world. Then they too, like Wordsworth, the apostle of Nature, can love nature and

"The meanest flower that grows can give
Thoughts that do often lie too deep for tears"

and like him find

"Tongues in trees, books in the running brooks
Sermons in stones and good in everything."

If the children are thus taught to love nature like a living thing, their cruel desire to kill or sport with birds and insects may also disappear and in its place the fraternal feeling of love towards all things of nature will be fostered.

Nature study must thus make children's eyes keener for the wonders and beauties of the world, their heart sympathetic towards all creatures, their mind reverential with the noble love for God and all things of His creation; and if the function of education is to illumine the mind and to ennoble the heart, perhaps no other study we may say will lend itself more easily towards that end than the study of nature, and as such it must find an important place in all Primary Schools.

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THE THIRD U. P. STUDENTS' CONFERENCE, BENARES.

ADDRESS OF

PROFESSOR P. SESHADRI, M.A.,
Chairman, Reception Committee.

ON behalf of the Reception Committee of this Conference, I extend to you a very cordial welcome to this ancient city whose glories have acquired an added strength in recent years, by the coming into existence of the Benares Hindu University where we are met this afternoon. The idea of reviving this annual Conference of the Students of the United Provinces of Agra and Oudh originated with the students of the University who have brought about by their efforts this third Session of the Conference and it is hoped it will become a regular fixture hereafter contributing to the vigour and prosperity of student-life in these Provinces. The lateness of the season in the academic year, the shortness of time at the disposal of the organisers and the absence of continuity of organisation, (this Conference being a revival after the lapse of some years) have all handicapped this Conference and prevented its becoming one of greater magnitude and importance. But I can assure you the welcome is none the less cordial and I trust that your labours will result in stabilising this organisation and contribute in an effective measure to the success, welfare and efficiency of the coming generation of workers and citizens in these Provinces.

Thanks to valuable educational efforts in many directions, the students of the United Provinces enjoy to-day admirable facilities for intellectual and cultural advancement, denied not only to their predecessors but also to the young men in many other parts of India. As many as four Universities

function within the provincial limits, a fifth also being in prospect, aspiring to bring into existence the conditions of high-class unitary and residential Universities, equipped with the latest appliances and possessing on their staff persons of ability and experience chosen from the Universities of the East and the West. Attempts are being made to make University life as rich and fruitful as it could be and you have the privilege of growing in an atmosphere calculated to draw out your faculties to the best and invest you with high standards of efficiency and the refining spirit of true culture. If, with all these facilities, you do not succeed in establishing for yourselves a high record of efficiency in the educational world of India and win a reputation for intellectual ability and general culture, the failure will only be due to a want of determination and active effort on your part to work up towards high ideals. If this organisation of the young men of these Provinces will only harp on this ideal continuously and enable them to put forth more strenuous endeavour for distinction, infusing ideas of steady progress and efficiency, it will have done enough.

Without trespassing very much upon the field of the President of this Conference who will undoubtedly discourse to you on many aspects of your life and work, I should take up a few minutes of your time inviting attention to what I consider some lessons of great value worthy of constant attention from students. In the forefront, I would place the need for the *Strenuous Life*, which alone, is the true ideal for young men, whatever differences of opinion there may be with regard to the details in accordance with which it should be lived. "A healthy State can exist," said President Roosevelt of

America, a person whose life was in itself a sermon on the *Strenuous Life*, "a healthy State can exist, only when the children are so trained that they shall endeavour not to shirk difficulties, but to overcome them; not to seek ease, but to know how to wrest triumph from toil and risk. The man must be glad to do a man's work, to dare and to endure and to labour." Living as yet you do under the affectionate protection of your parents and the watchful care of your guardians at College, yours for the present is only the peaceful duty of pursuing your work and equipping yourselves for the life outside. But the time will come, when President Roosevelt's message contained in the following words will have for you a deeper significance: "I preach to you then, my countrymen, that our country calls not for the life of ease but for the life of strenuous endeavour. The twentieth century looms before us big with the fate of many nations. If we stand idly by, if we seek swollen slothful ease and ignoble peace, if we shrink from the hard contests where men must win at hazard of their lives and at the risk of all they hold dear, then the bolder and stronger peoples will pass us by and will win for themselves the domination of the world. Let us, therefore, boldly face the life of strife, resolute to do our duty well and manfully; resolute to uphold righteousness by deed and work; resolute to be both honest and brave, to secure high ideals, yet to use practical methods. Above all, let us shrink from no strife, moral and physical, within or without the nation, provided we are certain that that strife is justified, for it is only through strife, through hard and dangerous endeavour, that we shall ultimately win the goal of true national greatness."

This ideal of the strenuous life is one to be practised not merely in the broad ways of the world over which you will wander when your work at the University is over, but one to be lived in all aspects of the work of the University itself. It should be expressed in the vigorous and unceasing exercise of your faculties without which responsiveness, all our efforts at educating you should end in dismal future. It should enable you to emerge from these academic surroundings, in the full consciousness, not merely of your glorious youth, but also of acquired physical and intellectual abilities of a high order and the inspiration of great moral strength. You have probably wondered sometimes why educational authorities are so relentless in demanding more and more work from you during your academic career. The answer is furnished in a fine passage in the famous report of the Royal Commission on the University of London, presided over by Lord Haldane. "A University education," says the report, "is most effective when it is given before the struggles and pre-occupations of life in the world have begun. It is a training which ought to make great demands both upon the intellectual energy and upon the time of the student; on his energy because he is learning the methods of independent work carried on in an enquiring spirit: on his time, because mental habits cannot be formed rapidly, nor if the mind is distracted by other cares and interests." The most essential thing is therefore to utilise the time and opportunities at your disposal in such a strenuous manner as to get the best out of them. Let me assure you they will never come again in life and nothing is more unhappy than the recollection of wasted opportunities.

One of the best ways of cultivating this love of knowledge and keeping it on through life is to acquire a fondness for reading and books. Time was when accessibility to books was a great privilege enjoyed by the select few; but thanks to some of the fine developments of modern civilisation and the great publishing houses of the world to-day, you have the world's masterpieces at your beck and call, available even to people of ordinary means, while the Universities are anxious to cater to your intellectual aspirations by collecting thousands of books under their auspices for your benefit. You are in a more fortunate position than your predecessors of a former generation of whose difficulties and sacrifices in the acquirement of knowledge we read in books. Charles and Mary Lamb tell us a pathetic story of a poor student who could not buy books, but kept on reading them at bookshops, looking them up day after day, in one shop after another, continuing his reading from page to page. One of the booksellers rudely snatched the book from his hands one evening observing that he had looked into many and not bought one. We are told that the boy passed slowly on with a sigh wishing he had never been taught to read! There is the story of the poor Scotch student at the University who could not afford to buy books of his own, but had to wait till his class-mates had finished their work at night to be able to borrow them and read them before morning. Sir Edmund Gosse tells us in his admirable autobiography *Father and Son* that many an evening he walked home from school without taking the train so that he may save his pence and buy a book at the end of the week. Compare your circumstances with those and see if you cannot prove worthy of them by working up to a much higher standard of the love of reading and of books.

