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Provision of Library Period in The Time-Table

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It is nowadays being more and more recognised that pupils in each grade should have an opportunity of sitting in the library periodically and making use of books and kindred material available under the guidance of the class teacher in co-operation with the school librarian. "Library period" helps in developing reading habit, a spirit of self-help, and at the same time learning from one another and many other civic virtues. This is why provision is made in the school time-table for pupils of each grade to do library reading occasionally.

The term "Library Period" is used to denote the time when a class is with the school librarian for the use of books and library technique. It does not include the occasion, when they are with a teacher for work in connection with a particular assignment concerning their subjects of study. During the library period an informal atmosphere should prevail so that each student feels free to ask for any such information. Discussion should be governed by a sense of purpose. Most of the time of the period should be devoted to practical work, which should be recorded in a record book which should reveal the author, title, and the opinion about the book in a line or two. The time of the library period should not be wasted in charging and discharging books, as those routines can be performed at other convenient times also.

For this purpose library should be kept open before and after school timings.

Aims of library Period:—The aims of the Library Period are as under:—

1. To encourage the care of books by explaining how books are produced, and how they should be looked after.

2. Training in the use and enjoyment of books and libraries by means of a planned course of instruction and practical training which should include.—

21. The use of reference books—encyclopedias, dictionaries, year books, directories, atlases etc.

22. A knowledge of the classification scheme used in the library, preferably Dr. Ranganathan's colon classification.

23. The use of the catalogue (classified catalogue).

24. Compilation of reading lists and writing of articles on various occasions.

So far as the details of the curriculum of practical training are concerned, the subject has been very well covered by C. A. Stott in his work "School Libraries,

Short Manual" and Ernest Grimshaw's "Teacher Librarian". The reader is referred to these books and I consider repetition as unnecessary.

For imparting training in the use of books and libraries, it would seem that an allocation of three periods or at least two periods of one hour each per week is needed.

It is for the convenience of staff and students that a library period be attached to the recess period, and the class of a teacher who is on leave should be persuaded to sit and read in the library, rather than roam about in school verandas and waste their time in idle gossip or make noise or indulge in other undesirable activities which have an unhealthy effect on the education of our children.

Activities of a library period.—Other activities which can be taken up in a library period are story hours, discussion groups and extension lectures.

Practical difficulties.—The conduct of the library period is not an easy job. We have to face many practical difficulties. It can be met with adequate provision of library staff, books (readers are understood to be there), and seating arrangements.

Co-operation between public libraries and school libraries.—School libraries should not be considered a separate entity. They are the link in the chain of libraries in a country. It is however admitted that school libraries are too small and they have two few resources. Public libraries can render the following types of services to the school libraries.—

(i) Lending publications and kindred materials, permitting the use of library permises, preparing book lists for schools and for publicity, and giveing training in library science and renderinging impersonal technical services like cataloging or classification of books added to the collection of a school library. Students should be persuaded to join the lending section of a public library nearest to their schools.

(ii) *Co-operation between the teachers and school librarians*—

The success of the "library period" however depends on the co-operation between teachers and school librarians, and without their active co-operation the provision of the "library period" will be wastage of time and energy. If our teachers co-operate with librarians, they will themselves inculcate "the reading habit." Moreover, the provision for the library period requires some planning on the part of administrators also. As Dr. S. R. Ranganathan points out: "It is particularly of no value if the library hour is conducted in the way in which one of my colleagues conducted it.....I found my colleague sitting in his class with heads bent and supported by their hands. I wondered why they were in mourning. When I asked my colleague later about it, he said that it was 'library hour' (library period). According to him, the library hour had been thrust on the institution by the authorities. The students began to pull out all sorts of books from the almirahs and left them behind, scattered on the tables; and it was a job for him to restore them to resting places. He had therefore decided to insist upon every student sitting silently throughout the library hour."

From the above, it is clear that once the library period is provided in the time-table, every effort should be made for its success.

It is therefore suggested to principals and headmasters that at least two periods of one hour each may be provided for each class in the time-table. Professors and teachers should take their turn in supervising their library reading and provide necessary help and guidance. Librarians should also co operate with our educators to make "library period" a success.

SCIENCE IN THE BRITISH UNIVERSITIES

Professor N. F. Mott Cavendish, Professor of Experimental Physics and Master of Gonville and Caius College, University of Cambridge

Not along ago Churchill College was founded; and there is to be in Cambridge, thanks to the generosity of Industry and of the charitable foundations, a new college devoted to the advancement of science and technology, and bound by statute to admit not less than seven-tenths of its student body in these subjects. Many of those who have worked for the new college and who have given money to it have felt that so powerful and well-endowed an institution set in so famous a university will be particularly well placed to give a new lead to scientific education in the mid-20th century. If a lead is needed, it must be felt that as circumstances change there are new problems to be solved; this article will attempt to state what these problems are.

Seen in comparison with scientific education in the universities of the Commonwealth and of many other countries, the features which are characteristic of the United Kingdom seem to me to be :—

1. Entry into English universities is competitive; one cannot be assured that by reaching a certain standard one will secure a place. The number wishing to go to a university and with expectations of securing adequate financial assistance from central or local government sources exceeds the number of places available. Each university, and particularly one of the more favoured universities, is therefore in a position to choose its young scientists from among many who are well qualified. In the schools, therefore, where the boys between *11* and *18* prepare for the university, there is a tendency to ask a boy to choose at an earlier and earlier age whether he will be a scientist, and once the choice is made to banish all non-scientific subjects from any serious place in his curriculum, in the belief that they do not greatly affect his chance of a place at the university. The English student arrives at the university exceptionally well prepared in science, but having received little formal instruction at a mature level in anything else.

2. The basic university course in science is short, lasting only three years; after this a majority of students are ready to go into industry or teach. So short a course is possible only because of the high standard reached at school, but even so there is a tendency to more and more specialisation within these three years. The Cambridge Natural Sciences Tripos used to demand the study during the first two years of three separate experimental sciences. Though this fiction is still maintained, it is in fact no longer necessary for the physicist or chemist to stray far from his chosen subject. Oxford has a four-year course devoted to chemistry alone, which has been praised because, in comparison with Cambridge, it allows a student more time to sample the rest of human knowledge. At other universities a student reads one main subject, others being subsidiary to it.

3. Comparable numbers study "pure science" and "technology", and there is a rather sharp division between the two disciplines. At cambridge the engineers, reading for part I of the Mechanical Sciences Tripos, are taught wholly by members of the Faculty of Engineering, while a separate group of men teaches the physicists and chemists. In some other universities the young technologists go to the physics or mathematics departments for some elementary teaching, but at the advanced level they

are separate again. In fact, between science and technology as practised in our universities there is a divergence both of aims and practice which may have become too big, and which without doubt has been in the minds of the sponsors of Churchill College. In Cambridge only chemical engineering is an exception, attracting as it does students of chemistry from the Natural Sciences Tripos.

Wish to do Research

The departments of pure science in our universities are greatly influenced by the wish to do research. From the last quarter of the last century onwards the outstanding advances in scientific knowledge have been made in universities, and scientific departments are staffed by men who have made their own contributions, and whose example leads their students to want to do likewise. About a quarter of those who take the first degree stay on to do research in universities, devoting three years or more to a research task which can earn the degree of Doctor of Philosophy. Many stay longer, and it is characteristically groups of young men in their late *20s*, working under an experienced leader, who make the pace of university research.

