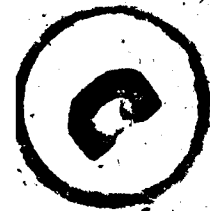


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Moral Education in the USSR

S. K. De, M.A. (Cal.), H. Dip. Ed. (Dublin). Cer-in-Psy. (Edin.) Calcutta.

Religious education is banned in Russia; but the aim and object with which religious education has been introduced in the educational institutions of Europe and America, viz., to check indiscipline, anti-social activities, proneness to aggression and explosive outbursts of pugnacious spirits and to develop in the pupils lofty moral qualities, positive character traits and a correct attitude to society has not been neglected. All the finest qualities of head and heart are tried to be inculcated in children from the very beginning by moral training. The Soviets do not believe in God, in a supernatural realm or a world of pure spirit, and have discarded religion which, according to Lenin is "the opium of the people...a kind of spiritual brandy in which the slaves of capitalists drown their human form and their claims to any worthy human life", and which "teaches passivity and patience in earthly life, consoling him (the exploited worker) with the hope of heavenly reward"; yet moral teaching has not been prohibited; rather it has got a great emphasis in Russia. What religious education has failed to do in Europe and America, moral education has accomplished in Russia, and this will be shown in this paper.

In the 1920s, moral education received very little explicit attention in the Soviet educational system; but in the thirties and forties great stress was laid on the moral training of the children. Education was spread throughout the length and breadth

of Soviet Russia, but it was soon realised that simple acquisition of knowledge would not bring the desired salvation, or a profound change in human nature and character and make the "proletarian revolution" a success, unless there be a disciplined generation of children and youths. So attention was directed towards moral regeneration of the younger generation. 'Morality' in the Soviet sense is a comprehensive term; so it comprises patriotism, unselfish devotion to the motherland, readiness to strengthen her freedom and independence, socialism, conscious discipline, qualities of will and character.

To the Russians patriotism is love of the motherland, and according to the Soviet educationists the cultivation of the spirit of patriotism in the younger generation is the most important task of moral education, which should be inculcated in every one at an early age. This patriotism means the struggle of everyone, young and old, for the honour, fame, power, prosperity and defence of the motherland. Soviet teachers preach this spirit of patriotism and try to implant in the consciousness and understanding of the young that the interests of the Soviet people cannot be separated from the interests of the toiling masses of the world, and as such it leads to the development in the consciousness of youth of love for the oppressed people everywhere.

The Soviet young man should not merely get theoretical lessons on patriotism: he must give a practical demonstration of his patriotism by devoting himself wholeheartedly to the good of the toiling masses and the advancement of the interests of his motherland. He must be ready if and when the call to sacrifice his life for the motherland comes. Soviet children are taught to show respect for and a dignified attitude to labour, as labour is regarded there as a matter of honour, glory and heroism—it is associated not merely with the idea of earning one's bread but also with a desire to serve society more fully and consciously. This attitude towards labour is closely linked with the attitude towards "public ownership" and "socialist property produced by social labour".

The teachers and students are often reminded of the Soviet Constitution: "It is the duty of every citizen of the USSR to safeguard and strengthen public, socialist property as the sacred and inviolable foundation of the Soviet system, as the source of the wealth and power of the Motherland, as the source of a prosperous and cultural life for all working people." As a result of this teaching, Soviet pupils would not damage school furniture or deface walls by scribbling, as pupils in every other country are seen doing. They will take care of school property and guard well their own possessions and those of their comrades.

The second principle of moral teaching that is followed in the Soviet School is "Socialist humanism". It means the culture and development of love for mother and father. Children should love, respect and obey their parents. Along with this love and respect for parents, they are taught to be polite to their school director and teachers. They must greet them on the street with a polite bow. They must be respectful to their elders and considerate of and attentive to the sick, the weak and the little ones. They should have a feeling of love and respect for one another; the older children should not

bully the younger, the strong should not taunt the weak, boys should not treat girls scornfully, and children of normal growth and perfect limbs should not tease and ridicule the deformed or children with defective limbs. A "sense of duty and responsibility, a sense of honour and personal dignity should be cultivated in the individual." All of this constitutes education in the spirit of "Socialist humanism". In short, children are taught to put a high value on human personality and respect for the rights and dignity of man; as a result, you will not find such things as teddy boys or girls in Soviet schools.

There is no such thing as religious education in Soviet Russia as (already mentioned), but in moral instruction we find the essence of all religious instruction.

The cultivation of friendly relationship, mutual aid and the idea of national and racial equality are also included in moral education. The children are taught that there are no superior or inferior peoples in their great republic, and actually the people of European Russia enjoy no rights or privileges which are denied to the backward people of the Asiatic Russia (The condition of the Negro in America may be compared here.)

There are many other things which are the ingredients of moral education. Collectivism, conscious discipline and qualities of will and character are also included in moral education. Collectivism is no contradiction between society and the individual. The idea of collectivism teaches the pupils to work together in an organised form and to subordinate their conduct and personal interest to the collective. To achieve this ideal, all have to work in a spirit of comradeship and submit to group discipline and obedience to the leader. If all work together for the common goal, mutual misunderstanding will be removed, and many intricate problems will be solved.

Of all that constitutes moral education, discipline is the most vital part. In the opinion of the Soviet teachers, proper prosecution of studies is not possible without discipline in life, and this discipline is not a matter that is concerned only with academic life: it is the coping stone of the architecture of the State. It is one of the most important traits of character of the whole nation which will endure through the decades of adult life. This discipline that is cultivated is conscious—it is not merely imposed from outside, it is founded on an inner conviction of the necessity of following certain rules and regulations. It must be self-imposed, that is, it is not a mere discipline of obedience, but rather a willingness to carry out certain commissions or execute certain assignments in the school. It does not require an order or reminder to execute a work. The leader must be obeyed without question, so should the teacher. This discipline is resolute. "It surmounts difficulties, and conquers motives of low degree."

To maintain this kind of discipline and to make it natural and spontaneous among the pupils, the teachers have devised certain methods. With the aid of the pupils, they conduct activities even after school hours, depending, of course, upon the age and interest of the children. The chief forms of such activities are: information talks, discourses, readers' conferences, debates, soirees organised to discuss special themes, collective visits to the cinema and theatre with later discussions of what they saw and heard, excursions to museums and exhibitions, hikes, work in study circles, publication of wall-newspapers and journals, etc.

The idea of moral upbringing is quite different (as has already been said) in Soviet Russia. There it is based on the principle that the formation of a pupil's individuality depends not only on the use of various measures, but chiefly on their wise combination. As such, the Soviet teachers employ various forms of persuasion, (some of which have already been

mentioned) like talks with the pupils, reports, lectures and debates on aesthetic themes and questions concerning morals.

The moral upbringing of the pupils is again regarded as the process of the organisation of their life and activity in order to develop in them lofty moral qualities, positive character traits and correct habits of conduct. So this moral education does not end with the class. In the playfield or factory, during their studies, at lessons, on excursions and in the workshops, not only educational tasks are solved, but also such as are connected with their upbringing. In the children are instilled a feeling of duty and honour, a feeling of responsibility for a task which has been entrusted to them, a conscious and conscientious attitude towards work.