I should be failing in my duty, if I did not proceed a step further and appeal to you to form the habit of acquiring books for yourselves and forming little libraries of your own which may be your abiding companions through life, affording consolation, when as the poet complained, "the world is too much with us," and we feel distracted by a variety of anxious cares. Books borrowed from a library are good so far as they go, but let me assure you that the ownership of books is a beautiful spiritual possession of great inspiration and delight. Mark Pattison was fond of saying that no man of any self-respect and dignity can have less than a thousand books in his house and I should not hesitate to put this ideal before you in spite of my knowledge of the poverty of material resources in our country. Sir Edmund Gosse has spoken of "the consolatory self-forgetfulness of literature" which will always be welcome in life.

Addressing myself to an audience of University students, I should plead with all the earnestness at my command for the cultivation of originality of thought and the critical spirit without which all this learning cannot be effective. You are no longer in the stage when your minds are only to be merely receptive, acquiring the information placed before you by teachers and welcoming new truths unknown to your childhood. Having entered the atmosphere of a University, your status is that of partners in the pursuit of truth with your professors, aspiring to understand by independent thought and investigation, the ideas relating to your branch of study. You are only the younger brothers of your professors who are somewhat ahead of you on the road of knowledge, and yours must be the ambition of standing on your own legs and pursuing truth by your own effort and investigation benefiting, it is true, by

their guidance and inspiration. Nothing is more fatal to higher intellectual advancement and more destructive of the true spirit of University education than abject dependence on the professor and the slavish adherence to lecture notes and a persistent desire to be 'spoon-fed' for the purposes of an examination. If you are anxious to grow to the full stature of your intellectual powers and get a good and effective grip on the best knowledge relating to your subject, let it always be your endeavour to share actively in the pursuit of truth and exercise your judgment all along the line, without being mere passive listeners in the lecture-room. Even from the narrow standpoint of success at examinations, it may be mentioned that knowledge acquired by individual effort makes a deeper impression on the mind and is more fruitful of valuable results.

It is obviously beyond my aim to survey the entire field of University education and knowledge and speak to you on the needs and methods of various branches of study. I shall, however, invite your attention to the cultivation of a love of the Fine Arts. We are the inheritors of great traditions in the cultivation of a love of the beautiful and it is a matter for regret that you should not have opportunities for the training of your æsthetic faculties during your educational career. There is however visible on all sides in India to-day a desire to recognise the need for the satisfaction of this important aspect of mind and culture, as is evidenced by the increasing number of Fine Art Exhibitions and Music Conferences and the demand for the inclusion of the subjects in School and University curricula. The Benares Hindu University has just passed syllabuses in Music and Painting intended, for the present, to be taken as alternative courses by girl students, but it is hoped they will soon be thrown open for men

students also and a Faculty of the Fine Arts may be an accomplished fact at the University. It is significant that the recent report on University Reform in Bombay supports a similar proposal and the University of Madras is also bestowing consideration on the subject. It must gratify you to know that the students of the Benares Hindu University have been organising Art Exhibitions for the last two years and one is now on, at the time of this very Conference, including competitions in the histrionic art. I should not invite such special consideration to the subject, but for my strong conviction that a love of art is one of the essential elements of a gentleman's culture and is a source of inspiration for sweetness and refinement of mind and soul. Plato urged a great truth when he spoke of the moral influence of a love of the beautiful, by pointing out that the love of one beautiful object led to love of others and the love of beautiful objects led to the love of beautiful actions in life.

The time will soon come when your dealings will be not merely with books and class-mates and professors, but with the community at large, and a few words may not be out of place here endeavouring to put before you ideals of right behaviour to others in the world. A University education should have failed in one of its most essential purposes, if it did not develop in those who have received it a beautiful code of high gentlemanliness and a genuine spirit of chivalrous consideration to others. Matthew Arnold referred constantly to "sweetness and light" and they ought to be found writ large on every person who professes to have passed through the portals of a University. Cardinal Newman's definition of the true gentleman is

too well-known to be quoted here at length, but it has not been surpassed by any description of the qualities which should be found in the products of University culture. Let us recall at least a few of his sentences: "The true gentleman carefully avoids whatever may cause a jar or jolt in the minds of those with whom he is cast.....He makes light of favours while he does them and seems to be receiving when conferring. He never speaks of himself except when compelled, never defends himself by a mere retort, he has no ears for slander or gossip, is scrupulous in imputing motives to those who interfere with him and interprets everything for the best. He is never mean or little in his disputes, never takes unfair advantage, never mistakes personalities or sharp sayings for arguments, or insinuates evil which he dare not say out."

Next to the conscious cultivation of good manners and the endeavour to approximate to this ideal of gentlemanliness, one of the greatest needs to-day in India is for the development of a strong sense of brotherhood among the different communities, to be able to form a united nation and put forth all the strength necessary for the highest realisation of our hopes. Meeting as we are in the United Provinces, we cannot but be oppressed at the thought that the Hindu-Muslim problem is casting its gaunt and unwelcome shadow on this part of the country and it is distressing to find that it has expressed itself sometimes even in the life of one of the Universities in these Provinces. The temple of truth should be a great healer of communal and even of racial differences, uniting everybody in a great brotherhood in the pursuit of knowledge and you can play no unimportant part in laying deep the foundations of nation-

al union in your College days. "If gold rusts, what will iron do?" asked the poet and may we not say that if men who have had the benefit of a University education cannot learn to sink their petty differences and develop feelings of brotherhood, where is the chance of the masses at large rising to any consciousness of national solidarity? Urging the importance of the Hindu University at Benares and the Muslim University at Aligarh as centres for the development of communal unity between the Hindus and the Muslims in India, I said at the Jubilee Celebrations at Aligarh the other day, that just as Byron's Dying Gladiator in *Childe Harold's Pilgrimage* turned to the homes of his people on the Danube, where "the young barbarians were at play" to revenge his death at the hands of Romans, Mother India in the throes of communal strife looks to the two Universities, in particular, to play a great part in the development of communal goodwill. Here is another direction in which this Provincial Students' Conference should aspire to make itself useful.

More than all these considerations, it is desirable that you should cultivate the right outlook on life and learn to look at things in a spirit of robust optimism, as otherwise you lose all incentive to work and you are apt to stagnate in a spirit of inanition and helplessness. This is no place to enter into an examination of the philosophical theories that the world is an illusion and all its activities are a mere vanity in the end. But even according to those systems of Philosophy, youth is a period of action and I cannot think of placing any better message before you than the words of Ulysses, that before death closes all "one work of noble note may yet be

done." Yours must be the philosophy of Browning:

God's in his heaven

All's right with the world

and you must press forward, in utter indifference to what may be in the future, making every hour of your lives a record of something achieved,

Follow knowledge like a sinking star
Beyond the utmost bound of human thought,
or bring a similar spirit into the world of action.