The departments of Engineering, on the other hand, train men who can satisfy the immediate needs of industry. The teaching staff will usually include many men with industrial experience, and although some students stay on for a Ph. D., it is probably true that a considerably higher proportion of the most able men have the ambition to get out into industry directly after their first degree. Their education is modelled to the job they have to do; but during it they have little contact with those who are advancing fundamental knowledge, and in a world where whole new technologies are rapidly built on the results of fundamental science, this leaves an essential role in scientific leadership in industry for some of those who have been trained in its disciplines.

These—one would hope—would, as in other countries, be the men who have worked for a doctorate in a university and consequently obtained some experience of research there. But as a matter of fact the Ph. D. has been under some criticism from industry. Nobody doubts the outstanding merit of the research done in the best university departments and the need to continue such work; but it is said in industry that the young men who undertake it fall too much in love with pure research, not enough come to them anyhow, (for Cambridge since the war the figures are less than *1* per cent. in physics, about one-third in chemistry) and when they do, they are reluctant to change their habits and do the kind of job that industry needs. Industry, it is sometimes stated, could give as good or better training itself.

Higher Calibre

Our research schools are so basic to scientific education in universities that some brief description and defence of them will not be out of place here. Many of us in the universities would fully agree that one can learn to do research as well in a first-class industrial or government laboratory as in a university. What we would say, however, is that the basic research done in universities is of a higher calibre than could be done elsewhere ; that it would be disastrous for the community if it were weakened; and that the flow of young men through the research schools is essential to it.

This is not the place to sing the praises of fundamental research in Britain since the war, except to say that it is perhaps our characteristic contribution to Western civilisation, and that the contribution to it of those who come from the Commonwealth is as great as ever it was in Rutherford's day. I remember, too, showing a Russian visitor some work going on in a wartime hut in the grounds of the Cavendish Laboratory and noting his admiration

and his belief that "in the U.S.S.R. we would build a palace for this work". But this article is the place to try to state why this work has the quality it has. Given talent and reasonable financial support, the basic reason in my view is that it is done by men who want to do it and whose careers offer many other possibilities.

The task of a university teacher is to teach, to advance knowledge and to help to form policy and carry on the administration. Those who do research do it because of their enthusiasm and talent; without it they will not attract the young men on whom their work depends. And, if and when the urge to research becomes less, a university can offer a no less worthwhile career in other fields. In a good university department, those of the staff who are active in research are on top of their form.

Economical in Manpower

For this reason a university is not only the best and most stimulating atmosphere for fundamental research, but the most economical in scarce manpower, giving each man the opportunity to make his contribution—perhaps at different times—to all these three activities. One deplores an organisation that separates them. Research institutes with a definite purpose, the development of thermonuclear power or new antibiotics, are of course essential, and nobody would think of diluting their work with elementary teaching. But any organisation which separates basic research and teaching, the former in government establishments or Research Associations and the latter in technical colleges of whatever kind, seems to me extravagant in not allowing a man to offer his best throughout his career, unless of course change from one to the other is much easier than it is at present.

However, when all this has been said, we still have to ask ourselves whether there is anything in the accusation that our Ph. D. and, indeed, our science graduates as a whole are rather narrow, wedded to the concept of pure science and unwilling rather than unable to go out into the world and apply it. If you look at our educational system as a whole, one feels that the criticisms may have some justification. Our standards are admirably high; but a great many, perhaps a majority of the young men now wishing to do science, come from homes where the full time education of their parents ended at *14*. What do they find in the schools?

Earlier in the article I have mentioned how competitive entry to the universities is, and the effect of this on many, if not most, of the schools that prepare for universities. The boy finds that in the formative years between *15* and *18* he must concentrate on his science, and other intellectual pursuits seem only too often a waste of time.

At the university he has only three years to reach the high standard of an honours degree, and then he is plunged into the exciting experience of research. At the end of this time he has achieved something and has become an expert—perhaps the expert—in some corner of knowledge. This gives him a considerable self-confidence; it is what separates him from the background from which he comes. But after nine years of education leading up to this achievement, it takes either a lot of courage or strong incentives for him to throw it away and face new tasks and a new world in industry.

British education—I mean particularly the education of the Grammar Schools and the modern Uuniversity—is a fine instrument for giving a student a through knowledge of a branch of science in the shortest possible time. But, thorough the speed with which we attempt the task we must lose something, and I believe it is often the courage and initiative to trust one's abilities outside one's proven field.

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The All-Russian Teachers' Congress

The All-Russian Teachers' Congress concluded its work recently in Moscow. Besides the almost one million-strong army of people's teachers of the Russian Federation, educational workers of all Union republics of the Soviet Union came to the Congress to share their experience and to acquaint themselves with the experience of the schools of the Russian Federation. They were all equally interested in the problems discussed at the Congress, for the level of public education in the national republics is as high as in the Russian Federation.

Y. Afanasenko, Minister of Public Education of the Russian Federation, stated in his report that, as a result of the implementation of the Leninist national policy, all the peoples, inhabiting the multi-national republic, had schools in which tuition is given in the native language. The number of pupils in them is treble the number before the revolution.

A great amount of work has been done in the year which has elapsed since the adoption of the Law on the reorganisation of the public educational system and bringing the school closer to life. It has already yielded its results. The school children now take part in socially useful work, within their power, at collective and state farms, factories and plants. This adds to their knowledge and polytechnical and vocational training, their all-round development. The school has become closer to life and gives the children a better grounding for practical work.

The reports of the representatives of the Union republics, who described the development of the national schools and the reorganisation of their work, were listened to with great attention.

I. Kadyrov, Minister of Education of the Uzbek S.S.R., said:

"Formerly an outlying district where almost all the working people were illiterate, Soviet Uzbekistan has turned into a republic with a wide network of schools, higher educational establishments and scientific institutions. During all these years, at all the stages of school development, our teachers have been receiving help from the fraternal Russian Federation in every way." The minister expressed confidence that the All-Russian Teachers' Congress would contribute greatly to popularizing valuable experience amassed by the Russian Federation's schools in strengthening the ties of the school with life.

A. Sharipov, Minister of Education of the Kazakh S.S.R., told the participants of the Congress of the development of the republic's industry and agriculture, the construction of powerful iron-and-steel and engineering plants which require more and more skilled workers capable of handling the modern intricate technique. In the solution of this task, said the minister, the general education school which provides its students with a good vocational training and an all-round general education, is playing a great role. At present Kazakhstan has nearly *10,000* schools attended by *1.5* million pupils. Many boarding schools have been built in the republic. Eight-year schooling is being successfully introduced, and ten-year schools are being reorganised into eleven-year schools. The school is now closer to life and is training the rising generation for work. The reorganisation of the school is taking place amidst great activity and creative initiative on the part of the teachers. The Soviet public also helps the school in every way. The work of the All-Russian Teachers' Congress which has generalised the one-year experience gained in educating and bringing up the young people, he said, will be beneficial to the Kazakh teachers as well.

Y. Borisov, principal of the Nyurbinsk secondary school, shared his experience in the reorganisation of the school in Yakut A.S.S.R.

"Formerly Yakutia was the most backward district of Tsarist Russia. Great changes have taken place here during the Soviet years. The life in Yakutia today differs radically from that in the pre-revolutionary times. Before the revolution only *0.7* per cent of the native population in Yakutia were literate, and in the districts of the Far North this figure was still less. To-day Yakutia has many cultural and educational establishments and research institutions as well as a state university. A big national intelligentsia has been trained. The republic has a wide network of schools Every fifth Yakut studies. The working people of Yakutia, said Y. Borisov, fully approved the Law on the school, which is being implemented everywhere. The pupils of the *9-11*th forms of the Nyurbinsk school take training in agricultural mechanization, vegetable-growing and cattle-breeding on a local collective farm. The schools have study-rooms where the school children do metal work, learn to operate tractors and automobiles and engage in plant-breeding. This year the school-leavers have received the qualifications of a tractor driver, fitter, cattle-breeder and driver. Vocational training has exerted a positive effect on the children's progress.