From all this, it will be seen that the morality that is taught in the educational institutions is not conventional morality—its object is to make the children into men and women of strong and resolute character, adamant will and steadfast determination. They are taught not to be dismayed by difficulties, but to surmount them by overcoming all barriers and obstacles on the way to the formation of a strong State of the people. They are taught to cultivate the ideals of persistence, initiative, courage and endurance.

Next, we are to see how the moral codes are followed. The moral codes in Soviet Russia are uniform and consistent. The teachers must be consistent and must follow a single line, and not contradict each other. That is, when a child passes from one grade to another or from one school to another, the same uniform moral codes must be followed. One teacher or one school will not give one sort of moral education and another school or teacher another kind of moral education. No difference or duality is tolerated. Here lies the rigidity of the Soviet moral education. The moral education that pupils get in their grades must be repeated at home also.

According to them: "It is injurious also, if the child experiences a duality or even a trinity of educative influences, if, for example, the elders in the family say one thing to him and the teacher tells him something else. If one teacher follows one line and his comrade in work another." You may call it regimentation of thought, if you like, but it is so in Russia.

Flawless conduct and strict adherence to moral principles are expected from pupils. Violation of the rules of conduct is not tolerated. If a pupil is not of flawless conduct however good he may be in his academic career, he will not get his proper grade. The Commissar of Education of the RSFSR issued an instruction on February 29, 1944, to the effect that a grade of 5 is to be given for flawless conduct, both in the school and outside the school; a grade of 4 is to be given for a noticeable violation of conduct. But this grade is temporary; if the pupil fails to improve, his grade may be lowered even to 3. This grade is given for serious violations of conduct and serves as a warning of possible expulsion from school. The case may be further reviewed, and if necessary, may be lowered to grade 2. Expulsion follows automatically, if approved by the regional Department of People's Education. Certificates and diplomas are issued only when the pupil's conduct is excellent. Of course, all pupils are not expected to get a grade of 5—the highest mark; still it is desirable that they get it. According to a decree of the Central Committee of the party: "Incorrigible pupils who behave like hooligans, offend the teachers, disrupt the school regimen, and destroy or steal school property, are to be expelled from school and deprived of the right to re-enroll during a period from one to three years."

But mere threatening and punishment cannot improve the moral condition of the pupils, unless they get an inner incentive to improve; so the Soviet Government has made and is making use of a comprehensive and graduated system of both rewards and punishments.

For inculcating the ideals of morality in pupils, the presentation of examples of highest conduct has been universally recommended. The teacher himself is expected to be such an example in his life and work in school and at home. Even this alone is not sufficient. The great leaders, the builders of the nation are great examples—their life is to be studied and examples followed.

Another device for inculcating moral ideals in students is the introduction of a kind of internal passport which was, of course, in vogue in old Russia to aid the police in combating subversive activities. It was abolished at the time of the Revolution, but was re-introduced in the time of Stalin as an insignia of honour. Now an effort is being made to convert the passport into a thing of honour, a badge of citizenship, a credential of maturity. The day the passports are given to the sixteen-year olds is declared a holiday, when friends, parents and relatives are present. The passport is given to pupils when they complete sixteen years and their conduct is satisfactory both in school and outside school. They regard it as a matter of pride and honour. Plato in his Republic says: "Youth is the time when the character is being moulded and easily takes any impress one may wish to stamp on it." So Soviet Russia wants to mould the character of the children from their very infancy through moral education set down in the code of rules for school children.

This moral education we may summarise in conclusion as the inculcation of noble ideals like industry, promptness, obedience, truthfulness and respect for elders. It includes also a dignified attitude toward labour, public property, social class and finer sentiments of patriotism, love of the motherland. These loyalties are cultivated throughout the educational system of Soviet Russia. So what other nations are trying to do by religious education is being attempted by Russia through moral education.

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—O—

Importance of Book-Classification in a Library

H. L. Vishwakarma, B.A., Visharad, C.L.Sc., Jabalpur.

In simple words, 'Library Classification' means the arrangement of books in the library. The main purpose of classification is greater and greater use of books in the library. For this, library arrangements should be made as follows:—

1. To arrange books in a helpful order.
2. To help or mechanise the correct replacing of books returned after use.
3. To help fixation of the most helpful place for a newly added book among those that are already in a library.

Dr. S. R. Ranganathan, the father of modern Library Science, has dealt with the importance of book-classification under the following points:—

(1) When a reader asks for a book which is in a library, it must be located immediately, even though the library may have miles of shelves full of books.

(2) When a book is returned to a library, its correct place on the shelves must be immediately determinable, so that it can be replaced ready for the next user.

(3) When a new book is added to a library, it must find its proper place among the other books on the same subject.

(4) When the first book on a new subject arrives in a library, it must find a place among the books on such other already existing subjects as are related to it, and in the degree of its relation to them.

The best method of library furnishing and equipment is to maintain the cataloguing and classification schemes. These schemes must be obvious to the readers of the library. In the West every child is a potential reader; it must be so in the East (India), even in places where the children have not yet had opportunities to do much reading or to get access to books. The librarian must be a man of an acquisitive mind. He is always a learner; he must always be awake to and welcome every development of human thought and every adventure of the human spirit. He must be educated in every operation and process of libraries. He must be a lover of other men. A book in the library may be an inspiration to all. In olden times books were kept chained and locked. In modern times, the function of the library is to make readers of 'all sorts of fellows'. For this purpose of library-service, the librarian should possess judgment, discipline and scientific habits. The classification of library books is also to make

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readers capable of using books as tools not only for the dissemination of knowledge, but also for the extension of the boundaries of knowledge. In modern times, that the library books are for use has stepped into the place of the maxim, 'Books are for preservation'.

According to J. S. Mill, the purpose of classification is primarily 'to facilitate the operations of the mind in clearly conceiving and retaining in the memory, the characters of the objects in question'. Hence, the purpose of the classification governs the extent of the subdivisions.

To a librarian, the word 'classification' has some specific meanings as follows:—

(1) The printed schedules of a system by which books and entries in a catalogue may be arranged in a systematic order:

(2) The placing of books according to these schedules and the arrangement of books or entries in the order of the schedules.

Now, the scheme of classification can be studied under two main categories:—the book-classification and the classification of knowledge itself. Knowledge classification may be divided into three broad groups:—1. logical, 2. philosophical and 3. scientific.

The essential difference between knowledge classification and book classification is that the former arranges knowledge itself, its substances tangible and intangible, while the latter arranges the expression of this knowledge in written or other form. Knowledge classification is abstract, for ideas only are arranged, whereas a book-classification is concrete and concerned with ideas in their written representation—a much more complex thing. Knowledge classification is based on preconceived ideas, essentially superficial. Books are actual indivisible objects, and their form and purpose demand special treatment in any attempt to arrange them systematically on the shelves of a library.

Here the practical aspect of the purpose of book-classification comes to the fore, it becomes a method. Thus the essential difference between knowledge and book classification lies in their respective purposes.

We see that the importance of knowledge and book classification is the same. Both have elements of service to humanity. Knowledge has been mingled with books. They are interrelated with each other. Hence, it can be said that the classification of books is the classification of knowledge.