Another helpful idea is that of devotion to some definite end, the selection of some high ideal in a spirit of self-reliance and the concentration of all energy of mind and soul upon its realisation. If you wish your life to be a success and your endeavours to culminate in the fruition of great things, let yours be the *Dedicated Life* described by Lord Haldane: "I mean by the expression, a 'dedicated life' one that is with all its strength concentrated on a high purpose. Such a life may not seem to him who looks on only from outside to comprise every good. The purpose, though high, may be restricted. The end may never be attained. Yet the man is great, for the quality of his striving is great. 'Lofty designs must close in like effects'.... If its Universities produce this spirit in its young men and women, a nation need not despair. The way is steep and hard to tread for those who enter in it. They must lay aside much of what is present and commonly sought after. They must regard themselves as deliberately occupying the duty of preferring the higher to the lower, at every turn of daily existence. So only can they make themselves accepted leaders; so only can they aspire to form a part of that priesthood of humanity to whose commands the world will yield obedience."

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The organisers of this Conference have resolved that it should be non-political, so that it may secure a platform common to people of all shades of opinion and it may also concentrate attention on educational and social matters of direct concern to students, without being distracted by the disturbing influence of politics, more suited to the adult citizen than to the student at school or college. That is however not intended to preclude us from seeing the need for patriotism to actuate our endeavours every moment of our lives. It is no doubt the ambition of many of you present here, to play a distinguished part in the political life of our country, for which each day is throwing open more facilities for you and every patriotic citizen will wish you all success in such hope. You should however bear in mind that the Motherland needs the services, not of immature enthusiasts who can only clap their hands in acclamation and shout boisterously at the top of their voices at political gatherings, but of trained and well-disciplined citizens strong in mind and soul, well-equipped for political work by years of patient study and the acquirement of all knowledge having a bearing on the life and fortunes of our land. It is hoped that during your stay at the Universities, you will have ample opportunities for this equipment, so that in the fulness of time you may be able to serve in some measure

That sweet Indian Land

Whose air is balm ; whose ocean spreads
O'er coral rocks and amber beds ;
Whose mountains pregnant by the beam
Of the warm sun with diamonds team ;
Whose rivalets are like rich brides ;
Lovely with gold beneath their tides ;
Whose sandal-groves and bowers of spice
Might be a Peri's paradise.

SANSKRIT IN SECONDARY SCHOOLS

By

MR. M. S. SESHADRI ACHARYA, 'SIROMANI,'
Sanskrit Pandit, R.S. Home High School, Myslapore.

IN these days of National Education it is a deplorable fact that the Sanskrit language in which are enshrined the highest and the noblest ideals of our country and of our religion and which is therefore the very fountain of our Hindu civilization should receive such a scant attention at the hands of the Department and still less at the hands of the educationists who plead so much for the revival of our ancient culture. I shall here only point out some of the defects of the teaching of this subject in our Middle and High Schools and invite the attention of abler men to bestow their best thought upon this subject and work for speedy rectification. In the first place, it is a very strange thing that this is the only subject that is taught without any aim or plan. In the Sixth Form selections for this subject are prescribed just as they are done for the other subjects. But whereas other subjects have a graded syllabus from the lowest to the highest classes this one is left to the discretion and convenience of the teachers in charge and to the heads of institutions, who, to suit their convenience, take very little care either to frame a syllabus or demand for one. There is no plan in the selection of books or passages and no method in the teaching. The subject is begun to be taught as late as II Form, whereas English is begun even in the III class, and is allowed to shift for itself in the midst of a multitude of subjects till the School Final Class where standard selections from Classical Works are prescribed for study. Such a course of study

of the subject results in mere mechanical memorisation and cramming of certain selections and their meanings for examination purposes. Certainly this state of affairs continues not on account of dearth of hands to work at it but on account of the supreme indifference shown to this subject.

I would therefore earnestly invite the attention of the educationists to the following immediate needs :—

1. Sanskrit may be begun at least as early as V Class.
2. A definite course of syllabus based on a scientific treatment of the subject on the lines of the modern method of teaching language subjects may be supplied for all schools teaching this subject.
3. A list of suitable text-books satisfying the requirements of such a syllabus for each class may be prepared by the experts on the subject and distributed to all the Sanskrit teaching institutions.
4. The Department may be requested to insist that at least one period a day be devoted for the teaching of Sanskrit.
5. The Department may be requested to appoint a Committee of expert Sanskrit scholars for this organization of Sanskrit teaching in schools.

KARUNATARANGINI

(English translations from the author's original lyrics in Sanskrit)

By K. KRISHNAMACHARYA, B.A., L.T.,

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PRESIDENTIAL ADDRESS TO THE ALL-BENGAL TEACHERS' CONFERENCE*

By DR. W. S. URQUHART, M. A., D. LITT.

WHEN the Secretary of your Executive Committee asked me to occupy the Presidential chair at the sixth session of your annual Conference, I had considerable hesitation as to whether it would be right for me to accept this most attractive invitation. It seemed to me hardly fitting that I should allow myself to be placed by your generosity in a position which has been filled on former occasions by leading men of the province, of the reputation and experience of your first and most recent Presidents, Sir P. C. Roy and Sir P. C. Mitter, to mention only two of the distinguished successions. And it seemed to me also that I could not by any means hope to have that adaptation which comes from the inheritance of a special educational tradition, and that familiarity with the conditions of village life in Bengal which comes from personal knowledge such as alone would appear to justify me in undertaking the duties of the President of this Conference. But the urgency of your Secretary overcame all my scruples and when he mentioned further that the invitation was supported by the Reception Committee and that the place of meeting was to be Feni, of which I have such pleasant memories associated with a former visit, I felt that I could not but accept, gladly and gratefully, the honour which you have done me. Further, although I came from another country yet perhaps my thirty-three years' residence in this land may have given some claim to be regarded as a

* Held recently.

citizen of Bengal, and although I have spent most of these years at Calcutta, there have been opportunities given me of coming into touch with educational work outside of the city and of making myself to some extent familiar with the difficulties and problems which arise in country districts. May I say how very highly I appreciate the honour of being the first non-Bengali President of this Association, and may I take it, that this is a recognition on your part that there should be no racial distinctions in the pursuit of educational ideals, and that whatever country we come from, we are partners together in the same great enterprise? I need not say how cordially I reciprocate this recognition, and I hope it may be found to be true of this land as well as of other lands that educationists are found in the vanguard of those who are marching towards that ideal of harmony and federation, for the fuller realisation of which the whole world is waiting and longing.