In the schools of the Far North a special emphasis is laid on deer-breeding, hunting, and navigating river boats. The school children in the Far North of Yakutia live in boarding schools, the cost of upkeep of which is entirely met by the state. The Yakutsk State University and the teachers' training schools provide the general education schools with qualified local teachers. The teachers' advanced training institute helps them in perfecting their pedagogical skill.

M. Adayev's speech, principal of the Kadgaron secondary school in the North-Ossetian A.S.S.R. (Northern Caucasus), was no less interesting. This republic celebrated the *40*th anniversary of the establishment of Soviet power recently. The republic's achievements are remarkable. Before the revolution *98* % of its population were illiterate. At present general eight-year schooling is being successfully implemented in the republic. It has many secondary and higher schools. To bring the school closer to life, there have been set up workshops and study-rooms in the schools which facilitates the vocational training of the school children. The pupils of the senior forms do various agricultural work: they make experiments in raising varietal seeds of maize, sunflower, hemp, autumn wheat and perennial grass.

In his speech at the All-Russian Teachers' Congress, N. S. Khrushchev, Charman of the U.S.S.R. Council of Ministers, who had just returned from Austria, gave a high appraisal of the people's teachers for their noble work—the upbringing of the rising generation.

"It is you," said N. S. Khrushchov, "the glorious people's teachers, who spare no effort to arouse in children the thirst for knowledge, love of labour, to teach them loyally to serve their people, the socialist Homeland and make prominent scientists, engineers, agronomists, and remarkable heroes of labour at our plants, factories, construction sites, collective farms and state farms.

"The Soviet teacher," said N. S. Khrushchev, "educates and brings up the children in a spirit of friendship and respect for all peoples. He wants them to be fond of work and to have a high standard of human consciousness. The Soviet teacher rears honest, strong and decent youngsters, in short, individuals devoted to the ideas of peace and labour."

N. S. Khrushchev's speech was listened to by the delegates to the Congress with great attention and repeatedly punctuated by stormy applause.

The All-Russian Teachers' Congress adopted an Appeal to the teachers of all countries. "We, teachers," the Appeal reads, "the representatives of the most humane profession, carry a great responsibility for the children's destiny. The care for the rising generation, whom we teach and bring up, calls us to active struggle for peace...We delegates to the Congress, on behalf of the teachers of the Russian Federation, address an ardent appeal to you to rally the ranks in the struggle for peace, for the banning of war from the life of society for all times."

Education and Character Formation

SHAMSUDDIN, Raipur (M. P).

There cannot be two opinions on the point that character occupies an important place in the life of a man. If the character of the people in society becomes weak, the very foundation of the edifice of life gets shattered, and one day or other it is sure to meet its downfall and complete destruction. Today, as we cast an eye on the present state of our society, we cannot but be unhappy to find the sad affairs there. The question arises, where lies the defect? And naturally we are reminded of our responsibility for the character formation of our children in their early age.

A child is not bad. When he comes into this world, he is quite innocent, pious and pure, a true representation of that Almighty God who sends him on this earth. Then gradually the atmosphere and environment of the family and society start influencing him, building his personality. His conduct and character is also framed in accordance with the influence that is exercised on him. It means that proper care has to be taken in children's early age only, when the foundation of the building of their character is being laid. This not only calls for the parents' duty to mould their children in the desired form, but also adds responsibility on the part of the teachers to build their personality.

Education means the harmonious development of the whole personality of the child, including his physical, mental, moral and spiritual self. Due to innumerable social, economic and other administrative reasons, the education of the child is not being given in the proper form. The parents feel their responsibility only to the extent of giving food and clothes to the children, and after getting them admitted in school, they become care-free from their side. In school, the teachers feel that their duty comes to an end as soon as the children are mentally capable enough to pass the school examination. The number of children being large and the time at the disposal of the teacher being short, it is impossible for him to pay individual attention to the children and supervise and guide them in other fields of their life. Naturally, the children are left to their own mercy in the broad world outside.

The material required for building character are the knowledge about the virtues and the strong will or determination to follow it in life. The teacher readily provides knowledge of virtues to the children, but fails to create a strong will in them to utilize it in life, with the result the knowledge proves to be useless. The task is not very difficult, if the teacher is a

bit prudent to make a psychological approach to the tender minds of children. As we find the children are essentially instinctive, these instincts, if properly controlled and guided, will develop into higher types of sentiments. Again, combined with the power of reasoning, these sentiments will prove to be a strong base for the formation of character. The teacher remains in mental contact with the children, and a little effort on his part will enable him to act successfully upon this great task of character formation.

Character is not formed by delivering lectures on ideals and values of life. Mere knowledge of what is right and what is wrong is not sufficient for building character. It requires constant exercise and training. After putting the ideals before the students, the teacher should provide opportunities which will give them chances to exercise will and build up sentiments in line with the ideals. Repeated exercise of these will enable them to gain strength of character.

There is one more aspect of the child's personality which can be best utilised for character formation. This is his sentiment of 'self-regard'. By nature the child develops self-consciousness and tries to make his own 'ideal self'. He has his own ideas, feelings and modes of behaviour according to this 'ideal self'. At such times it is the duty of the teacher to guide and influence the child in such a way that he should form a worthy self-sentiment. Ideal examples should be put before him to correct his self-sentiment, if it is going astray. Also, it should be borne in mind that the child's capability should not be undermined. The teacher should never ask him to be hopeless or worthless, rather he should make the child believe that he is capable of a high standard of conduct and behaviour. Thus, the child will build a proper self-ideal, and after acting upon it, will develop his character.

There is one more feeling in the child which can be exploited for framing his character. It is the feeling of 'Hero-worship'. Whenever and wherever the child comes in contact with persons, he has a tendency to compare his 'ideal-self' with them, and if he finds anything new and appealing in others, he tries to imbibe the same in himself. At these times, if proper ideals are not placed before him, possibly he may make a wrong selection for heroworship and may go astray. It is for this reason that the teacher has to be very careful to put an ideal example by his own personal example, so that the child may not be misled. The feeling of hero-worship can also be developed by prescribing studies of the lives of great political, social, religious and literary persons. These will surely help the children to get ideals worth admiring and will be ultimately helpful in their character formation.

There can be innumerable means which will help in building the character of children in schools. Extra-curricular activities such as social service, field work, tournaments, excursions, and cultural programmes are some of them. These will provide opportunities for children to come in contact with different types of nature and behaviour, and after clashes and differences they will learn mutual reconciliation. Extreme natures come to be moderate and team spirit is evolved among children. Also, a sense of discipline is developed, improving their character. A system of self-government in schools on certain occasions will help the children to learn the sense of responsibility and how to carry it out.

A weak character is a person who is guided by his emotions and impulses and does not keep control on his will. Such persons can never get success in life. Even after knowing as to what is good or worth achieving and what is bad or worth discarding, one can do nothing unless he

has strong will power and firm determination to adopt the good and work upon it in life. Even the most intelligent persons have been found to be of weak character, due to lack of this will power. A strong character, on the other hand, is always master of his impulses. He is not affected by any influence from outside. He controls his own actions. His personality is self-possessed, integrated and firmly knit. Such persons are successful in any sphere of life they step in! Children of today are going to be the pillars of the nation tomorrow, and they need to be strong characters. Our education will fail utterly in its object if, it does not produce strong characters in our schools.