Libraries exist for the provision of books, and their stock should be so arranged that the service is as prompt and effective as possible. Books are read because they have contents interest, provide information, or give pleasure to the common reader. It has been said that 'classification is the foundation of librarianship'. This statement is supported by the following accomplishments of a systematic book-classification:—

(a) Arranges books in an order convenient to the reader and the library-staff.

(b) Is essential for systematic, comprehensive and representative book selection and for thorough revision and withdrawal of stock.

(c) Enables books to be inserted into organised groups, and is a means by which books may be returned to their former relative position on the shelves.

(d) Through the medium of the catalogue, analyses the contents of books for readers, refers the public quickly from the catalogue to the books, and is the means by which the stock may be effectively and clearly guided.

(e) Facilitates book-display and the withdrawal of certain books from the main stock for any special purpose.

(f) Is frequently used as the basis of recording issues and facilitates the compiling of various kinds of statistics.

(g) Through the medium of shelf and stock registers, enables thorough and efficient stock-taking to be made.

(h) Can be used for the systematic filing of correspondence, fugitive material, prints, photographs etc.

(i) Is of value in bibliographical research

and the compilation of bibliographies, catalogues, book-lists etc.

(j) In all, is a great time-saving device for both the reader and the library-staff.

The main importance of book-classification is that books are arranged in such a manner that the needs of the readers, both laymen and students, are best served.

—OXO—

Dimensions of Democracy and Education

Dr. Donald L. Barnes, Assoc. Professor of Education, Ball State Teachers College Muncie, Indiana, U.S.A.

Men through the centuries have sought to establish societal relationships that were constructive, effective and mutually satisfying. In general, these attempts have fostered increased freedom for the individual. In the seventeenth and eighteenth centuries, individuals were granted protection against arbitrary seizure of person and property. They were also granted trial by jury and governmental assistance against force and fraud. The nineteenth century witnessed the extension of voting rights, and governmental offices were opened to candidates of varying status. Finally, in a more positive form, privileges of opportunity are being extended in the form of educational, recreational and cultural opportunities as well as protection against economic insecurity, sickness and squalor. These victories have not been easily won, for there are streaks of anarchy and despotism as well as tolerance and altruism in all of us. In the larger society this struggle among conflicting motivations is much broader and more complicated.

Individual freedom is not simply a legal sanction—it is an ideal and a goal towards which men struggle. Freedom may take many forms. There is political liberty, economic liberty, religious liberty, artistic liberty and many others. These freedoms are rooted in living society and are guaranteed by democracy. In order to function effectively, free societies must help individuals within the society learn to balance and judge the conflicting freedoms which will inevitably confront

them. An individual must be able to balance his own freedoms against his own sense of justice, order and social responsibility. At best these are difficult and complicated decisions. India's recent national elections served to give thousands of citizens this opportunity to make judgments.

It comes as a shock to many of us, when we discover that we cannot truly define democracy. It is a philosophy as well as a process. Democracy affirms a faith in the judgment of the common man. Its approach is individual rather than institutional, and it embodies a number of implicit assumptions. It assumes that citizens can and should be treated upon a fraternal rather than a differential basis. (Monotheism serves as an important base for this assumption.) Democracy also rests upon the assumption that man is perfectible. (Recent psychological studies have affirmed the plasticity of human nature.) Democracy further assumes that progress is essentially a mass rather than an individual effort. Confidence is expressed in the ideal of common consent and appears in institutional forms, understandings and practices. Citizens within democracies expect opportunities for public opinion to develop and be translated into action. Democracy serves as a guard against impatience on both the right and the left.

Unfortunately, democracy cannot grow in any kind of soil. An examination of

history suggests that this form of societal association flourishes where there is a reasonably high level of educational attainment and an absence of extremes in wealth. A general condition of world stability also appears to be important to the growth of democracy. Perhaps new nations will prove these historic judgments to be incorrect. Many different kinds of political units, economic systems and administrative or managerial arrangements may be subsumed under democracy. It is misleading and dangerous to suggest that only particular economic systems or managerial arrangements can qualify as democratic.

There are, however, a number of elements which seem to be universally present in democratic forms of association. (1) There is a sensitivity to individual differences and personal growth. In contrast to closed social systems, democracy attempts to avoid any stigma attached to position or birth. (2) Equality before the law is crucial. Cases are tried on their own merits without regard to the individual wealth or social position. (3) Equality of vote seems equally important. Votes carry equal weight, and qualifications for office may not be directed against particular individuals or groups. (4) Equality of opportunity, likewise, seems to serve as a distinguishing characteristic of democracies. Citizens may choose their occupations and live where they wish to live—subject, of course, to that which is considered important to the common good.

Serious questions have been raised regarding the efficiency of decision-making within democratic associations. Critics need only observe the functioning of democracies under war-time conditions to realize that a democracy may act as decisively as the emergency and the temper of the people demand. Civic cohesion may be extremely strong during periods of crisis and relaxed during periods of calm. Democracy, like any form of government, will dissolve if the differences in social groups become too great. Much of a democratic government's strength lies in the fact that political and industrial

systems under a democratic form of government are readily adaptable to change.

Democracy is dynamic. It requires continuous re-examination of underlying principles and goals and an equally painstaking examination of the ways and means of putting these principles into practice. Special attention is usually given to minority group rights. Means are most frequently thought to be embedded in the ends, and dialectical elements in human relationships assume importance. The greatest guarantee a democracy may boast is the social sensitivity and awareness of its citizens. Not infrequently, the citizens must look to a few hundred of their number who serve as guiding prophets and spokesmen—men of great stature who are particularly sensitive to the purposes and goals of the nation.

John Dewey and others have discussed the important relationship which exists between democracy and education. Certainly the interdependence is vital if children are to become effective members of the democratic community; their educational programmes must reflect this concern. Dewey suggested that children should learn to use problem-solving techniques and also manifest a genuine concern for service to mankind. The child must also understand the basic principles upon which democratic affiliation rests. Only a sincere and deep commitment to the democratic way of life will sustain a society during periods of trial. Voices of impatience will dominate otherwise!

As a part of the problem-solving process, children must be taught to establish criteria, weigh alternatives, secure information relative to the problem and reach group decisions amicably. They must learn how to resolve differences and abide by the outcomes of group decisions. Individuals and groups alike have achieved a gigantic step, when they learn to subordinate their personal wishes to the will of the majority without recrimination. There is no short-cut to democratic living. Children must learn democracy by practising it in their daily lives.

The "Synoptic Scientist"

Ritchie Calder.

The tools of my trade as a science-writer have been—apart from a typewriter—three questions. "What are you doing?" "How are you doing it?" and "Why are you doing it?" With patience on the part of the scientist and patience on the part of the inquisitor, there are few things in science, however apparently abstruse or novel or difficult, which cannot be explained in comprehensible terms. One of the major difficulties is the terminology—the jargon of science. The scientists in the various branches and disciplines of science have invented their own language of convenience. Where once the terms were descriptive they are now cryptic—sometimes one feels that like the code-names for military operations, they have been deliberately invented to mislead and, like the sign-language of the mediaeval crafts, designed to preserve the inner mysteries for the few. . . . What the scientist, who in the restricted company of his colleagues uses them as common place terms, does not always realize is that such words are like index cards; to him they convey a whole filing-cabinet full of meaning, but he forgets that others do not have access to that filing-cabinet. This is, alas, inevitable. With the proliferation of science, the scientist is entitled to his "language of convenience", but he must, when necessary, define those terms. A century ago, any man of science was intelligible to any educated man; terms had a common-root etymological meaning and in that sense were descriptive. Today, I repeat, they are cryptic.

