

THE DIFFERENCE BETWEEN THE SOVIET AND WESTERN
PATTERNS OF ELEMENTARY AND
SECONDARY EDUCATION

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I shall not attempt systematically to draw specific contrasts, point by point, between Soviet and Western school education. Furthermore, where I make comparisons they are between Soviet and American patterns inasmuch as these are the systems of education with which I have some familiarity.

Although my topic is Soviet elementary and secondary education, I am going to begin with a generalization which applies not only to secondary education but also to Soviet education at other levels, from kindergarten to graduate schools--a generalization on the basic principles of Soviet education. I do so because I believe that any features of Soviet education at whatever level can be seen in their true perspective only in the light of the underlying Soviet philosophy. That philosophy is derived from the fundamental Communist view of society and the place of the individual, and it is reducible to a single premise: the role of education is to enhance the power and capabilities of the state.

The specific expressions of that fundamental policy have varied through time and continue to be consciously modified in line with the

changing patterns of priorities and objectives of the state; but the principle of using education as a major tool of the state has been constant in the Soviet Union now for forty years.

In keeping with that general principle, Soviet education is a process controlled exclusively by the central government. Comprehensive control is achieved through the ministries of public education. Each of the fifteen republics of the Soviet Union has its own nominally independent Ministry of Education. In reality, however, the central school authority resides at the Ministry of the RSFSR--the Russian Republic which, need I say, is distinctly the most equal of the fifteen equals. For all practical purposes, therefore, a single agency, acting in behalf of the central government, exercises administrative and budgetary control over the entire school system of the Soviet Union. The Ministry of Education supervises and directs teacher training, certification, appointments, and salaries. It prescribes the content and methods of instruction, and it alone has the authority to make any changes in the prescribed curricula, syllabi, or textbooks.

In contrast, consider, for example, that in the United States most of these functions are performed by each state independently, with a decisive voice on all important matters given to the elected local administrators of each school district--and that there are over 50,000 school districts in the United States. Moreover, there is the whole system of American private schools outside of state, county, municipal,

and township systems, each one wholly self-governed. To sum up, in America education is said to be "everybody's business"; in the Soviet Union it is clearly the monopoly of the state.

Two other fundamental factors have influenced the development of the Soviet system of school education. One, the very high value placed by the Soviet planners upon professional specialization and practical skills, has led to a strong emphasis on science, mathematics, and technical subjects. The other, a dogmatic ideological commitment to the supremacy of environment over heredity, has led to consolidation of the prerevolutionary Russian schools of various types into a single uniform system and the introduction of a single standardized curriculum.

Before proceeding to consider some of the practical consequences and manifestations of these factors, perhaps I should outline the organization of Soviet elementary and secondary schools of general education.

There are ten grades, age 7 to 17, in the Soviet school system. The first four grades of the so-called ten-year school, grades 1 through 4, comprise elementary education. The completion of three additional grades, seven grades in all, leads to "incomplete secondary education"--now a universal minimum in most of the Soviet Union. Secondary education is completed with the tenth grade, normally at age 17. Progression from one level to the next and the final certification are determined on the basis of state examinations which are administered at the end of the fourth, seventh, and tenth grades.

Until 1953 most Soviet children terminated their general education after only the first four (elementary) grades at age 11 or after the completion of the seventh grade at age 14. Relatively few continued through the last three, the college preparatory grades, the successful completion of which qualifies one to compete for admission to higher education.

The number of ten-year school graduates averaged about 300,000 per year until 1953--only slightly in excess of the approximately 250,000 first-year, full-time students admitted to institutions of higher education. Since 1953 the picture has sharply changed. First, for all practical purposes seven years of education has become universal; second, the upper-grade enrollment in grades 8 through 10 has sharply expanded. In 1957 some 1,600,000 students completed the ten-year school.

All those Soviet school graduates, boys and girls alike, whether in large cities or villages, studied the same subjects on a uniform six-day per week schedule of 33 weeks per year. Their heavy schedule--to draw again a specific contrast with the American practice--means that in ten years of attendance Soviet pupils, graduating at age 17, receive more hours of class instruction than American students do in their 12 years prior to graduation, normally at age 18.