Our Educational Diary

" PEPYS "

3—7—60. The Mysore State has set up a Pre-Primary Education Committee which has prepared a questionnaire on Pre-Primary Education to collect expert opinion both in the State and outside. The object of nursery education was to develop the child mind, mentally, socially and physically, the chairman said. There were nearly *189* nursery schools in the State which were attended by children of the age-group *3—6.*

10—7—60. The State Government were always prepared to assist in the establishment of chairs in Tamil in North Indian Universities, the Madras Education Minister said.

17—7—60. Girls studying in Government schools in Pondicherry from Form III to VI will have free education. Till now both boys and girl reading upto III Form had been exempted from payment of fees.

20—7—60. Nehruji has suggested the Devanagari script as the common script for all the Indian languages.

21—7—60. The Deputy Chief Minister of Kerala has depreciated the tendency of students and their guardians to approach University examinations with a view to obtain higher marks than what the students deserved.

22—7—60. The Andhra State propose to bring a bill introducing free & compulsory Primary education.

23—7—60. Rajaji, speaking at Meenambakkam, said he was not against teaching in the regional language. Only the teachers should adopt English terms freely.

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The Madras Governor, speaking on the occasion of the opening ceremony of the Rs. *2* lakhs laboratory buildings of the Sita Lakshmi Ramasami College, Trichinopoly, hoped that a women's university would soon be established in Trichy.

26—7—60. The Union Government has advised Universities and Directors of Public Instruction in the States to prescribe text books for three - year periods, to effect economies in the use of paper. This will also help sales of unconsumed books in subsequent years. It will lessen the cost of education for the students who will be enabled to go in for secondhand books.

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The College Tamil Committee has appealed to private colleges to introduce Tamil as the medium of instruction in *1961-62* in humanities.

28—7—60. Minister R. Venkatraman said that the Government proposed to have atleast one Industrial School for every two higher elementary schools, so that pupils would have a chance of choosing vocational training.

30—7—60. In a letter to the *Mail* (dated *1—8—60*) a correspondent has drawn attention to the fact that till date no Tamil-text book for the IX Standard Part II has been prescribed by the T.B.C. It is revealed that no book was received by the Committee for approval under the category! The publishers are shy to invest money in the face of the Government's policy of gradual nationalisation of text-books, with the result that the education of our boys is made to suffer.

4—8—60. At the annual conference of the Tirunelveli District Teachers' Guild, it was resolved that the basic pay of B.T.'s should be fixed at Rs. *175*, that the age of retirement should be fixed at 60, and to revise the scales of pay of secondary grade teachers to *90—4—110—5—160*

Systems of Examintions in USSR, USA, UK

A Comparative Statement

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The most vital and pressing problem of secondary education, it is said, is the need for reform in our system of education. The Calcutta University Commission, Radhakrishnan Commission and Mudaliar Commission stressed the need for reform in our examination system. The Calcutta University Commission recommended that the Matriculation examination should be freed from University requirements and control, and pupils' attainments should be judged by class-room teachers and a system of visiting examiners should be instituted to assess attainments, particularly in fields which do not admit of written examinations but which are none the less essential aspects of the pupils' growth. The Zakir Hussain Commission stressed the need for judging school efficiency and giving more and more scope to class-room teachers for judging attainments of their pupils. The Government of India have also accepted a phased programme of examination reform, extending over a period of ten years. The two seminars on examinations inaugurated by the Ministry of Education, Government of India, one at Bhopal and another at Delhi, suggested various reforms, one of which was to introduce internal examination. Many of the suggestions of these seminars are, in the name of elimination of wastage and failures in secondary education, to make examinations easier and to push the pupils through anyhow, whether they are fit or not. Reforms are necessary undoubtedly, but we must see that, in the name of reform of examination, education of the children is not reduced to a mere eye-wash. We teachers for the last few years have been writing on the evils of examination, and elaborating how it causes nervous breakdown and emotional excitement in the child, how it encourages cramming, how it measures the attainments of pupils on the basis of a single performance at the termination of the school career.

Mr. Mumtazuddin, Secretary, Board of Secondary Education, Madhyapradesh, in his presidential address at the 34th All-India Educational Conference (Examination Section) sang hallelujahs to internal examination and said: "A number of

State Boards of Education are sharing *20%* of marks with the school..... Through instruction and healthy criticism, it may not be difficult to attain uniformity in assessment. After this has been achieved, the share of the school could be increased gradually even to *100%*." But we hear (and we expected so) that the teachers of Bihar have been complaining against internal examination. They say that it only encourages corruption, nepotism and pressure tactics of influential guardians; so they are in favour of abolition of internal examination. Moreover, they say, assessment of hundreds of answer scripts every week has brought teachers to the breaking point, and if this system is continued, it will seriously tell upon their health. Circumstanced as we are, internal examination will never be successful in our country. If internal examination is substituted for external examination, the country will be flooded with certificates and diplomas of uncertain and doubtful standard, and society will refuse to accept them. Let us not forget this practical side in our enthusiasm for examination reform.

Before we think of any reform in our examination system, it would be better, if we compare the examination system of USSR where it is Draconian, with the system of examination in America where it is very easy, and again compare the examination systems of these two mighty countries with that of England which follows a via media, and see their effects on the students of their respective countries. Now let us deal with the examination systems of these countries separately,

The Russian System

The Soviet education system is examination-ridden, both oral and written. The kindergartens alone are exempted from examinations. There are also no end-of-the-year examinations in the first three classes of the primary school. Term tests are given in order to check upon progress, and transfer is on the child's record for the year. At the end of Class IV, there is the transfer examination set on the work for the whole of the preceding four years. A half-yearly examination and a sessional examination in the different groups of subjects taken esch year are compulsory for all. Those who fail after a second opportunity are sent down. Oral examinations are compulsory at every stage for examinable subjects.

In the first transfer examination (Class IV), written and oral work is required in Russian and arithmetic, oral only in history and geography. In the second transfer examination (Class VII) written work is required in Russian and mathematics, and oral in all subjects. In the matriculation examination (Class X), written work is required in Foreign Languages, Russian Language and Literature, History, Algebra, Geometry and Trigonometry, while oral work is required in all other subjects. The examining body of Class VI consists of the School Head, the class teacher, two other teachers, and a representative of the Regional Education Authority. For Class VII and the matriculation diploma examination, the examining body is similarly composed except that the Education Representative in an autonomous republic will be from the Ministry itself. Soviet educationists consider both tests and examinations educationally important and, in fact, necessary.

The marking is on a numerical scale ranging from one to five, i.e., a five-figure system: *5* (excellent), *4* (good), *3* (fair), *2* (poor) and *1* (bad). Those who pass the second transfer examination from Class VII may go either into Class VIII or into technical schools, some of which may require admission tests also.