I have sometimes described myself as a "babelologist", a student of that babel of tongues which is science. I also boast that I am an expert on experts—one who knows to whom to turn for the information one has not got. In that I personify the science-reporter, who is the trustee for the common man for whom he seeks enlightenment in the common tongue; who never relies on what he knows but

turns to the expert sources for current guidance; and who does not make the mistake which many academics do of confusing ignorance with lack of intelligence. I have, after thirty years of trying to explain science, a reinforced confidence in the capacity of ordinary people to grasp what is made intelligible, provided that their interest has been enlisted and their imaginations illumined. But that after all is surely the essence of all good teaching.

The crisis of our times is the breakdown of communications—not just in the sense of political barriers, but in this all-important area of science. Our lives, our hopes, and our survival depend upon the uses which are made of science. To progress, we have to use scientific knowledge and discovery to its utmost advantage. Science, in the advanced countries, is developing so fast that it is almost impossible to keep pace with the knowledge—and the gadgets—which are aggregating. I believe that some 3,000,000 original scientific papers a year are published. No one can compass so much information. . . . One set of scientists does not know what another set is doing, and yet there may be an important affinity which may be of material value to mankind.

There are too few communicators within science, and the bridges are broken between the humanities and science. Those who have to make the social judgements about science have usually no scientific training—worse, their own education makes them feel that anything which involves such intensive training is beyond their comprehension and that they must "rely on the expert". But there is little in the training of the scientist, preoccupied with all that has to be learned in his own subject, which gives him the capacity for social judgements. We are in danger of being subjected to the tyranny of

experts—faceless men at the elbows of the uninstructed. They are not tyrants by disposition but by our default.

How are we to reach people enough about science to allow them to make judgements, to decide priorities, and to see that science, with all its potential for good or evil, is directed to the advantage of mankind. How much more resources and attention should we be giving to the problems of this planet on which 4,000,000,000 people will have to contrive to live 20 years from now? Is Space adventure more important than the food and population problem, for instance? And how, with all the spectacular advances of today, can we close the widening gap between the prosperity of the scientifically advanced countries and the impoverished ones?

Without arrogating to the science-writer all the wisdom of the world, it is true that he has the opportunity for better understanding. He is a "synoptic scientist": he travels across the advancing fronts of

all branches of science and can see, at first hand and in survey, what preoccupied scientists cannot see for themselves and what man-of-affairs can never see panoramically. His job is to pass that knowledge on, either along the line of science or to the public. He is, by the accident of his trade as a collector and disseminator, the prototype of what should exist in academic and public life, the communicator of information on which judgements can be made. In his own working life, his function is to convey to the mass of people the facts about science, but also to convey an interpretation of the social implications of new developments.

I know that many of my colleagues think that they should confine themselves to description and explanations and leave the value judgements to others. I disagree profoundly. Our access to information, our point of vantage on the scientific scene, gives us responsibilities which in the present situation, we must not shirk. — (UNESCO)

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The Medium of Instruction in Universities*

Prof. N. Kuppuswamy Iyengar, M.A., Srirangam.

Educationists wanted the change in the medium of instruction because the English medium, in the words of Gandhiji, made our youths crammers and imitators unfit for original thinking and, if taught in their own language, it was believed they could understand things better and could be given real education.

Naturally the teachers objected. No doubt it was not easy for them to move out of their grooves. The objection took the form of want of text-books, scientific and technical terms etc., as though they had to teach text books and not the subject. Gandhiji says: "If I had the power of a despot, I would today stop the tuition of our boys and girls through a foreign medium, and require all the teachers and professors on pain of dismissal to introduce the change forthwith. I would not wait for the preparation of text-books. They will follow the change. It is an evil that needs a summary remedy."

But the politicians made this objection a question of prestige and not a question of sound education. They set about appointing committees and advisory bodies at a huge cost to coin new words and phrases and to create text-books. It was not realised that we could learn to swim only by plunging into water. We do not create dictionaries and then produce literature. These coined words are not less difficult to learn than the corresponding English words. It is an additional difficulty to the teacher. He has himself to learn the newly coined words before he can use them in teaching.

The Government which is run by the politicians had power over Secondary Education. The teachers had to submit. They dared not protest. Owing to this and other reasons, education in schools

has become inefficient. The University teachers could not be so easily coerced. They raised additional objections. They cried, 'Danger to National Integration'. Regional Language media will prevent students and teachers moving from one State to another, thus impeding the free flow of knowledge throughout India. A false sense of prestige and purism in languages made the politicians forget how languages are developed and agree to postpone the change in the universities till the languages are sufficiently developed.

Now the position is, you teach through the regional language in the High Schools, and suddenly change into English in the pre-University class. No one who knows anything about educational psychology or who has had any experience of teaching in such a situation would recommend this procedure.

I have a boy in the pre-University class. I know something of the difficulties and the nervous strain involved in this change. The boy is cursing daily this change in which he has not only to learn a new set of terms, but to relearn sometimes in a foreign language what he has already learnt in the school in his own language. College teachers and prescribers of college text-books ignore the fact that students do not enter colleges with sufficient knowledge of English to understand either the teaching or the text-books as they did during the days of the English medium in school.

The two books prescribed for this year, *The Threshold* and *Men of Science and their Discoveries*, contain 41 essays on various disconnected subjects ranging from life under the sea, on the earth and in the air to the heavenly bodies, and in time

* From his speech at the All India Educational Conference, Trivandrum, moving the resolution on the subject.

from Ancient India to the present atomic age. I very much doubt whether the teachers themselves understand fully the meaning and scope of those essays. What is the result? The students become mere framers of summaries, annotations, dioms etc., just as the school boys under the English medium did. Is it any wonder that standards have fallen? Between the fanaticism of the politician and the obduracy of the university teachers, the education of the present generation is being ruined.

What Is The Remedy?

The only remedy that will give real education to our youths and at the same time cure all the ills complained of is to make at once the Regional Language the medium in the Universities also and allow the teachers to use from the lowest class, wherever possible, the English terms that we are now using. No teacher has or can have any objection to this. If it is not stressed in Educational Conferences, it is owing to political pressure and indifference rather than to any conviction to the contrary. I know that many top-ranking politicians like Sri. K. Santhanam hold this view. But I suppose it is party loyalty that prevents them from making it an object of public agitation. Even in law, a Minister is reported to have advocated the use of English terms.

An Impossible Effort.

In the matter of coining scientific and technical terms, the Advisory Board at its first meeting, recommended that the terms chosen should be common to as many of the regional languages as possible. But this is an imposition. Modern science and technology developed in India only as part of English education. Therefore, there are no scientific and technical terms in any of the Indian languages, that could be made use of in modern education. Therefore, the most reasonable and practical thing and that which should be acceptable to all the linguistic groups is to use in all cases the

English terms that we have learnt, and are using at present.

It is waste of money, time and energy to coin new words. Hence the recommendation that all Committees and Boards that are now engaged in coining new words in the regional languages are to be forthwith abolished.