Your meeting together as an Association is a recognition of the strength that lies in unity, and with no uncertain voice you have sent forth a summons to the teachers of this province to band themselves together for the improvement of their position and the redressing of their wrongs. In a recent issue of your journal you have vigorously called attention to the twin follies of indifference and selfishness. It is easy to say that nothing can be done and to act in accordance with the Bengali proverb that those who go ahead will fall into mouths of tigers and those who run behind will get gold. It is easy to devote oneself exclusively to one's own particular work in one's own little village and to care nothing for the larger issues which affect the whole country. Your Association is itself an

invitation to wider thought and more comprehensive action.

No one can say that there is no need for such joint action. The deplorable conditions under which teachers labour have been repeatedly pointed out and are matters of bitter experience to many here. Commissions composed of educational experts have come and gone away and have left a record of their adverse judgments. Government officials and University leaders have successively addressed themselves to the problem and have been almost appalled by the multitude of the difficulties. The daily press is filled with dissertations on the woes of teachers. That the disabilities under which teachers labour are many and serious, will be admitted by all. They do not enjoy that position in the community which they have a right to expect and which might be said to belong to them in virtue of their Indian inheritance of a traditional respect for education. Their pay is for the most part miserably small, and their security of tenure is often negligible. Their prospects in respect of provident funds or retiring allowances are often so very slight that anxiety for the future deepens the distress of the present. The teachers are frequently at the mercy of the unsympathetic managing committees which are themselves in many instances impotent by reason of faction. And in the larger bodies whose function it is to systematise the higher secondary education of the country, the teachers feel that they have not sufficient opportunity to make their ideas and their needs known and realised. They feel that their interests are often swamped by other more powerful interest and that whatever degree of good-will there may be, those who ultimately control the destinies of teachers have not sufficient time to devote attention to

their needs or sufficient opportunity to make themselves properly acquainted with their problems.

Yet we must not forget the other side of the picture or minimise the efforts which have been recently made or are being made to better the situation. The University has been attempting recently to raise the minimum demand, before recognition is given or continued, and has been using what powers it possesses to prevent arbitrary treatment of teachers. It has at present under consideration a scheme which, if put into operation, will do much towards improving the status and pay of teachers and it is also discussing the formation of an Arbitration Board. The reorganisation of the control of secondary education will no doubt soon be taken up by the authorities concerned. What particular form that reorganisation may take it is impossible at present to say, but it may confidently be predicted that there will be greater differentiation of functions than at present obtains and that through this differentiation the claims of teachers will be more fully recognised than heretofore. We are glad that Government has been able to set aside in the last Budget a sum of three lakhs for the improvement of the salaries of Secondary teachers and has also been able to give some assistance towards the institution of provident funds. We rejoice in this, and, like *Oliver Twist*, we ask for more, while at the same time recognising that Government assistance must be paralleled by local effort. Teachers must look not only to Government but to the leaders of their local communities for an improvement in their condition. We consider that an improvement is especially necessary in the relations between the teachers and the local managing committees. The teachers ought to have a substantial share in the membership of that committee

and it ought to be more clearly recognised than it is that the committee exists for the sake of the school, and not the other way about. Too often the school is made to subserve private ends or to promote interest of one or other of the rival factions in a village. Under such conditions the teachers become but puppets in the hands of the local magnates and are set up or pulled down at the bidding of the most powerful party. Such a state of things must come to an end. One of the most common sources of trouble lies in friction between the headmaster of a school and the committee or a section of it. In order that such friction may be avoided it is necessary that the functions of the headmaster both in relation to his subordinates and in relation to the committee should be more strictly defined than they are at present.

One other urgent necessity amongst many that I could mention is the removal of the feeling of helplessness against the arbitrary decision of persons locally powerful, which is felt by many teachers. To this end it seems very desirable that some sort of arbitration boards should be set up either in connection with the University or in connection with any authority which may come into being. Care should be taken to avoid undue neutralisation. There might, *e. g.*, be district arbitral boards as well as a central one, the central board being of course the final court of appeal. The danger of having only one central arbitration court lies in its distance from the various parties affected with the further consequence that those who can afford either the time or the money for a journey to the far off metropolis seem to have an unfair advantage over their opponents. The teachers are not usually possessed either of much time or money. It is impossible for me to go further into details

of improvement. I should prefer rather to direct your attention in the little time that remains to one or two more general considerations. Much has been said both of the status and the pay of the teachers. I should like to urge that status is of much more importance than pay, and that if proper ideas could be disseminated both in the community and the teachers as to the status of the latter, difficulties about pay would adjust themselves. Let the community honour the teachers and let the teacher make himself worthy of the honour, and all other things will be added unto him. It is unwise I think for the teachers to concentrate attention upon his emoluments or to encourage other people to think that his status depends entirely upon his pay. It is foolish, I think, for any teachers either in the University, the College or School even to expect that they will make as much money as those of their associates who have adopted other callings. The world is not so adjusted, never has been so adjusted, and never will be so adjusted. Now I do not mean this to be taken as a counsel of despair, or as a cynical piece of advice that teachers should reconcile themselves to the inevitable.

I mean simply to draw attention to the fact that the teacher's profession should be regarded from a higher point of view than the merely economic, and that if the teacher allows himself to be dressed by this point of view, he will inevitably come to degrade his calling, will regard it as a profession to be taken up only when all else fails. Now he should consider it as an honourable profession even though it does not bring him wealth, and he should choose it because it is that above all else in which he delights. He must remember for his comfort that he is the

custodian of the sacrifices of the community and how great these sacrifices are in Bengal you will know. You know how in many a household the last pice are scraped together in order that the boy or girl should be educated and is it fair that the teacher should refuse to accept any share in this sacrifice?

But while putting forward this consideration I am equally vehement upon the other side of the question which is that the sacrifice should not be altogether on the side of the teacher.

I am afraid that in too many communities this is largely the case. The teacher is exploited in order that the community or perhaps that, some wealthy man may have the glory of association with and credit for a higher English school. The teacher is worse paid than a domestic servant. Those who minister to the comfort of the wealthy members of the community are considered of more account than those who educate their children. There is need here to get rid of confusion of ideas. When the authorities are strict about the conditions under which a school is to be recognised, the cry is often raised that they will be depriving a struggling community of the advantages of education. His cry would be intelligible and justifiable if we could always be certain that it was the community as a whole which was struggling and not merely the poor teachers, if we could be sure that the sacrifice of poverty was always at the expense of the community as a whole and not merely at the expense of the teacher.

Often I grant that the community does its very best, but it is not always so, and it is for an Association, such as this, to devise means whereby the community may take its fair share in the burden of education, and those

who have adopted more lucrative professions may be induced by public opinion to divide some portion of their wealth with those who are actually engaged in education. We must give the teachers their proper place in the social economy so that the young teacher, after having by toil and sacrifice on the part of himself and his family come to the close of his University course, should not feel that his life has reached an anti-climax and that he is compelled henceforth to exist under miserable, helpless, and soul-destroying conditions. The teacher must not be regarded as the insignificant employee of the community but as the depository by the community of a sacred trust and the community must see to it that it provides honourable conditions under which the teacher may carry out that trust.