Pupils who matriculate from Class X with five marks in each of the subjects examined, and receive five from the subject teacher for other subjects and for conduct are awarded a gold medal; those who get five for each subject in the examinations and four in others are

awarded a silver medal. Gold medalists are exempted from entrance examinations for the University. Silver medalists have to take the examinations, and on passing, are given priority over other applicants. Both receive free university education and scholarships in addition. Soviet educationists are trying to devise means of examination which will be free from the vagaries and prejudices of the examiner. They believe that they will solve the problem in the near future. Soviet educationists are of opinion that examinations are necessary as a means of testing the pupils' fitness for passing on to the next stage, but they lay greater stress on the teacher's record of the pupil's work and behaviour throughout the year. Soviet educationists made experiments on the extreme form of freedom in education in the first fifteen years, but finally they returned to the old rigorous system of examination and discipline, characteristic of Tsarist days. Those who fail have to take the course all over again, and the number of failures is more than *15%*; but the percentage of failures at the University level is only *2%* to *3%*.

The result is that a school graduate (Matriculate) of USSR is at par with a college graduate of USA. This is not our opinion. Beatrice King says so. The Education Institutions of USSR, which train teachers for classes VIII to X have "courses which would be equivalent to a degree course in an English University, while the professional course is the Soviet equivalent for the English one-year post-graduate course for teachers but more profound in each subject."

The American Scene

In USA, the case is otherwise. Class examinations of the old type have almost disappeared, and external examinations have been discarded. The tests that are most widely used are achievement tests and objective tests. Admission to universities or higher institutions is generally possible without any required examination other than tests for purposes of guidance. The examinations set by the College Entrance Examination Board which are required by some higher institutions, are not so much admission examinations as instruments for guidance. The New York State is the only State which conducts an examination (the Regent Examination). The Educational Testing Service in Princeton, with which the College Entrance Examination Board is now associated, conducts a variety of objective tests all over the country. In schools where examinations are held, it is the general practice to permit pupils to decide whether they wish to take them or not. This practice of promoting pupils or pushing them through, whether they are fit or not, in order to avoid discouragement, has its serious drawbacks.

The effects of promotion on this basis are cumulative. To remedy this, remedial classes in reading have to be established in high schools to correct deficiencies in reading ability. There have, in recent years, been serious criticisms of the results of education. It has been found that the products of the schools are weak in the fundamentals of arithmetic, spelling, grammar, speech and reading, and there is an outstanding amount of ignorance of history, including national history, and of geography. Since the close of the World War II, some critics say that elementary and secondary education has further deteriorated as a result of not compelling students to take formal examinations, but relying only on tests. Mr John Gunther in his *Inside Russia Today*, says: "Still again, Russian standards are, it goes without saying, severe. The number of hours of instruction is between a thousand and thirteen hundred per school year, many more than in the United States..... The emphasis in the United States is, only too often, on pushing the youngsters through somehow, no matter how indifferent their work, if only to satisfy the trustees and

taxpayers with a good overall record of success. Few American schools would dare to fail *15* per cent of the student body. No such fear exists in the USSR, although it should be pointed out conversely that a Soviet teacher is considered to be doing an unsatisfactory job and is subject to reprimand, if too high a proportion of his students fail."

British Conditions

In UK in *1951*, the British Ministry of Education reorganised school examinations based on matriculation, and instituted a new kind of examination, known as the General Certificate of Education (G. C. E.) meant for the compulsory education age period (up to *15+*), and at present there are nine examining organisations charged with the administration of this examination. It is only the Secondary Modern Schools that have no external examinations. The Grammar Schools and the public schools have regular external examinations.

In Scotland, the fitness of pupils to profit from the various types of secondary courses is assessed on the basis of teachers' estimates of attainment, intelligence tests and attainment tests, with due regard to the wishes of the parents. There is provision for an appeal to the Secretary of State for Scotland in the event of a dispute between the authority and the parent and also for the reconsideration of the original allocations where transfer to another course subsequently appears to be necessary. Pupils of the primary schools of England have to sit for admission into the Grammar Schools, which still enjoy a great prestige in the social milieu and where fewer places are available. Arrangement for this kind of examination varies from the area of one Local Education Authority to another, but most of the children in their last year at the primary schools sit for this examination, which usually consists of an intelligence test and a standardised achievement test in English language and arithmetic.

Secondary Modern Schools having no public examination do not enjoy social prestige. So to fit these Secondary Modern Schools into society, a necessity has been felt for examination without which the quality of their teaching cannot be assessed. The demand for formal external examination has very recently, become so strong that some groups of Secondary Modern Schools have already started experimenting with joint local examinations, in which six or seven neighbouring schools organise their own school-leaving examination, and issue their own certificates. For want of formal examinations, the standard of education has deteriorated even in Oxford, the oldest British University. Many students there cannot speak or write their own language properly—a weakness common to the whole country, according to a report published in London on *8—2—1960*. So, in order to ensure that university entrants can understand and write English correctly, they should be made to take a more difficult examination.

Lessons for India

Soviet Russia is a country which does not believe in heredity. They stress on environment and nature and believe that every human being can attain the same intellectual height, irrespective of hereditary limitations, and they have actually proved so. All the big scientists, engineers, technicians, doctors etc., there come of uneducated or half-educated farm-labourers' or workers' families. In one generation, they have transformed the whole nation by intensive education. easier. If they are successful, why should not India be? Why should India, at the instance of America, try to make examination easier or a mere show and try to push through the pupils anyhow in the name of reform of examination? If teachers are hardworking and students cooperate with them and work seriously instead of frittering away their time and energy in empty slogans, there is no reason why our children will not be successful

even in this traditional form of examination. It is the spirit, enthusiasm and zeal that work and not any sugar-coated method. The correct step, therefore, should be to improve the school work and raise the standard of instruction, and not to raise the percentage of passes by artificial means like lowering the minimum pass marks, or making all subjects optional, or permitting all possible combinations of subjects according to the choice of the pupils.

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Ruskin on Education

M. S. V. CHARI, Tindivanam.

By chance, my eyes fell on a very old edition of Ruskin's *Time and Tide* (published in *1889*) with its pages gone brittle with age; and as I turned the pages, I came across Letter XVI which dealt with *Education* Urged by curiosity, I began to read the letter with great interest. My idea was to know how education was viewed by this great thinker in his own times. You may imagine my surprise when I found that the views expressed therein on education could not be improved upon even today. Then I realised, as I never did before, that the true test of great thinkers is what they had said many decades or centuries ago, holds good for all times. I give below a few (though long they are worth careful study) extracts from this great thinker's views on education with my own comments to show how apt they are even today.

Ruskin denounces the mercenary view that people have of education. He says: "You must forget your money, and educate for education's sake only!' Or the very good you try to bestow will become venomous, and that and your money will be lost together. And this has been the real cause of failure in our efforts for education hitherto—whether from above or below. *There is no honest desire for the thing itself.* The cry for it among the lower orders is because they think that when once they have got it, they must become upper orders. There is a strange notion in the mob's mind nowadays (including all our popular economists and educators justly, as we may, under the brief term 'mob') that everybody can be uppermost; or at least, that a state of general scramble, in which everybody in his turn should come to the top, is a proper utopian constitution; and that, once give every lad a good education, and he cannot but come to ride in a carriage (the methods of supply of coachmen and footmen not being contemplated). And very sternly I say to you—and say from sure knowledge—that a man had better not know how to read and write, than receive education on such terms."

He gives reasons why education should not be viewed with a mercenary motive. He says: "Education was desired by the lower orders because they thought it would make them upper orders, and be a leveller and effacer of distinctions. On the contrary, it is the fatallest discerner and enforcer of distinctions."

It is the eternal law of nature that certain kinds of differences and distinctions should and must exist, and education *cannot* and *will not* efface them. Ruskin gives an illustration. "In the handful of shingle, which you gather from the sea-beach which the indiscriminate sea, with equality of fraternal foam, has only educated to be round, you will see little difference between the noble and the mean stones. But the jeweller's trenchant

education of them will tell you another story. Even the meanest will be better for it, but the noblest so much better that you can class the two together no more.