Anyway, if the Government wants to make the regional language the medium of education in universities as they should, and if it is to be successful, i.e., if the standard is not to be lowered thereby but improved, teachers should be allowed to use English terms wherever possible from the lowest class.

In writing, transliteration followed by English words within brackets should be used. Teachers would consult English text books and teach in the Indian languages. Text-books in Indian languages may at first be mere translations of English books. Original text-books will come in due time.

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This wholesale adoption of English terms, besides making the change-over of the medium of instruction easier, is advantageous in a number of other ways.

(1) As the present-day teachers have learnt everything in English, the teaching both in schools and colleges will be less difficult and more efficient.

(2) Students need not learn one set of terms at the school and another at the colleges, as they do at present and they therefore can understand the teaching much better.

(3) As we have agreed to the three languages formula, there will not be much difficulty in the interchange of teachers

and students among Indian Universities and in the free flow of knowledge throughout India.

(4) Study in foreign Universities and taking part in international scientific conferences will also become much easier.

(5) Above all, it will considerably lessen the tension between the North and the South. The North must be prepared to give something and not try to take everything.

Is it too much to expect all genuine educationists and statesmen to shake off their prejudices and look at the matter purely from the point of view of improving the education of our youths?

Factors Affecting the Choice of Courses in the Secondary Schools

Raghunath Safaya, M.A., M.Ed., P.B.S.I. Professor of Education, Training College, Jullundur.

The selection of courses in the Higher Secondary Schools is not a smooth affair often, a number of heterogeneous forces pull the attention of the pupil in diverse directions. He is virtually on the horns of a dilemma. One strong factor out of the many then determines the final choice, whether appropriate or inappropriate. A brief review of the diverse factors is presented below:

I. The influence of the Home and Social Background.

The home and the social background of the child have a potent influence upon the predilections of the pupil, as this forms the strong hereditary and immediate environmental aspect of the child's life.

1. Orthodoxy of the parents may stand in the way of the pupils in selecting a particular vocation. A profession connected with leather work, sanitation and scavenging is tabooed by all high-caste

Hindus. Orthodox Hindus go to the extent of preventing their children from joining a medical course because dissection of animals and birds is *himsa*. Craft work and some skills connected with hand-work and industry are even now considered by some as mean jobs.

2. Illiteracy of the parents or the low educational level of the parent leaves the pupil in the dark and also makes him susceptible to any wrong choice. Even now, some parents are against allowing their daughters joining any vocation. 'The home is the only place for women', they say. For some parents, their children are fit for any job. Some pupils blindly seek the advice of others.

3. The present occupation of the parents also restricts the choice. It has been discovered that some parents strongly advocate their own profession for their sons, while others, dissatisfied with their present jobs, ask them to take to other

professions. As such, a doctor may be seen insisting on his son joining the medical profession, irrespective of the son's interest or aptitude. On the other hand, a post-master condemns his own profession and advises his son to join any profession except the postal service. A shopkeeper, sick of his own job, hankers after a Government job, however mean it be. A weaver's son finds his father's job dull and monotonous, and prefers even a peon's job to his hereditary vocation.

4. The occupations of the relatives may in certain cases influence the choice directly or indirectly. A boy whose uncle is a pleader gets attracted towards that job. A cousin, who is a doctor, may advise his cousin, or prompt him indirectly to join the medical course.

5. The pattern of living may direct a pupil to a particular type of course. Some parents are progressive, and they insist on a public school education leading to high executive jobs, civil or military. Westernised parents will usually vote for science and technology.

6. Family ties, in certain cases, are strong enough to restrict the choice. Some families cannot leave their ancestral occupations. A businessman wants his business to continue from generation to generation. Some skilled workers must impart their skill and the tricks of their trade to their own kith and kin.

7. The financial resources of the parents determine, to a large measure, the level of occupation depending upon the capital investment on specialised training or on opening a business concern. Only the parents belonging to a high income group can afford to meet the expenses in highly specialised courses like medicine, engi-

II. Interest and Achievement.

The interest and achievement already acquired in a particular educational course or profession may be the determining factor for the choice. A pupil gets high scores in a certain subject and acquires interest due to the recognition and encouragement received. It is a common observation that some pupils find a particular subject either dull or interesting. Sometimes at a later stage, a particular subject appears to be interesting and thus affects the choice, because that subject gives greater satisfaction. The interest in a particular subject may be innate or acquired. All the same, it will influence the achievement and future choice.

III Availability of the Courses

In spite of the fact that there has been a rapid conversion of High Schools into Higher Secondary Schools, the number of Higher Secondary Multipurpose Schools offering a diversified curriculum does not cope up with the present needs. In some areas, only some specified courses like Humanities and sciences are available. The choice is naturally restricted to these two alone. At some places, there is tough competition for admission into a particular course like Commerce or Agriculture. Most of the applicants go away disappointed. In such cases, the choice of courses is determined by the availability. Fine Arts and Home Science are even now a 'dream' in certain regions. The girl students usually take up Humanities. The rapid growth in student population may not allow the pupils to have a free choice for a number of years to come, in spite of the rapid conversion into the Higher Secondary pattern.

IV Chance Selection

selection of courses. In certain cases, no information is available regarding the availability of the courses at various places and the future avenues connected with these courses. Consequently, a pupil selects the subjects at random. At best, some friend or relative may present a passive suggestion and retire. The suggestion may work, the pupil may make the choice with full complacency, and study the particular subject at the higher

secondary stage only to repent afterwards or to oscillate to other courses. He may not know that, by choosing subjects at random, he is only postponing the problem of his guidance and not solving it, and often making it more complex. Some parents do take hurried decisions in order to defer the problem to the future. But such a state of affairs is deplorable and needs immediate attention on all fronts.

Sanskrit Studies in the Soviet Union

V. Nozbergina, D. rent, Moscow State University.

In the Soviet Union Sanskrit is studied at the State Universities of Moscow, Leningrad and Tbilisi and the Institute of Oriental Studies of the USSR Academy of Sciences. Soviet Sanskrit studies follow the traditions established in old Russia.

In Leningrad University these traditions are connected with the works of I. Minayev and his followers, E. Obermiller, S. Oldenburg and F. Shcherbatsky. Sanskrit was studied as a branch of Indology. It was for many years taught by Prof. Shcherbatsky, who insisted that its teaching must be based on classical Sanskrit works. Conversely, Academician A. Barannikov, who considered Sanskrit fundamental to the study of modern Indian languages, paid special attention to Vedic Sanskrit. Since 1937 the chair of Sanskrit has been occupied by Prof. V. I. Kalyanov. At the Department of History, Sanskrit classes were conducted for several years by Prof. V. S. Vorobyov Desyatovsky.

In the Indian section of the Department of Oriental Studies, Sanskrit is

from the Meghaduta and the plays of Kalidasa; in later years, they study the Arthashastra. Practical studies are combined with Sanskrit grammar and linguistics. Thus, in his later years, Academician Barannikov delivered lectures on ancient Indian literature, comparative and historical grammar of Indian languages and the fundamentals of Indian poetry.