More significant is the contrast between the respective curricula--the single curriculum of the Soviet ten-year school and the highly

diversified curricula in a typical American high school, if it is possible to speak of a typical American high school. The curriculum of an American high school may include such subjects as Consumer Economics, Consumer Education, Personality Problems, Marriage and Family, Chorus, and Driver Education. In contrast with this superabundant choice of easy-to-digest electives offered to American boys and girls, the Soviet ten-year school provides only a limited number of subjects, most of which are traditional, strictly academic subjects and all of which are compulsory--except that the student himself chooses one foreign language among those offered (usually English, German, and French). The contrast is particularly vivid in the fields of mathematics and science.

Reflecting the Soviet view on the primary role of science and technology in shaping national destiny, the subjects and attitudes appropriate to that view are strongly emphasized in the ten-year school curriculum. Instruction in mathematics, starting with algebra and geometry in grade 6 and including solid geometry and trigonometry, takes up 20 per cent of the total class hours of the ten-year school program. In contrast, and again I draw only on the American counterpart data for comparison, in 1953 fewer than 4 per cent of American high schools required solid geometry or trigonometry even of the college preparatory pupils; and a recent study indicates that only two-thirds of American high school students take any algebra at all. In the majority of the states the minimum mathematics requirement for graduation from high

school is simply one unit, so called, which is approximately 180 class hours of instruction. Computing the Soviet ten-year school load in mathematics on the basis of hours equivalent to an American high school "unit," the Soviet ten-year school graduate can boast of 4.4 "units."

I would emphasize that we are here comparing minimum requirements in the United States with the standard requirements in the Soviet Union. There are of course many schools, public and private, in the United States where the requirements in mathematics are very much higher than the minimum I have cited and even higher than those of the Soviet curriculum. Many high schools offer introduction to calculus whereas Soviet school mathematics ends with trigonometry. Thus the contrast I have drawn is a contrast of uniformity versus diversity.

Similarly viewed, the difference, both qualitative and quantitative, between the ten-year school and the "average" American high school offerings in science is even more striking. For example, whereas the minimum science requirement for admission to MIT is only one high school unit of physics, a Soviet ten-year school graduate would qualify for nearly three units of physics alone, plus approximately three additional units of other science subjects: chemistry (nearly two units), biology (one unit), and a minor fraction of a unit in astronomy (33 class hours of instruction in the tenth grade).

In drawing these comparisons, I have taken into account only the last four years of the Soviet ten-year school curriculum, which

approximately match the four-year American high school term. The comparison is actually less favorable to the United States, since the ten-year school instruction in science begins in the fourth grade--with biology. The teaching of physics begins in grade 6 and continues for five years. Chemistry starts in grade 7.

Thus, quality and effectiveness of instruction aside, the fact is that every Soviet ten-year school graduate is exposed to a systematic, coordinated, and substantial science program. In contrast, as recently as 1954 some 23 per cent of the tax-supported American high schools offered neither physics nor chemistry. It should be noted, however, that the 23 per cent accounted for less than 6 per cent (about 100,000) of the total twelfth-grade enrollment in the United States. More generally, a recent American survey of the tax-supported high schools established that, whereas nearly 73 per cent of the students enrolled in the tenth grade take biology, only 32 per cent study chemistry; and in the twelfth grade, the terminal grade, only 23 per cent take physics.

We must not mistake the meaning of the American data I have cited. For one thing, these data do not include the pupils of American private schools, which account for more than 20 per cent of the high school enrollment. And by any standard no Soviet school today can match the best American schools. I have cited these data not to indicate the average level of preparedness among the American high school graduates who go on to higher education--and these are now nearly 40 per cent of

the total. I have cited them to show that, in contrast with the graduates of the Soviet ten-year school, a large number of American high school graduates have had at best a spotty and sometimes no exposure at all to the intellectual challenge of the concepts, methods, and content of mathematics and science.

In significant contrast with American lack of uniformity, the Soviet approach to the teaching of science and mathematics, which follows a fixed curriculum with standardized syllabi and textbooks, provides a certain floor below which the quality and quantity of teaching cannot sink. Nor can there be in the Soviet schools, of course, the kind of imaginative experimentation which characterized the best of American education. But, while a Soviet ten-year school graduate may not necessarily have gained an imaginative mastery of the science and mathematics he has been taught, he must have been reasonably well grounded at least in rules, techniques, and definitions.