And the law about education is that all its gains are at compound interest; so that, as our work proceeds, every turn throws us farther behind the greater man with whom we began our work Two children go to school hand-in-hand, and spell for half an hour over the same page. Through all their lives never shall they spell from the same page more. One is presently a page ahead—two pages, ten pages—and even more; though each toils equally, the interval enlarges—at birth nothing, at death, infinite.

And by this you may recognise true education from false. *The false education is a delightful thing* and warms you an makes you think every day more of yourself. And true education is a deadly cold thing and makes you every day think worse of yourself. It is perpetually increasing the personal sense of ignorance and the personal sense of fault."

(To be continued)

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How Pencils came to be made

D. MacRow, London.

The next time you pick up a pencil you may care to think about how the very first pencils came to be made. You will have to go back more than *400* years, to the mountains of Cumberland in the North-West of England.

One night, in about the year *1550*, there was a violent storm. The next morning, where local shepherds went to look after their sheep on the hillsides, they found that several trees had been blown down. The torn-out roots had broken the soil, exposing a strange, black material.

At first, the shepherds thought it was coal. They tried to make a fire with it, but the black stuff would not burn. Then they found that very black marks had been left on their hands, and later used the new material to mark the wool of their sheep, to show who was the owner.

In Armed Stage-Coach

For some years, the shepherds dug out as much of the black material as they needed, but no one else was very interested. Then the Government got to hear about it and though they had no idea what the black stuff was, they thought it might be valuable. Some was sent to London-and it was carried in an armed stage coach.

The material came to be known as graphite, and the Government took over the deposits in Cumberland because graphite was found to be useful in the casting of cannon balls. During the reign of Queen Elizabeth I, the fame of Cumberland graphite spread to many countries. It was used by artists, who found it excellent for black and white drawings. Those early "pencils" were just pieces of graphite wrapped in sheepskin.

Cottage Industry

Soon, it was found that long, thin strips of graphite could be fitted between two grooved pieces of wood, which could then be bound together to keep the "lead" firm. And so the first pencils, as we know them, were made. The first of these hand-made pencils came from Keswick, a town near where the first graphite was discovered. It was then a cottage industry—families made pencils during the evenings in their own homes.

It is some *60* years since the last graphite was mined in Cumberland. Now, it is imported from Ceylon, Mexico, Korea and some other countries. But pencils

are still made in Cumberland, not only with black "lead", but with *72* other colours as well.

Coloured pencils have, of course, been made for many years in many countries. But the first came from Keswick, and the Cumberland people still have something useful to give to the pencil industry.

Some coloured peneils are dangerous, because their "leads" are poisonous. The pencils from Keswick are all made of substances that you can suck, if you must, without coming to any harm.

NEWS & NOTES

JUNIOR RED CROSS COMPETITIONS - 1960

Sri C. Amrithaganesan writes:

The Indian Red Cross Society, Madras State Branch, invites entries from Junior Red Cross groups of colleges and schools in the State for the following competitions:—

1. LADY MARJORIE ERSKINE CHALLENGE CUP for colleges, training schools and high schools and CHALLENGE SHIELD, for Middle and Elementary schools. Awarded for the best group judged from progress during the half year from *1*st July to *31*st December *1960.*

2. LADY NYE PRIZES IN FIRST AID AND HOME NURSING: I Prize Rs. *40*, II prize Rs. *30*, III prize Rs. *20*. Awarded to Junior Red Cross groups with the largest number of St. John First Aid and Home Nursing Certificates earned during the year *1960.*

3. MADRAS STATE BRANCH PRIZES (a) for COUNSELLORS:—

Rs. *10/-* for the best essay on a topic, particulars of which can be obtained from the Honorary Secretary.

(b) for JUNIORS from (i) Training Schools. One Prize Rs. *10/-*, (ii) high schools. I Prize Rs. *10/-* II Prize Rs. *5/-* (iii) Middle and Elementary schools, I Prize Rs. *10/-* II Prize Rs. *5/-*.

Copies of rules and entry forms can be obtained from the Honorary Secretary the Indian Red Cross Society, Madras State Branch, *12*, Monteith Road, Egmore, Madras-*8*.

REVISED PAY SCALES FOR TEACHERS

Bombay State

	Categories of Teachers	*Revised Pay Scales*
1.	Trained Graduates (B.A., B.Sc., and B.T.) ...	Rs. *120-5-170*-E.B-*8-250*-E.B-*10—300.*
2.	Trained Graduates (B.A., B.Sc. with S.T.C. or T.D) ...	Rs. *100-4-170*-E.B.-*6—200.*
3.	Untrained graduates ...	Rs. *100* per month as fixed pay.
4.	Trained matriculates or intermediates (holders of intermediate, S.S.C. or equivalent qualification with S.T.C. or T.D.)	Rs. *70-3-100*-E.B.-*4-140-5-150.*
5.	Untrained matriculates, intermediates ...	Rs. *65* per month as fixed pay.
6.	M. A., M.Sc. (II Cl.) B. T. ...	Rs. *150-7-240*-E.B.-*10-350.*
7.	Kandivali trained (B.A., B.Sc. and D.P. Ed.) ...	Rs. *110-4-170*-E.B-*6-200.*
8.	Drawing teachers and drawing masters ...	Rs. *70-3-100*-E B.-*4-140-5-150,*
9.	Art masters ...	Rs. *110-4-170*-E.B.-*6-200.*
		Scale of Pay Alternate Allowance :
10.	Headmasters/mistresses	
	(i) School with an enrolment upto *300*	Rs. *200-10-300/-* or Rs. *50/-*
	(ii) School with an enrolment between *301-500* ...	Rs. *250-15-400/-* or Rs. *100/-*
	(iii) School with an enrolment between *501-1,000*	Rs. *300-20-500/-* or Rs. *150/-*
	(iv) School with an enrolment of over *1,000*	Rs. *350-25-600/-* or Rs. *200/-*

The alternative allowance should be given in addition to the pay in the scale of Asst. masters only.

11. Additional pay for higher qualification :

(a) B.A. or B.Sc. II class ...	Rs. *5/-*	per month
(b) B.A. or B.Sc. I class ...	Rs. */-*	,,
(c) B.T. or B.Ed. II class ...	Rs. *5/-*	,,
(d) B.T. or B.E.d. I class ...	Rs. *10/-*	,,
(e) M.Ed. Pass ...	Rs. *5/-*	,,
(f) M.Ed. II class ...	Rs. *10/-*	,,
(g) M.Ed. I class ...	Rs. *15/-*	,,
(h) M.A. Pass ...	Rs. *5/-*	,,
(i) M.A. II class ...	Rs. *15/-*	,,
(j) M.A. I class ...	Rs. *25/-*	,,

Teachers' Journal, Calcutta.

BOOK REVIEWS

CIRCLES-Study of concepts regarding Circles. Issued by the S. I. T. U Council of Research, Raja Annamalaipuram, Madras.

Results of educational research have proved beyond any doubt that there is marked difference in the mental powers, learning rates and in the scholastic attainments of different individuals, but it is highly doubtful whether the practical teaching in schools has been sufficiently influenced by these findings. A scientific analysis of the performance of the pupils of different standards is an imperative need now, and a diagnostic test, carefully constructed and properly administered, brings to lime-light the "Achilles' heel" of each pupil. When once the weakness and also the strength of the pupils are diagnosed, it becomes the responsibility of the teacher to reinforce the strength and seek remedies for the weakness of the pupils. This procedure may seem to be more exacting, but this does away with the present quixotic and haphazard ways of measurement.