Sanskrit studies at Moscow State University are associated with the educational and research work of P. Petrov, F. Fortunatov and V. Porzhezinsky. Both Vedic and classical Sanskrit were studied at the department of comparative and historical linguistics of the Faculty of Philology. After the October Revolution, Sanskrit studies were continued by M. Peterson who lectured in the language at the Faculty of Philology from 1922, with intervals, and every year from 1942 to 1953. Sanskrit was taught for some time by R. Shor, and since 1951, by the author of this article, whose Elementary Course of Sanskrit is one of the basic textbooks. The course of Sanskrit is optional.

Two Master of Science theses in Sanskrit

Sanskrit," and the other in 1956 by T. Yelizarenkova on the subject, "Verb Classes in Rig Veda." Moscow University scholars have to their credit several studies on Sanskrit, such as M. Peterson's "Formation of Aorist Bases in Ancient Indian and Other Indo-European Languages" and "Verbs of Speech in Sanskrit."

With the establishment in 1956 of the Institute of Oriental Languages of Moscow University, the study of Sanskrit developed and expanded considerably. Sanskrit became obligatory for students specializing in Hindi and Indian literature and history. Practical knowledge of modern languages is combined with comprehensive theoretical studies. Lessons in Sanskrit are conducted parallel to, and in close connection with, other courses in Indology, such as Indian philology and the history of Indian languages. Work on a Sanskrit reader is proceeding at the Institute.

Research work in Sanskrit is carried out at the Moscow and Leningrad Universities and the Institute of Oriental Studies of the USSR Academy of Sciences. The Institute of Oriental Studies is engaged in translating and publishing works of Sanskrit literature. Thus, the first book of *Mahabharata*, translated and annotated

by V. Kalyanov and edited by Academician Barannikov, was published in 1960. An annotated translation of *Arthashastra* has been prepared. This work was begun by a group of Indologists headed by F. Shcherbatsky and has now been completed by V. Kalyanov. A translation of *Jatakamala, or the Exploits of Padhisattva*, begun by Academician Barannikov, has just been completed by O. Volkova. The Institute has also prepared a collection of articles on Indian languages, including two on Sanskrit.

Interest in Sanskrit has been heightened by the appearance in recent years of several translations of monuments of ancient Indian literature. Thus, in 1956-56, were published B. Smirnov's translations of *Nala and Damayanti*, the episode of Savitri and Satyavan and *Bhagavadgita*.

In 1958 a new translation of the fables of *Panchatantra* by A. Syrkin was published. (The first translations of excerpts from the work appeared in 1930).

Work is being completed on translations of ancient Indian philosophy which is being prepared for publication by the Institute of Philosophy of the USSR Academy of Sciences.

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PANJAB KITAB GHAR
Jullundhur City.

8-3-62 In a letter to the Mail, a correspondent has pointed out the injustice of disallowing special pay or allowance given to headmasters of aided schools.

11-3-62 Dr. A. Lakshmanaswamy Mudaliar pleaded for improving primary and secondary education so as to provide a strong base for higher education. There were great need and scope for improving primary education, he said.

15-3-62 A correspondent writing to the Mail has drawn the attention of the government to the sufferings of the primary school teachers to whom the managements are unable to pay salaries every month. He suggests that the government, having introduced free education, must shoulder the responsibility of paying the teachers direct. He has also urged that compensation to schools should be calculated on current rates of school fees.

16-3-62 Sri P. Jagadesan has complained through the columns of the Mail about the iniquity of terminating the services of trained graduates on disciplinary grounds because of their periods of service being less than five years.

[Perhaps, it is worth while also to note that a few teachers, simply because they have put in the required number of years of service, are openly lapsing into laziness and inefficiency, with the result that education in the school suffers very much. It is to be hoped that the teachers' associations, which rightly fight for the rights of the teachers, will also try to remedy this state of affairs. In fact, in every school, there are at least one or two teachers who defy the headmaster and the management.]

23-3-62 The Kerala government has announced that it will take action against teachers for poor results.

[Nobody can deny the fact that inefficient teachers, of whom there are too many today, many young men drifting into the profession because their intellectual wares will not sell anywhere else—should be weeded out, but this weeding must be done with great care. It is often-times observed that parents do not supply their children even with the necessary educational materials, viz., note books, pencils, slates and even text-books. Sometimes text-books are not available till late in the year. Also, the students do not do their assignments at home. All these factors have also to be taken into consideration before the teacher is penalised for producing poor results.]

27-3-62 The Hyderabad correspondent of the Mail has discussed the problem of University examinations. He pleads for a modification of the system. He also makes reference to the merits and demerits of class tests. He concludes with the recommendation of the examination committee set up by the Union Government which has toured abroad for investigating this problem: "There should be different kinds of tests throughout the year, each with a specific objective. There should be a comprehensive examination at the end of the entire course. The committee has also suggested the introduction at least of techniques of a new type."

28-3-62 The Director of Public Instruction, Madras, does not foresee a situation in which there would be unemployment among teachers, for according to him, the required number of men and women are being admitted into the training schools in the State every year.

[The claim seems to be more optimistic than real. The Education Department can well maintain a statistical wing to eliminate unemployment among teachers.]

28-3-62 Dr. A. Narasinga Rao urged that a bold step be taken to expand the present facilities, so that no student desiring to have University education was faced with any obstacle. He asked the University to adopt a more sympathetic attitude towards the question of private study.

1-4-62 While the Chief Minister of Kerala has assured the Assembly Members that evening and correspondence classes would come into existence in the State shortly, the University seems to be opposed to it. He criticised the University in this regard.

Dr. D. S. Kothari, Chairman, U.G.C., has expressed the opinion that teachers should not be transferred except in the interest of education. He said that it was best to allow a teacher to be in continuous service in one institution, so

that he took deep roots and developed traditions in it.

Governor Giri criticised the present system of education and opined that classifying students into grades was better. He was against any restriction on admission of students to Universities.

Sri. C. Subramaniam criticised the tendency on the part of parents, particularly the educated, to get their children admitted to schools at a very early age. He said that the age of admission in Russia was seven plus.

[Without kindergarten facilities, to take care of children's education before they are seven, to begin education at seven plus would be nothing short of disaster from the point of the education of our children.]

OXO

Wither Women's Education?

N. S. Padmanabhan B.A., B.T., Ammapet.

At a time when we are engaged in the establishment of a social order in which men and women are to share equal fortunes, when the centuries old barriers of customs and conventions prohibiting the latter's fuller participation in life are melting away and at long last, when women have, by rising to the occasion, been acquitting themselves ably in various vocations and practices, it will do well for those concerned with education to probe to the aim, scope and content of their education. Thanks to the genuine and earnest efforts taken by its votaries through the recent decades, women have been taken out of the morass of ignorance and servitude, and their social status has been given desired impetus and recognition. But at the same time, is it not pertinent to

ask ourselves whether the type of education we offer them goes to contribute in fair measure to the commonweal? Also does it run counter to accepted fundamental values in life? Is it true to the soil and tradition, and does it jeopardise national interests? These are, however, the questions that stalk us in our march to prosperity, as much depends on how we answer them. The desideratum has to be found out and a suitable remedy suggested long before the problem becomes a canker.