Instruction in science and mathematics takes up about 34 per cent of the class hours in the curriculum of the ten-year school. Russian language and literature take another 30 per cent. Other academic subjects, accounting for an additional 18 per cent, include history, taught for seven years; geography, six years; and one foreign language, also taught for six years, from grades 5 (age 12) through 10.

In the majority of the Soviet urban schools, English, French, and German are customarily offered. Recent information suggests that about

40 per cent of the ten-year school students elect to study English. Thus it can be estimated that some 6,000,000 Soviet young people today are studying English. Here one is tempted to draw another specific contrast. As far as I have been able to establish, Russian was offered in an American high school for the first time in 1946--in one state, in one school, with a total initial enrollment of eleven pupils. In the 1957-1958 school year, some 26 high schools offered elementary Russian--most of them, I understand, having introduced this subject in the second semester of the year.

To return to the Soviet ten-year curriculum, with the academic subjects--science, mathematics, and humanities--taking up some 82 per cent of the total time, 18 per cent of the class hours is given to non-academic subjects. These include physical education, singing, drawing, simple manual crafts in the lower grades and practical shop work in the senior grades, and engineering drafting which is taught in the last three grades.

Ideological content aside, the present ten-year school curriculum, in the choice and sequence of subjects, is similar to that followed in prerevolutionary Russia only at the science and technology oriented secondary schools patterned after the German Realschule. And today the ten-year school curriculum is quite similar to the curricula used in certain types of continental schools. In fact, if we compare the ten-year school curriculum with the curricula of certain college

preparatory schools in America--such schools as Brooklyn Technical High School, Baltimore Polytechnic Institute, and other science-oriented high schools, the contrast I have previously drawn would all but disappear. But whereas in America and in Europe only a certain per cent of high school students follow such a demanding curriculum, in the Soviet Union there is no alternative.

More accurately, one should say that until recently there was but a single undifferentiated ten-year school curriculum. In 1956-1957 a new, experimental curriculum was introduced in 500 schools of the Russian Republic. Under the new plan, the academic content of instruction was reduced in favor of practical vocational training. In the lower grades, 1 through 7, time given to manual crafts was considerably increased. In the last three grades, 8 through 10, a new subject, Basic Techniques of Production, was introduced and labor training programs were added which required students to perform regular work assignments in shops, factories, machine-tractor stations, collective farms, state farms, and so on. A year ago this fall, some 25 per cent of the RSFSR schools shifted to a similar plan.

It is an interesting paradox that, while in the United States the trend is now definitely toward a renewed emphasis on the academic content of secondary education, the Soviets are shifting more and more toward practical vocational objectives. What has happened, of course, is that, with the expansion of enrollment in the schools, the role of

the ten-year school has changed, and the old college-preparatory type of curriculum has become inappropriate for the new task of providing terminal education for the majority of pupils.

I have already mentioned that until 1953 the number of ten-year school graduates per year was barely large enough to provide a sufficient number of qualified applicants to schools of higher education. In 1952 a decision was made by the Soviet government to extend the years of universal education from seven to ten years. Immediately thereafter a large number of pupils was permitted to go on to the next grade. In the first year following the decision the tenth-grade enrollment totalled 880,000--double the number enrolled during the preceding year. In 1957 some 1,600,000 completed the tenth grade--about five times as many as in 1952 when the decision to expand was first taken.

The rapid expansion of the upper-grade enrollment was facilitated and perhaps made possible only by the fact that beginning with 1949 the total school-age population in the Soviet Union started temporarily to decline, reflecting a wartime birth deficit. For about four or five years beginning with 1949-1950, the intake of first graders may not have averaged more than three-quarters of the normal rate, with a total deficit of more than ten million. But as the total enrollment declined, the number of upper-grade pupils was rising. Last spring (1958) nearly 2,000,000 may have completed the tenth grade. In the

meantime, however, the number of new admissions to higher education remained unchanged at about 450,000 per year, including students studying by correspondence. Thus, for some years now a very large number of ten-year school graduates have had to go into industry and other occupations after a predominantly college preparatory and not a vocational training. This must have come as a considerable shock to those students who had expected to follow their older brothers and sisters to college as a matter of routine. Furthermore, it is a certainty that, with a far less rigidly selected and greatly expanded student body all following an identical curriculum, the average quality of preparation in the last few years has considerably deteriorated. This fact is frequently hinted upon in the Soviet press and is reflected, for example, in the rules for admission to higher education; less and less weight has been given lately to the ten-year school record of the applicants, and selection has been made almost entirely on the basis of competitive entrance examinations.