The Bulletin No. 2, issued by the S.I.T.U. Council of Educational Research and dedicated to "Circles—a study of concepts regarding circles of High School pupils", is a step forward in the direction of a scientific study, and this will definitely serve as a guide to all those who are interested in making a statistical analysis of the results of tests intended to measure attainments, achievements and other facets.

In Bulletin No. 2, with the nature and purposes of the tests clearly set out at the beginning and with a description of the three tests administered, a qualitative analysis of these tests is made, and a comparative study among different tests, with comments thereupon, is attempted. Making a comparative study between the two sexes, the bulletin reveals an interesting piece of information, that there is almost the same degree of proficiency in the two sexes and that the reasoning capacity of girls is higher than that of boys. The observations are also graphically represented.

The bulletin No. 2 is definitely a pointer and a guide to so many who are interested in making such studies. If we make a critical study of the work taken up by the bulletin, so many points may come up.

1. Will it be valid in comparing the performance of boys of one locality with the girls of another?—A comparative study between the girls belonging to the schools in Mambalam or Mylapore with boys of schools in backward areas or less educated areas or localities may not yield valid results.

2. Will it not be more appropriate to choose the number of boys and girls to whom the tests are administered, in the ratio of the schoolgoing boys and girls?

3. If the tests are administered to specific experimental groups, selected on the merit of their previous performances, will not more valid results be got by correlation?

4. Will not the results be more valid, if they are conducted for larger numbers of children?

5. Will the results and observations made in the bulletin for the Madras city hold good for all the other places and localities?—There is a general opinion, well-founded or ill-founded, that pupiles in towns and cities measure up to highsr standards than their counterparts in villages.

The Tests are well constructed. Apart from some multiple-choice items, all others are short-answer questions which can be scored objectively. In actual practice, we find that, though our pupils study so much about circles and the formulas connected with them, when they are asked to draw a diameter of the circle or its chord in a figure, they very often fail. This shows the lack of depth in knowledge, how concrete and practical experiences are lacking in our pupils and how abstract are the ideas that hang loosely in the minds of the pupils. The test has taken care to include items which ask pupils to draw a chord, an arc, a sector etc., in the figures provided in the test papers.

The diagnosis of the pupils' answers and the tabulation made in Appendix-B where the number of wrong answers for the whole test, which tests copmrehensively the knowledge and understanding of the pupils, their ability to recognise concepts and apply the knowledge they have acquired, their ability to draw and name various parts and the pupil's understanding of the various fundamental concepts implied in the proper study of circles, is tabulated for all the groups of pupils, render it possible for us to know the defects or the difficulties in understanding on the part of the pupils. For instance, this reveals that pupils, who are successfully solving sums using the formula πr^2, are not able to find out the ratio between the area of the circle and the area of the square on its radius. So many who are able to identify diameters fail to say that the radius produced through the centre to meet the circumference is a diameter. The concept of area of a sector has made a very feeble impression in the minds of the pupils. So the bulletin points out that the present tendency to hurry on too quickly to 'sums', ignoring concepts and realities, is the reason for such failures and that power of reasoning should on no account be sacrificed at the altar of mechanical ability to do 'sums' or apply formulae.

The authors of these tests would have taken into consideration all the points raised or would have left some for obvious reasons, perhaps giving scope for further detailed study. The bulletin has shown us the way, and we can carry out similar studies and research or even improve upon the work done, if we find any need to do so, and thereby make useful observations that will help us to understand our pupils and bring about beneficial changes in handling them.

"Forewarned is forearmed" is an old adage, and if teachers scent by their experience and study the possible pitfalls and anticipate the creeping in of possible errors and decide to nip these in the bud, the quality of teaching and hence the soundness of learning will be improved. Thanks to the S.I.T.U. for popularising such methods of ultimate importance!

— *K. Ramanathan, B.Sc. (Hons.), B.T.*

BASIC FACTS AND FIGURES

Internatinal Statistics Relating to Education, Culture and Mass Communication.

Unesco, Place de Fontenoy, Paris (7e). Price. *3* dollars *15/-*(stg.), *10,50* NF.

Published by Unesco in several editions since *1952*, *Basic Facts and Figures* has become one of the indispensable documents for everyone interested in statistics on education, culture and information. A new bilingual edition (English and French) has just been published, and it includes the data available to the Secretariat of Unesco as of June *1959*.

Under the Constitution of Unesco, each Member State is asked to provide periodically a report on the laws, regulations and statistics on education, science and culture; and the Secretariat itself compiles data touching on education and culture in all the countries of the world.

The list of contents of the book shows the interest and scope of the documentation provided.

Statistical data on education includes population, area and density, the estimated extent of illiteracy in the world by continents and by regions, the population by educational attainment and the estimated population from 5 to 19 years old attending school. There are also detailed figures on schools giving the number of teachers and pupils in pre-school, primary, secondary and higher education and teacher training. Another chapter deals with public expenditure on education.

In the field of culture, extensive statistical information is given on libraries, classified by categories, and also on museums (the number of them and of their visitors). Another chapter gives figures on books and non-periodical publications for most countries of the world, and figures on translations classified according to the translating countries and tha countries of origin, etc.

The section covering information media gives all useful data on the number of newspapers and periodicals in the world, the consumption of newsprint paper and of other printing paper and even of writing paper. Films, radio and television are not neglected; there are statistics on the production of long films and the number of cinema houses and on radio and television receivers.

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EDITORIAL

Language Politics

The visit of the Rashtrapathi to the south has provoked, as usual, fresh outbursts of linguistic zeal. Secessionist parties of Madras wished to stage black flag demonstrations before the President. One of them was persuaded to abandon its project after statements and assurances at Delhi and Madras and a letter from the Prime Minister to an M. P. Police action had to be taken against another group of secessionists to prevent them from insulting the Head of the State.

The statements by the Union and State Ministers clarified the President's order on the question of the official language. It was made clear that there had been no departure from the Prime Minister's promise that Hindi would not become the official language till the non-Hindi States agreed to it. Subsequently it has been announced that legislation will be brought in to implement the assurance about the indefinite continuance of English as official language.

Dr. Rajendraprasad at a public meeting at Madras declared that Hindi would not be imposed on the south. This was a very welcome assurance, but it was coupled with a request that the south should not try to impose English on northern India. As Rajaji has pointed out I, to ask for the continuance of the present state of things does not deserve to be called "an imposition".

The threatened demonstrations in Madras, the ugly riots in Assam and the agitation in the Punjab are all portents and warnings from which we may gather wisdom and formulate policies that will ensure unity, peace and prosperity in the country. We are particularly concerned here with the way in which linguistic politics impinges on education. The demand for replacing English as the medium of instruction in colleges is now made at the highest level.

Recently we had the eminent vice-chanceller of a north Indian university ruling as out of order a resolution in the

Senate for continuing English as the medium of instruction for a few more years. When the matter was taken to the High Court, an order was made that discussion on the resolution should be allowed. The vice-chancellor promptly resigned, making the issue a matter of conscience. In our own State, colleges teaching through English are being threatened with stoppage of grants. At the Delhi University, a compulsory test in Hindi has been imposed on all students, failure in which means failure in the entire examination.

The threat is therefore imminent of India becoming divided into a number of hermetically sealed linguistic compartments, isolated almost completely from one another and from the world. We do hope that something will be done to retrieve the situation before it is too late.