During the pre-historic and remote historic days of the past, it was not as if women were denied their proper place in society as also the benefits accruing therefrom. Of course, the kind of education they received was not the

denominational one of these days, but one which was at once all-comprehensive and all-purposeful. Had it not been for their erudition and mastery of subjects, could we have come across a Sarada to argue with the great Adi Sankaracharya on highly metaphysical doctrines and dogmas, and an Avvaiyar to throw gems of wisdom and experience in words which have transcended time and space? Also it is noteworthy that such educated women of yesterday did not form a class by themselves, nor did they shun their mundane activities in life. The great Book of Nature with its gleaming pages was open before them; the holy scripture with its nascent glory served as a beacon-light for them; their unsophisticated and austere living was but a reflection of the contentment and culture they imbibed from out of these two. They, in short, were the nuclei of civilisation, the home being an institution by itself. But alas! that was not to be for ever.

Incursions and invasions from the West jeopardised the vested interests in learning, and soon men succumbed to the idea that all education was a means to fashionable living. The Macaulayan system of education with a pronounced bias on bread-earning and against traditional thought and practice only actuated the downfall of ethical values. Women, at any rate, were slow to respond to the chords of decline, in spite of (or rather because of) their being consigned to the kitchen. Men folk, with easy access to English education by dint of their social status and vantage position offered by society during its periods of wine and stagnation, left the claims of women either unheeded or overpowered. Learning was an anathema to the latter, and hence they had to lean heavily on the slender resources of the past and face the brunt of the attack. It is to be said to the credit of them that they did not do the job squarely and neatly. While remaining as mere passive tools in the hands of men, they wove culture and tradition into the fabric of daily life, and in their own limited sphere helped to stem the rot of

pure materialist philosophy setting in. Their education shrank to a blind observance of formalities and rituals, the reasoning side of them having sunk into oblivion. To cut this short, the vehicle of learning, as far as they were concerned, was working in reverse gear.

Perhaps because of this ingrained conflict of values, temporal and spiritual, that were represented by the Western and Eastern facets of the educative process, women in India, when they took to English education in the early decades of this century, could not assert themselves in any single field and so presented a confused picture. So it was that the great emancipators of women in recent times, Swami Vivekananda, Dr. Besant, Tagore, Mahatma Gandhi and poet Bharati of Tamil Nad, pleaded for the resoration of the mother to her former glory. Reorientation of education thus became the panacea for our ills, and the national governments in power owe unto themselves this onerous task of providing it. Education commissions were set up for scrutinising the types of education in vogue at various levels and evolve formulae by which we could gain our twin objectives of talent and poise. Quite in keeping with their recommendations, made after great thought, changes in the patterns of education are in the offing, and they are, no doubt, great steps forward and as such welcome. Nevertheless, it is a truism that the subject of women's education has not acquired such active sympathy as it would demand.

Women, as said before, occupy a pivotal position in Indian community life, and as such the type of education they receive must be distinctive and deliberate in character. A common course of study for both sexes leads us nowhere and if at all anywhere, to maladjustment of values and interests, and here it is that the present system suffers a setback. A few subjects like Home Science and Needlework have worked out to be more artificial than otherwise. It is patent that in such subjects even an average Indian

girl, having no chances of schooling, is as good as, if not more well-versed than her counterpart in school. The Indian girl, besides her knowledge of the three R's, should learn the science of common life, the value of food-stuffs and of medicinal herbs, the laws of personal hygiene and at later stages mother-craft and sex education. Co-education in schools and colleges have caused enough damage to their discipline and work-potential, and it is high time we give it up and change for the better.

Thus a separate national plan of women's education based on using their instincts and natural aptitudes with a due

and deserved slant on science, drawn by a committee of experts in the field, is one which is now urgently needed. In all earnestness and humility, I plead with educationists and other well-wishers of the nation to see to it that such a scheme is formulated as would form an enviable entity, as would shape women into effective limbs of society, and as would make every one of them the modern girl of poet Bharati's dreams. That day would be a day of remarkable importance to our nation, when womenfolk, released from the fetters of feudalistic thoughts and notions, take up the challenge of posterity with renewed and rejuvenated gusto, holding aloft the banner of culture.

EDITORIAL

Academic Magistracy

A few weeks ago, the Chief Justice of India suggested (in his convocation address at Patna) that graduates and diploma-holders guilty of moral turpitude should be deprived of their degrees and diplomas. We are glad that a question of vital importance to our Universities which has till now been ignored, has at last been raised at the highest level.

Traditionally the University in Europe has been an imperium in imperio, an autonomous, self-governing institution within the framework of the State. The University had its own court for trying teachers and students. The ancient Indian Universities like those at Nalanda, Pataliputra and Takshasila also enjoyed a similar status. The Indian tradition harks back to the forest hermitages of independent sages and scholars who taught and ruled their little troops of students.

Apart from tradition, however, the practical needs of administration and maintaining discipline among a large number of young men and women support

the case for making every University a tiny State with some of the attributes of sovereignty. The Ministers need not be jealous of any magisterial powers that the University may be allowed to exercise. This is done only in the national interest.

The atmosphere of indiscipline prevailing in residential Universities like Banaras and Annamalai, and the riots that students often stage in University cities like Lucknow, Allahabad and Mysore (not to speak of the serious political agitation which the students of Dacca in Pakistan have recently launched) remind us of the battle between Town and Gown in the middle ages. They speak eloquently of the urgent necessity for clothing Universities with powers to deal effectively with their students.

The Chief Justice's proposal points out that even past students may have to be dealt with. Some may feel that a double punishment is sought to be imposed on the graduate delinquent—one by the State and the other by the University. The answer to it is that moral turpitude may not be always punished by the laws of the

land, though the State recognises crimes involving moral turpitude as a category of heinous offences against the law. And when such crimes are committed, the deprivation of academic honours may well become part of the sentence imposed.

A recent case before the Madras High Court brought out the need for comprehensive thinking on the lines suggested by the Chief Justice. A student who admittedly made some improper advances to a young lady living in a near-by house was expelled and rusticated. He sought a ruling of the court against the punishment imposed on him. The court refused to interfere. Here is a case involving moral turpitude which may not be punished by courts in the ordinary course.

A policy of drift in regard to student indiscipline may lead to national indiscipline. If we are to be saved from that doom, we must bestir ourselves and haste, among other measures, to create an academic magistracy.

More about Teaching Machines

Having first seen the light of day in America, the teaching machine has now crossed the Atlantic. A British University (Sheffield), the R. A. F. and the Royal Navy, and British industry have begun to experiment with it. Some of these experiments were discussed at the annual conference, held early this month at Loughborough, of the Ergonomics Research Society.

The Air Force and the Navy allowed some of their recruits to be taught trigonometry by an American teaching machine. The only appreciable difference

between pupils taught by men and those taught by machines was that the latter completed the course much quicker—in about half the time. The successful training of key board operators by a machine devised by Mr. Gordon Pask was also reported.

British experience so far, by no means comprehensive or even adequate, confirms the sober estimate that the teaching machine cannot replace the teacher. It may do some of his chores for him, saving his time and energy for more important or complicated or creative work. The advantage of the machine is that it can pay prompt individual attention to the boy or girl who seeks its help at any time and can advance at the pupil's own pace, patiently and without loss of temper. But the snag is that the machine is soulless. The pupil cannot catch any enthusiasm or inspiration from the machine. And it is doubtful whether the machine can do a completely successful job of teaching subjects in which value judgments preponderate.