In the face of this development, Soviet educational authorities, instead of introducing a choice of curricula, as was done some decades ago in America when high school education became virtually universal, have still clung to the ideal of one education for all. Under the slogan of a "polytechnic" approach to education, they have been merely making changes in the same single curriculum. It is safe to predict, I believe, that the compromise forced upon the ten-year school

curriculum by the pressure of numbers is an unstable one and that more radical changes will soon be made.

Several plans have been under discussion in the Soviet educational press, including one--apparently favored officially--under which the policy of universal ten-year general education would be abandoned and most of the present ten-year schools discontinued. It is proposed instead to limit the compulsory general education to seven or eight years. Thereafter, for the vast majority of the Soviet youth any further education is to be on a work-while-you-learn basis in special part-time schools to be organized at the employing industrial enterprises, factories, and farms. Only a limited number of pupils apparently would be selected to continue for another three years of full-time education without having first to enter employment. Under the new plan the schools offering such full-time secondary education would offer four distinct curricula, provisionally designated as: physico-technical, chemico-technical, natural science-agricultural, and humanities. Whether the schools offering these curricula would be largely or exclusively college-preparatory schools is not clear at this time. And, in any event, these are only plans; and, even with the Soviet capabilities for making sharp changes, it will take some years before the pending reforms can be carried out in full.

Much has been said about a crisis in American education. In a different sense and arising from a totally different historic past,

it is clear that Soviet school education now is also in a stage of critical transition, if not crisis.

There are many dimensions to the current Soviet educational crisis. I have already referred to the temporary overproduction of the college-preparatory school graduates vis-à-vis the impending ebb in the flow of the manual labor force replacement because of the wartime birth deficit. And there is the conflict between the political need for continued control of education and training--which necessarily leads toward standardization of minds and of skills--and the need of the technologically maturing society for people with initiative, originality, and versatility. Many other factors as well have been instrumental in bringing about the present need for a reform in the Soviet educational system. But above all, the educational dilemmas which confront the leaders of the Soviet Union today may stem in the final analysis from the growing assertion of individual aspirations which conflict with the dogmatic communist view of the individual's role in society.

There is nothing to indicate that in the face of this pressure the present Soviet leaders have abandoned any part of their basic educational philosophy. The central control of education in the Soviet Union remains as heretofore in the hands of the Communist Party; the national admissions quotas continue in effect; the fields, scope, and character of training continue to be determined not on the basis of individual preference but solely on the basis of the estimated needs

of the state. Nevertheless, the contemplated educational reform would make at least one concession: some diversification of curricula in the upper grades of the secondary school. Dictated solely by expediency as it appears to be, this change nevertheless constitutes an important if small step away from the previously held principle of "one education for all."

For the student, the proposed diversification will offer a limited choice--something that Soviet high school youth have never had before. But, at the same time, the number of young people who may have the opportunity to exercise that choice will apparently be severely limited. And in this respect the proposed educational reform is a sharp retrenchment from the ambitious policy announced in 1952 of making ten-year school education universal by 1960. I have no doubt that both economic and political considerations (labor shortage and the growing number of restless and unattached ten-year school graduates) are forcing the Soviets henceforth to restrict the availability of general education and to emphasize vocational and labor training.

In conclusion, if I may, I should like to make another generalized comparison between Soviet and American education. The two systems have stood at the opposite ends of what I might call the spectrum of educational philosophy. At the Soviet end of this spectrum the interest of the state is paramount, the state asserting that one is educated by the state in order that one may best serve the needs of the state. At the

American end of the spectrum the emphasis is on the priority of the individual. Thus one extreme would assign all the fruit of education in the first instance to the state and only incidentally to the individual servant of the state; the other emphasizes an inverse relationship between the rights and duties of the individual vis-à-vis the state.

Both systems have been functioning under the increasing tensions created by the extremity of their positions vis-à-vis the political, technological, and economic realities of the age. For political if no other reasons, the Soviets--for all the revolutionary changes in their educational practices--appear to be unable to modify the basic premise of their educational philosophy. In contrast, the American concept of school education appears now, with increasing harmony and popular consensus, to be evolving progressively toward a point of balance between the needs of the state and the satisfactions of the individual.