This leads me to another thought. I am fully in sympathy with the contention of teachers that in any reorganisation of managing committees or higher boards of control, the representation of teachers should be effective and to a large extent controlling, as regards their particular interests. But I should like to point out that a certain danger lies in too exclusive attention to definite majorities either on the side of those who are teachers or of those who are non-teachers. I prefer to rely on the qualities of individuals who compose committees and boards, rather than upon their constituting a definite majority. When a man belongs to a secure majority, he is apt to rely upon his party rather than upon his own sense of what is due to the community as a whole, and he judges everything from the point of view of his party. This seems to me to introduce a new rivalry between the teaching body and the other

bodies, similar to the rivalry on the merely economic level. It introduces the idea of "Let us get all we can for ourselves and never mind the rest of the community." Let me urge again the idea that teachers are trustees for the community and can never make progress except with the good-will of the community, and let me urge again equally strongly the duty of the community to the teachers. Organise, organise, by all means, but do not let us organise in rivalry. It has been said that "God helps those who help themselves," but I would rather change it to God helps those who help other people!

So my last word is this, strive as earnestly as you can that you may secure an honourable place and honourable conditions for yourselves. Never rest content or passive under any measures of exploitation but remember that you must work in agreement with the community as a whole and that you are trustees for the community. After all you stand on a spiritual and not an economic level. It is for you to maintain a high ideal for the whole community. It is for you to keep their aims pure. That you can do by clear thinking in regard to your own vocation and by earnest labour in the fulfilment of it. Opportunities are given to you, such as are given to few, for you would be the minds for the coming generations.

You hold the whole world in your hand;
See to it what you do,
For wrong or right or dark or light,
The world is made by you.

And what shall it profit the teachers of this land if they gain the whole world and lose their own souls?—*Education*: Allahabad, Feb. 1926.

EDUCATION IN BARODA.*

I THANK Your Highness for the kind invitation you have extended to me to take part in to-day's ceremony. I accepted your invitation with the greatest alacrity, both on account of my appreciation of the general advantages expected from the projected institution in affording extended opportunities of acquisition of practical knowledge in science and adding to the facilities for research, and because I wished to show how greatly I had been impressed with your Highness's achievements in the cause of education. On the first point I need not dwell at length for your Dewan has explained in the most lucid and eloquent manner the scope of the new Institute of Science, the aims it is intended to fulfil and the advantages expected from it. To those like myself, who have lived in the 19th century and crossed over 20th, it has long been apparent that an era of far reaching scientific discovery has begun by day to silent workers and seekers in many an institution such as that it is proposed to build here. Nature is slowly revealing her secrets and the mysteries of the universe are being disclosed year by year and additions are being made to the sum total of human knowledge and a new land of promise is the thing opened out. It is really an era of stupendous discoveries and unparalleled inventions, and if we are justified in trying to gauge the future by the immediate past, a period of exceptional intellectual activity and scientific competition lies ahead of us. Those countries which lack the equipment to keep pace with it, will lag behind, not only in the march to progress,

but even in what may be within a very few years the essential conditions of serviceable existence, and this holds true even in a country of conservative traditions like India. The application of science is the key to the improvement of the great staple industry of this country, agriculture. It is upon science that progress in the ordinary needs of the community, as for example, better communications, improved public health, hygiene and sanitation, and the relief of suffering, must in future depend. Science is also the hand-maid of industry without whose help no industry can expand or flourish. In a word, the happiness of the people in the future is inexplicably bound up with efficiency and scientific knowledge and to untold numbers science may mean the difference between health and disease and between contentment and want.

Here I must leave this fascinating subject, but the little I have been able to say may help the public to realise to some extent of what great importance to the welfare of this State this institution may one day become. In your project for this institution your Highness has added one more stone to the great educational structure which your Highness has built up in this State, and though I have already dwelt last night in my speech at your Highness's banquet on your achievements in the cause of education, I desire once more to express my admiration of the liberal conceptions your Highness has formed of educational needs. To the realisation of those conceptions you have devoted your highest faculties, an absorbing personal attention and an untiring activity. You have rightly conceived, that, of the many disabilities and suffering to which the masses are exposed, ignorance is the potent cause, and knowledge is a certain cure, and in proportion as knowledge can be

Reviews and Notices.

AN ECONOMIC HISTORY OF ENGLAND: 1066—1874, BY CHARLOTTE M. WATERS, HEAD MISTRESS OF THE COUNTY SCHOOL FOR GIRLS, BROMLEY. (OXFORD UNIVERSITY PRESS, 1925), Pp. xviii & 610—WITH NUMEROUS ILLUSTRATIONS. Price 7s. 6d.

This excellent handbook follows a plan in which it takes the condition of the English nation as it stood at intervals of 200 years and gives pictures of their economic life at these points of interval, noting the principal changes and attempting to note their causes. "At each stopping place we take either three or four pictures, one of rural England, one of the towns and one of the Government; this last only from the point of view of the national house-keeping, politics and law being left to other history books." The first picture is of the Eleventh Century England when there was established the definite economic system of the manor which lasted on for over four centuries. Thus we are taken from a picture of the eleventh century village, town and revenue system to an account of England as it was by the end of the thirteenth century when the manorial system was in its prime and with the towns and guilds fairly well developed. The decay of villeinage and the breakdown of the feudal system form the background of the picture of the 14th and 15th centuries; and the conclusion of the author, that in spite of the increase of pasturage and unemployment and economic revolts, the total prosperity of the nation undoubtedly increased between 1300 and 1500, while at the same time inequalities of wealth became more marked, the mere wage-earners increased in number and 'labour questions' began to appear. (p. 142).

The latter part of the book deals with the beginning and development of modern economic England and marked by the effects of the Agrarian and Industrial Revolutions of the 18th and

spread among the people, in such measure will the moral and intellectual well-being of the community improve and expand. Nor have you confined your energies to one portion of the field alone. While realising the importance of a sound general education of the people at large, you have not neglected the claims of higher education in which the selected few may share. You have abundantly provided for the more solid items of intellectual acquirements but at the same time the arts and graces have not been forgotten. You have sought to encourage erudition to provide research and to develop the intellect, but side by side, in your academy of music, picture galleries and art classes, you have catered for the stimulation of imagination and the formation of taste. The student in your State may turn at will from the pursuit of modern scientific attainments in your School of Technology to the study of the love of the ancients in your library and museums. The facilities which your Highness has instituted offer equal attraction to those who desire a general education or those who would devote themselves to special or elective courses. I cannot too highly praise the thought and capacity which your Highness has devolved to the establishment of this raved and comprehensive scheme for fostering intellectual activities and I feel privileged to lay the foundation-stone of an institution which will help to complete the great project you have in mind.—*Education:* Allahabad, Feb. 1926.