Drilling, correcting, giving standard explanations—these can be done by the mechanical teacher with a kind of impersonal efficiency. But if the student is worried by an imaginative or searching question off the track, only the living teacher can help him. Even with many complicated machines doing his routine chores for him, the teacher will be required to coordinate, to answer questions, to cultivate taste, to teach the making of value judgments, and to inspire. As John Davy, a well known science correspondent points out, "it is not yet clear what a machine can draw out of an individual as opposed to what it can stuff in."

—OXO—

Book by Sri Prithvi Nath Razdan.

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Women's Education in Japan

Kathleen Costello.

A new Unesco paperback, *The Changing Social Position of Women in Japan*, by Takashi Koyama, brings together studies by Japanese specialists—mostly women—in the fields of labour, the family, the rural community, education, civic activities and public opinion.

Japan's New Constitution revolutionized the legal basis of Japanese new institutions. In this study, Mr. Koyama and his collaborators describe the sweeping reforms that gave women equal rights before the law and investigate the present relationship between legal and actual status. . . .

On the whole, the statistics assembled in *The Changing Social Position of Women in Japan* describe a trend, not a landslide. It cannot be said, and Mr. Koyama makes no effort to do so, that the last 15 years have effected a radical transformation of Japanese women's life. The impression given by this study is of creeping rather than dramatic change.

But there is one exception. Equal education for children of both sexes became not only a legally recognized right, but a fact. Article 5 of the 1946 Fundamental Law of Education states: "Man and woman shall respect and co-operate with each other. Co-education shall be recognized." The provisions of this law were put into effect with incredible speed.

Compulsory education was extended from six to nine years for all children, and in a country where boys and girls had been separated after the third grade, co-education was also made compulsory for the whole period. Before passage of this law, girls' secondary schools existed only to make "good wives and mothers" for middle and upper-class families. After

the sixth grade, no effort was made to provide either a curriculum or level of teaching in any way comparable to what was offered to boys. Girl graduates of this system were equally unqualified for higher education and gainful employment.

Acceptance of women's right to equal education shows up strikingly in figures for enrolment after the compulsory nine years. Taking 1880 as a base year, the index of high school enrolment for girls had climbed to 173.9 in 1957 (as compared to 134.7 for boys) and to 284.7 for women in colleges (as compared to 144.3 for men). (Actual enrolment for senior high schools: 1,203,749 boys, 733,766 girls; for colleges and universities; 364,643 boys, 40,668 girls.)

In the same year, of the 51.2 per cent of female college graduates who were employed, 63.6 per cent were professional and 27.9 per cent clerical workers.

This movement of women into positions that command social respect is a post-war phenomenon almost entirely attributable to the introduction of equal education. The author feels that this development "will be likely to modify considerably the past tendency to belittle working women and will contribute towards the enhancement of women's position."

The graduates of the new co-educational system of education still constitute a minority of the population of Japan. But there are already enough to make them an important leaven in Japanese attitudes. In this basic minority lies the promise of a happier, fuller life for the generation of women now growing up. (UNESCO)

The Sun will Work for Us

N. Zheleznov.

[The article is based on the author's interview with Professor V. Baum, who heads the Heliochemical Laboratory of the Power Institute, USSR Academy of Sciences.]

"The last ton of coal on our planet was mined!" This sad news, economists assert, may resound throughout the world already in 2061. And as far as petroleum and gas are concerned, the reserves of these fuels will probably be exhausted even earlier, say, at the end of the 20th century.

Such an unhappy picture is depicted by heliochemists as soon as the talk touches on the prospects of utilizing new forms of power, and specifically the energy of solar radiation.

The future generations, and perhaps the generation of the present-day school children, will wonder how our priceless wealth—the energy of the sun—was uneconomically used. For the sun brings our planet such an amount of heat which would suffice to evaporate the Azov Sea within several minutes. The earth receives in one year considerably more power than is contained in all the world reserves of power resources, excluding of course, the possible resources of thermonuclear energy.

Solar Kitchen and Electric Station

The first units compelling solar energy to do useful work (solar kitchens, bath-houses and driers) were made back in the thirties, but at that time work in this direction was considered more like an absorbing experiment: the efficiency of the initial solar transformers working on metal thermo-elements was too low. Thanks to the work of the pupils of the late Academician A. Ioffe in connection with the successes scored by the physics of solids, semi-conductor materials have been obtained at the present time—thermocouples which can provide an effi-

ciency coefficient of up to 13 per cent. This means that the utilisation of solar rays can hold a worthy place in the country's power balance already in the near future.

The staff of the heliochemical laboratory is excited now by the problem of creating within the next two or three years thermoelectric generators which would become the prototype of the power plant of the future. The process of the transformation of energy there will proceed as "cleanly, noiselessly and without any human beings' help" as when solar light turns into energy-rich organic matter in plants.

The second important direction in which a group of enthusiasts of the laboratory is now working is the elaboration of photoelements transforming radiant energy directly into electricity. Crystals with given properties obtained by physicists enabled heliochemists to create transformers with an efficiency of as much as 10-11 per cent.

In recent times photoelements too began to be used successfully for the transformation of solar energy directly into electricity. Scientists proposed that spherical mirrors focusing the rays be used for increasing the "harvest" of energy obtained per unit of the photoelements' area. The photoelements are cooled by water to prevent in such cases the inevitable overheating.

The concentration of solar rays as much as 160-fold led to a 70-fold increase in the output of electricity. Thus another path to the conquest of radiant energy has been discovered.

Solar Houses

The laboratory is flooded with sunlight. The sweltering July noon made the huge windows facing Lenin Prospect very hot.

"Come back in about two years," the staff members of the laboratory joked. "Then we heliotechnical specialists won't have to feel embarrassed for receiving you in such a hot room. Special surfacing material with the properties of a semiconductor put on the window panes will transform the warm sun rays into coolness and bring fans and air moisteners into action."

The hosts of the solar laboratory drew for us a picture of the morrow of solar energy. Numerous solar combines will gather the "harvest" of radiant energy

throughout the country, and especially in the countryside of the southern republics. In the next several years they will be able to release 50-60 percent of the fuel in small-scale power consumption in our southern areas, where 50 million people live. These accumulators of solar energy will help set up and expand oases in deserts, improve the conditions for the growth of farm crops (heating the ground at times of frosts, watering the fields with warm water, creating the best conditions for raising such crops like calorella).

The heliotechnicians enthusiastically talk about the "solar house" project, the prototype of the future residence. The roof of such a house will have additional functions to its main job now: it will serve as a sort of reception device of an electric station, which will provide an abundance of energy even for a multistorey house.

Madras State Educational Conference

The 52nd Madras State Educational Conference comes off on the 17th May, 1962, at Madras City and will last three days. Sri Govindarajulu, Vice Chancellor, Sri Venkatesa University, presides over the Conference. About 1000 delegates from all parts of the State are expected to attend the Conference. About 10 members of the teaching profession from the City Schools have enrolled themselves as members of the Reception Committee. During the three days there will be sectional conferences also at which topics of current academic and professional interest will be discussed. For particulars, write to the South India Teachers' Union, Annamalapuram, Madras 28.

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