The Man and the Machine :

Sometime back, we noticed the advent of the teaching machine on the American scene. The extensive use of the radio and television and the appearance of the teaching machine make the *New York Times* wonder whether America is "being catapulted into an age of automated instruction" In other words, is the machine superseding the teacher, as it has superseded the artisan and the handicraftsman? Obviously, the teacher has at least one residual role to play. The machines require work-books. Curriculum material has to be prepared for them. And at a hundred points, the living presence will have to supplement and complete the mechanical instruction given by machines and learning aids.

Apart from this subsidiary role, mostly behind the scenes, the teacher with vision and initiative can always go beyond the machine *The New York Times* cites the example of the "High School of Fashion Industries, Cultural Activities Report for the Spring term, *1960*". Here is the narrative of "a special project to make students conscious of contemporary culture in the drama, the opera, literature and journalism." *The Times* goes on : "Under the direction of a dedicated teacher, high school boys and girls at this school (other schools have undertaken similar drives) may visit current plays at a fraction of normal box-office prices, listen to standard operas in the Metropolitan Opera House repertoire at little expense, and buy books, magazines and newspapers at discount rates. The label, 'cultural activities', may seem a bit too formidable and conveniently vague, but it does represent a form of essential training beyond the bounds of school walls. There has to be a guiding spirit who plans such a programme and takes care of chores requiring an unlimited amount of time in and out of the school buildings, all this without any additional remuneration except the consciousness of doing a fundamental educational job."

After all, the teacher has survived the formidable inventions of writing and printing. There is no need to fear that the teaching machine or the radio or the television can annihilate him. He will always be the Aladdin rubbing the lamp: the machines and teaching aids will be the slaves who help him to carry out his will.

SCIENCE AND HUMANISM

In opening the Seventh Conference of international non-governmental organizations approved for consultative arrangements with Unesco, Mr. Vittorino Veronese, Director-General of Unesco, said on 30th May last:

"I have no fear for the future of the relations between Unesco and the non-governmental organizations, for these relations rest upon a more solid base than rules of procedure or administrative arrangements. The real basis of our co-operation is the deep affinity between the objectives of your organizations and those of Unesco; the ideal which is the reason, explicit or implicit, for the existence of all your organizations. This moral pact which reciprocally binds Unesco and the non-governmental organizations obliges us to deepen our collaboration and together to face, unitedly, the tasks imposed on all by the rapid transformation of the world in which we live. That is also our duty toward the man of tomorrow, the theme which you have wisely made the central one of your conference"

In these words Mr. Veronese placed emphasis on the interest and importance of the work accomplished by these very diverse organizations which all serve the cause of mutual understanding among peoples and co-operation toward peace. But the Uuesco Director-General's words had a direct bearing on the debate that was to occupy an entire day of the Seventh NGO Conference, under the subject, "The Man of Tomorrow: Humanist and Man of Science."

Search for Communication

The rapproachment of two attitudes of men of culture—the humanist and the scientist—and their apparent opposition was to be the most discussed topic, as was immediately recognized by Prof. Pierre Auger as he opened the debate over which he presided. Citing the secular quarrel between the traditionalists and the moderns, Prof. Auger described the positions of the two forces. "The humanists occupy the terrain, and therefore are in a favourable situation... The virulent insurrection of the scientists makes them even stronger because they have other arms than the traditional ones." Prof. Auger did not spare either side in his criticisms, to conclude that "modern man needs two attitudes."

The theme of "the search for communication", asenunciated by Mme. Alice Arnold, president of the Conference, was developed by Mr. Rene Poirier, professor at the Sorbonne and member of the French Institute; Dr. A. M. J. F. Michels, professor of the University of Amsterdam, and Sir Ronald Syme, of the University of Oxford and Secretary-General of the International Council for Philosophy and Humanistic Studies.

Mr. Poirier, in a long and impassioned exposition and defence of the concept of humanism, spoke not without reserve; he accepted the fact that the humanists had been described, in the phrase of Auguste Comte, as an army "that numbered more dead than living", but, to deepen the concept of a living humanism, he spoke of "the search in us for the man profound, ideal, hidden from us" and the quest for "a method which comes at the same time from both art and history, to create a way of communication".

His criticism of the adversary—the scientist whom he reproached for excessive specialization and the resultant "dehumanization"—was however less severe than his criticism of a world menaced by having too much of the facilities of life, destructive of spiritual inquiry; and by a boredom which would come from such excess as it

gradually eroded one's freedom of thought. For education, which will form the man of tomorrow, Mr. Poirier voiced the wish of a broadened humanism, regenerated and made universal by the recourse to other sources such as those of India or the Far East.

The exposition of the scientific idea was presented with objectivity by Prof. Michels, who said that if the two camps "do not understand each other, it is essentially a problem of finding clearer definitions", and, he added, a problem of "extremists". Citing the scientists' opposition to Kant and the distinction established by the great German philosopher between intellectual knowledge, and exact knowledge, Prof. Michels compared the scientist, facing reality, to a painter facing his model. "The true scientist," he said, "understands, first, that he will never understand creation." And so Dr. Michels concluded that it is necessary for science and humanism to work together to form the "basic culture of education".

Sir Ronald Syme also advocated a synthesis of the two attitudes. While he recognized that "there is now a type of technological civilization that is irresistible", he noted that, since Greece of the sixth century B. C., there have been men of science who were also "philosophers, legislators and even poets". According to Sir Ronald, the opposition between the concepts of humanism and of science arises from material reasons the vast range of studies and work necessitated by the age of technology—and that these need not prevent a reconciliation linked to the very idea of democracy.

Man of Tomorrow

Other contributions were made to the discussion which broadly defined the problem of "The Man of Tomorrow". Answering Dr. J. F. Delafresnaye (Council for International Organizations of the Medical Sciences), Prof. Auger insisted on the role of the humanistic studies in the reconciliation of the "adverse camps", and prof. Michels emphasized the interest of the introduction of scientific methods into the humanities—an idea defended by Mr. Henri Laugier (International League for the Rights of Man). The opposition created between the scientific idea and the religious ideal was also discussed by Father Russo (Pax Romana), Mr. Berker (World Alliance of Young Men's Christian Associations) and Dr. A. Steinberg (World Jewish Congress).

Dr. P. Anjouiat (International Movement for Fraternal Union among Races and Peoples) presented the problam of "The African Man of Tomorrow", and Mr. T. Diop (Society of African Culture) eloquently discussed the problem, insisting on the difference in the "hierarchy of dangers" on the African continent as compared to the West. Calling for an "African technology adapted to the realities", he said that "human awareness is developing and is leading us to integrate into the concept of humanism disciplines that we had not been accustomed to see in it." As an objective of tomorrow, he added, Africa will give its aid to the West in return for aid received in the past.

Other interventions were made by Mr. H. M. R. Keyes (International Association of Universities), Dr. Grace Spofford and Mrs. Kamala Dhingra (International Council of Women,) Mr. Taggart Shaw (World Friendship Federation), Dr. R. Fraser (International Council of Scientific Unions). Dr. J. P. van Praag (International Humanist and Ethical Union) insisted on the "ambiguity of the word 'humanism'", ('which' he said, applies as well, in the Renaissance sense, to those who reveal ancient wisdom and to the humanists of the modern world with access to universal knowledge." The conclusion came opportunely in the intervention by Dr. Claire Preauu (International Federation of University Women) who, defining humanism as "the study of what is not us", said that the study of what is not us is definitely of service to man."

(To be continued)