* H. E. the Viceroy's Address delivered at the ceremony of laying the Foundation-stone of the Institute of Science.

9th centuries and by the triumph of *laissez-faire*. Book I brings us down to the middle of the 18th century which saw the growth of a national debt and a system of government by credit and the shifting of the burden of taxation from the land-owner to the payer of indirect taxes. The triumph of *laissez-faire* in the Victorian epoch saw the beginning of its agitation in the thirties (of the 19th century), the admission of its principle in the forties and the complete vindication of the whole of it in the sixties; while the Classical Economic Theory on which the whole system was based, was formulated and consolidated by J. Stuart Mill.

The whole treatment is marked by a minute study of original and contemporary sources and based as well on various standard histories and monographs on the subject by high authorities like Thorold Rogers, W. Cunningham, Ashley, the Webbs, R. E. Prothero and E. Lipson. Each of the two parts of the book has a complete list of reference books attached to it; while every chapter, i.e., each section of a Part has got at its end a very carefully compiled summary of the chief conclusions reached in it. It is the list of illustrations that is particularly exhaustive, covering all operations of manorial cultivation and village life, building operations, methods of reckoning, etc., prevalent in those days, buildings of various types and epochs, illustrations of ships, trades, etc., as they developed into modern times, the revolutions in industry, etc., cartoons and extracts from contemporary prints and magazines—too numerous and interesting to be detailed here. The aim of the author is to show that the seemingly dull economic life of the nation may be made to appear as romantic and as full a mixture of enterprise and misery, idealism and utter-selfishness;—"there is romance in golden fields of corn; in perilous journeys by sea and land; in finding new worlds, not only across the seas, but in fresh arts for human skill." This task the author has attempted

and worked out in an eminently successful manner; and we commend the book to all lovers and students of history.

ANNALS OF THE BHANDARKAR INSTITUTE, VOL. VII, PARTS I AND II. EDITED BY DR. D. R. BHANDARKAR AND MR. C. R. DEVADHAR, POONA, 1926. Pp. 184.

This double number brought out under the auspices of the new Editors may be regarded as the Memorial Number in honour of the late Dr. Sir R. G. Bhandarkar, an appreciation of whom is contributed by Mr. V. G. Paranjpe. The Institute announces an early publication of a Memorial Edition of the collected writings of the great *savant* in four volumes containing respectively literary contributions, addresses, etc., Reports on Mss. and Social Writings, Early History of the Deccan and Inscriptional Essays and lastly Vaishnavism, Saivism, etc., and the Wilson Philological Lectures. We await with great interest these volumes of his writings, which are, as aptly pointed out, "all pure gold tested in the fire of criticism."

Mr. C. R. Devadhar examines the authenticity and the merits of the 13 plays hitherto ascribed to Bhasa falling into 2 broad divisions—the Epic-Pauranic and the Legendary. He examines the question whether they can all be ascribed to one author on the basis of discovered similarity of expressions and dramatic devices. He infers other characteristics of the author from the plays and finally determines the relation between *Chārudatta* and *Mrichchakatika* and consequently between the Trivandrum author (Bhasa) and *Sūdraka*—concluding that *Chārudatta* was the posterior play. Other conclusions are promised by the author in the next instalment.

Prof. D. R. Bhandarkar discusses the date of Kautalya (derived from his gō-ra-name, Kutala) and rejects the arguments of Professors Jolly and Winternitz ascribing a later date to the work which combines the minimum of speculation with the

maximum of practical wisdom. He tries to prove that the work was wholly in verse and continued to be so until the time of Dandin and was reduced to Sūtra form before the time of Bhavabhūti, without however any violence to its internal contents. Mr. P. V. Kane also writes about the work of Kautalya, discussing the proper name and date of the author and concluding that the work has an ancient atmosphere about it, namely, *Circa* 300 B. C. Mr. Kane also writes about the *Dharma-Sūtra* of Sankha-Likhita; while Mr. H. C. Chakladar describes in a first instalment the peoples and countries mentioned by Vātsyāyana. Mr. Apte's Note on the Constructive Geometry of the Vedic Altars is valuable and we have thus a rich output of learned articles in this number.

AN INTRODUCTION TO PSYCHOLOGY, BY MR. H. A. REYBURN. (LONDON: GEORGE G. HARRAP & CO., LTD.) Cr. 8vo., pp. 324. Price 7s. 6d. net.

"Man, know thyself" was the famous teaching of Socrates. According to him to know oneself is the one pursuit worthy of man, the sum of all wisdom. Since the time of Socrates the study of mental life has been vigorously prosecuted and the science of psychology that we have to-day is the outcome of the striving of men to know themselves. But for a long time psychology was regarded as a chapter in general philosophy. Under the leading-strings of philosophy, psychology could never attain to the level of an objective science and could make no headway. It shared the fortunes and failures of philosophy. Every school of thought, each system of speculation, laid claim to a definite type of psychology. Instead of being recognised as an objective and experimental science which should remain unaffected by the varying fortunes of speculative thought, psychology remained largely an auxiliary to philosophic thinking. Besides men studied mental phenomena, not for their own sakes, but for the basis such a study offered for Ethics and Epistemology.

The 19th century saw the beginning of empirical psychology. "Leaving the parental roof, it has followed its older brothers, physics, chemistry and biology, out into the world, and set up business for itself." The rapid strides made in physiological research and the introduction of laboratory experiments to test mental processes like memory, learning, association, intelligence, thinking, etc., have placed psychology in the front rank of experimental sciences. Once set on the proper road, psychology launched upon a career of prosperity. And to-day its devotees have taken it over wide fields. We hear of individual psychology, abnormal psychology, social psychology, industrial psychology, educational psychology, legal and forensic psychology. The beginner is apt to be bewildered by the vast amount of psychological literature that is available. He feels keenly the need for an introductory manual.

This book is to meet the first needs of non-professional students. The author breaks no new ground for the student, but he writes the book in such a way as to present no difficulties to the general reader. To make the beginner see the wood and not the trees, the author lays the emphasis on the general principles, on certain main lines of thought, and not on the details. In the chapter on "The Nervous System" the writer has given a concise and interesting account of the rôle of the nervous system in the economy of life. Special attention is devoted to the importance of instinctive behaviour. Unlike older text-books on psychology, this book finds room for a discussion of intelligence and intelligence tests. "Dreams and Mental Conflict" is the theme of another interesting chapter. But even the casual reader is surprised at the summary way in which memory and problems connected with memory are disposed of. It is hoped that this serious omission will be remedied in the next edition. However, this book is the best introduction to psychology for the ordinary student. This treatment will enable the reader to take an intelligent interest in the psychological problems and discussions of the time.

AN INTRODUCTION TO PHYSICAL SCIENCE, BY IVOR B. HART. (CLARENDON PRESS, OXFORD, 1925). Price 4s.

Opinions vary regarding the aims and methods of teaching Science in schools. Not long ago the rule was all theory and no laboratory work; now is the cry for more and more laboratory work. Once the plea was for formal science divorced from vocational or utilitarian tendencies; now probably it is all for practical purpose. Though each one of these views argues soundly, it is very difficult to arrive at a cut and dry method of teaching it. In the Preface, the author quotes opinions of Science teachers assembled at the Conference and it is no wonder if earnest teachers of experience hold divergent views as regards the aim of Elementary Science in Secondary Schools, whether the lessons shall be 'formal' or if pupils shall learn to measure accurately to millimetres and to weigh to decigrams.

The truth probably lies between the two. It is necessary to instil a scientific spirit in the approach to every-day problems, and the facts and wonders of Nature. This entails, therefore, frequent reference to their various applications to daily life.

The author of this book has kept in view this ideal and in the earlier chapters experimental work involving measurement figures largely. As the method and habit of experiment becomes established, the descriptive side and application of the scientific principles to daily life figure more prominently.

The book is divided into eight parts covering about 300 pages. The first four parts of 165 pages are devoted to Lengths, Areas, Volumes and Hydrostatics; and the remaining to Heat, Sound, Light, Magnetism and Electricity. It is profusely illustrated, the list numbering 199. The elaborate treatment of the first four parts is not proportionate with the 30 pages allotted to Magnetism and Electricity or to Light.

READABLE SCHOOL ELECTRICITY, BY VIVIAN T. SAUNDERS. (GEORGE BELL & SONS, LONDON, 1925). Price 2s. 6d.

This book is again one of Bell's Natural Science Series of which E. J. Holmyard is General Editor. Like the other books of the series, this is also a very useful addition to the reading public. The matter is well arranged and is 'readable.' It is further up-to-date, the last two chapters being devoted to the conductance of electricity through gases and wireless telegraphy and telephony.

HISTORY OF ELEMENTARY EDUCATION IN ENGLAND AND WALES, BY CHARLES BIRCHENOUGH, M.A. (UNIVERSITY TUTORIAL PRESS). Price 6s. 6d.

Educational history furnishes a key to the understanding of many of the problems of aim, administration, organization and method which confront the student to-day. It will also help him to assume a just attitude towards the future, dispose him to avoid routine, to beware of prejudice, and to keep an open mind with reference to suggested change. "History is the true prophylactic against the fogginess which besets the Schoolmaster, the Committee-man and the official." This book is hence received with great joy by all who have the interests of the Elementary School at heart. We feel it will supply a need in education and we are sure that our belief will be accepted by all who accept the doctrine of development which is in other words the assertion that the present is both the child of the past and the parent of the future. Hence the high value of historical study. We recommend the book to our readers feeling sure they will receive as great inspiration from it as we did ourselves.

GRAPHIC METHODS IN EDUCATION, BY J. HAROLD WILLIAMS. (LONDON: GEORGE HARRAP AND CO.) 7s. 6d. net.

This volume is one of the Riverside Text-books in Education, edited by Ellerwood P. Cubberley, Professor of Education, Leland Stanford University. This series of text-books arose from an attempt to meet a very practical need in education, and it is to America that we often have to turn to find our needs practically met. In this book again we turn to America for the author is the well-known Professor of Education in the University of California, and the book is written as he says "to meet a need in educational administration, namely, that of giving to prospective School Principals, Superintendents and research workers such simple training in graphic methods as they need without the necessity of sending them to engineering courses in lettering, linear drawing and design."

The school-master in India does not seem to need to resort to graphic representation to the same extent that his American brother seems to need it, but even so those of us who are engaged in mental tests, etc.,—and we are not an inconsiderable number—will welcome the book as giving a practical and simple study of one of the most useful ways of representing our results. We owe a 'thank you' to Messrs. Harrap for placing the book within our reach, and feel sure it will fill a place in the educational world. We recommend a copy to every school and college reference library and especially to the training schools.

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The Educational Review.

We regret to have to record the death of Mr. T. V. Seshagiri Iyer, retired Judge of the Madras High Court and a well-known public worker of the Madras Presidency. The late Mr. T. V. Seshagiri Iyer took keen interest in educational matters and was connected with many schools besides representing the Madras University for some time in the local Legislative Council. The National College, Trichinopoly, which is now a first-grade institution, was developed under his personal care and if he had been spared for some years, he was sure to have established the institution on a sounder financial basis. Suave in his manners and with varied intellectual interests, Mr. Seshagiri Iyer's was an attractive personality and he will be missed for many years to come in the public life of the Madras Presidency. The late Mr. Seshagiri Iyer was a genuine friend of the teachers' profession and always used his influence for the betterment of its prospects and conditions of service.

India has been assigned many kinds of names, but it would not be unreasonable to call it also the Land of Examinations. As we are writing, all the Universities in the country are busy conducting examinations, compelling thousands of young men and women to sit day after day for a number of hours trying to answer searching questions by

examiners. We admit that the complete elimination of examinations is beyond the range of practical politics, but cannot something be done to reduce their influence in the world of Indian education? The whole scheme of things in educational matters seems to move in the direction of examinations and the baneful effects of such a state of affairs must be apparent to everybody. The employment of a larger staff, the introduction of the tutorial system and the close supervision of students in their daily work at a residential institution should at least reduce, if not altogether eliminate, the importance of examinations and we hope some attention will be bestowed upon it by our educationists.

The Rev. Alexander Moffat of the Madras Christian College is retiring after a period of valuable service at the institution and we cordially endorse the tributes paid to him at the recent public meeting in the city presided over by Sir C. P. Ramaswami Iyer. Mr. Moffat has been an unostentatious worker for thirty years at one of the leading colleges in Southern India and he will be remembered with gratitude by the hundreds of students who have passed through his hands. While being very devoted to his own work at College, Mr. Moffat took considerable interest in social activities of various kinds and the cause of temperance in the City of Madras was promoted in no small measure by his labours. He was ably seconded by Mrs

The Rev. A. Moffat.

Moffat in his useful work, and we wish them all happiness and prosperity in their retirement. We can assure them they have left very pleasant memories behind.

It is gratifying to note that the cause of the Fine Arts is receiving further encouragement all over India and we hope the time is not far distant when there will be high-class facilities at our educational institutions for the advanced study of the Fine Arts. The University of Patna resolved the other day upon conducting an examination in Indian music. The Government of the United Provinces is making provision for a substantial grant for the establishment of an Academy of Music, for which considerable public support has already been forthcoming. The Benares Hindu University has already passed courses in Music and Painting for the benefit of girl-students. The Government of India is seriously considering the scheme for the establishment of a Central Art Institute at Delhi. We hope that some definite activity will be apparent in that direction at an early date in Southern India.

One of the most hopeful signs in the educational world of India to-day is the increased activity among teachers and the formation of teachers' organisations in the various provinces. The inauguration of the All-India Teachers' Federation last year is being followed by activities in various provinces

among Secondary School teachers. The United Provinces Secondary Teachers' Association have just had their annual Conference at Bareilly under the presidency of Lala Diwan Chand, M. A., Principal, D. A. V. College, Cawnpore, while the Bihar and the Orissa Secondary Educational Association has had an equally successful session at Gaya under the presidency of Prof. P. Seshadri, M. A. of the Benares Hindu University. Considerable headway has still to be made, particularly in Bihar and Orissa, in the matter of Secondary Education and we hope these Conferences will be able to contribute to a better state of affairs. We hope to be able to publish some of the proceedings in our next issue.

Soon after the introduction of the 'Reforms' into the Madras Presidency there was the curious spectacle of the Ministry being formed entirely of Telugu-speaking members, though the Tamil Districts are the most advanced in education. In response to adverse criticism, the present Ministry has made provision for a Tamil representative, but the Tamil Districts continue to receive a step-motherly treatment. It is well-known, for instance, that the Tamil Districts have a much larger number of colleges than the Telugu Districts and the literature and culture of Tamil is not less worthy of special encouragement than those of the Andhras. The Andhras have already a University, though it is not much of a 'University' and it will only be an examining

A Tamil University.

The Land of Examinations.

Teachers' Conferences.

body, smaller in jurisdiction than Madras. The paltry sum of a lakh of rupees has been provided in the budget, and nobody has yet heard of some magic process by which Universities can be run on a lakh of rupees apiece every year. The Tamil Districts are willing to come down to the level of the Telugu Districts and are willing to have an examination machine set up among them of smaller dimensions than that of Madras, but the Government is not anxious to indulge them in their vanity, and the Tamils have been protesting vehemently. If Cardinal Newman were living, he could have added some interesting chapters from these episodes to his *Rise and Growth of Universities*!

We offer our cordial felicitations to Rao Bahadur S. Appu Sastriar, B.A., on the completion of fifty years of existence of his Native High School in Kumbakonam. The Golden Jubilee was duly celebrated the other day with Sir C. P. Ramasami Iyer in the chair. A large number of messages and greetings poured in from all quarters and the Rao Bahadur was the recipient of many tributes of praise from speakers at the public meeting. Fifty years of service as a schoolmaster and proprietor of a High School is a record worthy of special praise. Rao Bahadur Appu Sastriar carries with him the best wishes and appreciation of all lovers of education in Southern India. The proprietary school is by no means the ideal form for an educational institution, but where the

owner is actuated by high ideals, considerable personal influence on the pupils and continuity of interest are possible. These have been the secrets of Rao Bahadur Appu Sastriar's success and it will not be easy to mention many others with a similar distinguished record.

The following information will interest Indian students intending to go to America:—

The Committee on Friendly Relations among Foreign Students, 347, Madison Avenue, New York City, is prepared to arrange to meet foreign students proceeding to the United States at ports of entry and help them in every way possible and to answer questions regarding study in the United States. This Committee was brought into existence by the Foreign Department of the Y.M.C.A. and has been doing extensive service to foreign students in the United States. At the present time there are 7,518 foreign students in the United States, of whom 237 are from India. The Y.M.C.A. is prepared to render any service possible at ports of entry. Information regarding foreign students may be sent to the Secretary of the Y.M.C.A. at any port of entry with the exception of New York City, where the information should be sent to the Secretary of the Committee on Friendly Relations among Foreign Students, 347, Madison Avenue, New York City. The port reception service is available free of charge to students and professors from every country. The Committee is international in its spirit and membership and seeks to meet the student's immediate needs and to co-operate with him in realising his highest aspirations.

Any Indian student travelling to America who would wish to avail himself of the help of this Committee should write to the General Secretary of the Y.M.C.A. at the port of entry, giving his name, the ship on which he will arrive, the date of arrival and, if possible, the class in which he will travel. For New York City the information should go to the Executive Secretary of the Committee on Friendly Relations among Foreign Students, 347, Madison Avenue, New York City.

A most discreditable case of official bungling and neglect is that which happened recently in connection with the death of a student of the Madras Law College who was denied admission into the General Hospital during the few hours before his death on the ground of lack of accommodation. The question was discussed thread-bare in the Council, thanks to the vigilance of Mr. Satyamurti and others and we have no wish to reopen the unpleasant episode. But we must observe in passing that this does not reflect credit on another department also, that of educational organisation. In a Presidency town like Madras, containing thousands of students, it should be possible for students to obtain first class residential accommodation and also expert medical attendance as is the case in most of the North Indian Universities. The Government makes enormous profits out of the Law College and yet does not find it possible to provide hostel accommodation on a large scale to the students.

We wish our educational authorities in Madras pay a visit to Allahabad, to witness the admirable hostel accommodation provided there for Law Students who have got two magnificent hostels provided exclusively for themselves. We hope some steps will be taken in the direction at an early date.

In spite of the recommendations of the Lytton Committee on Indian Students that efforts should be made to gradually eliminate the need for Indian students going to England for the completion of their studies, hardly anything has yet been done, though it is also a fact that Indian students often go to England not because of the better facilities obtaining there for education. The fictitious value attached to English degrees is responsible for the crowding of Indian students in England. According to the latest report issued by the High Commissioner for India, the number of Indian students at the various British Universities is as follows:—

London 360
Cambridge 117
Oxford 86
Edinburgh 166
Glasgow 62
Manchester 51
Bristol 24
Sheffield 21
Leeds 17
Belfast 13
Aberystwyth 4

The legal profession is overcrowded in all parts of India, but in spite of that there were as many as 583 Indian students registered at the Inns of Court. It is depressing to realise that the bulk of them when returning to India after being called to the Bar will find it hard to eke out a livelihood. Some regulations were attempted to be passed during the year having the effect of restricting the admission of Indian students, but they have been altered, providing for the recognition of students who have passed in Indian Universities in English and in one classical or modern European language. We are not sure if all the labour and expense involved in the sending of such a large number of students to England is yielding commensurate beneficial results.

Lecturing on Indian Educational Policy the other day, Dr. Meston had some trenchant criticisms to offer on the present educational policy of the Government of Madras. Though the budget allotment was increasing every year, he was not sure if it was always spent to the best advantage. With regard to elementary education, Dr. Meston complained of want of an adequate Inspecting agency, the small proportion of trained teachers and the want of a correct policy with regard to the giving of grants. Passing on to Secondary Education, Dr. Meston sought to prove that Municipal and Board Schools were treated more liberally than private schools. He thought that University education had not received sufficient encouragement. The Hon. Mr. Moir referred to the criticism with regard to University education and thought that Universities should not be started unless adequate financial facilities were available for their maintenance.

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

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Education (Allahabad), March 1925.

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The Madras Christian College Magazine, January 1925.

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

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

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