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## COLLEGE EDUCATION IN SOCIETIES UNDERGOING RAPID CHANGES

When our ancestors migrated from the Old World to the New they brought their culture with them—or as much of it as could be transported in crowded sailing ships or in the minds of men and women. But in such a migration a culture inevitably loses some things and gains others and the result is that the culture of the New World is, and must be, different from that of the Old.

One of the cultural attributes that was brought to our shores, was the European tradition of formal education—actually not one but many traditions for the educational patterns were different in the various countries of Europe. The Puritans who came to New England brought with them a conviction that each individual should be able to read the Bible for himself and that consequently universal education at the elementary level was a necessity. Soon after they arrived in New England they passed laws requiring each town to establish a school.

Those who came to the New World in the 16th century from the mainland of Europe and particularly from Spain, had a long tradition of excellent universities but no tradition of universal

elementary education or of public and secular education. As a result of these differences English-speaking America eliminated illiteracy, or reduced it to a low level, much earlier than Spanish speaking America but they built no universities for a long time. Many of the Spanish colonies, not only in America but throughout the world, established universities long before they established elementary schools. Such elementary education as existed was provided by parents or private tutors rather than by formally established schools.

When a large number of people move from one part of the world to another they never bring *all* of their educational patterns with them, even when these patterns are ancient and well established. The differences in physical environment, including climate, in economics, social patterns, and pressures bearing in upon the society, require changes in educational institutions. Harvard, for example, was patterned after one of the colleges that is a part of Cambridge University. In Cambridge of that day, the college was a housing, social, and tutorial unit while examinations and degrees were given by the university of which the college was a part.

But the Harvard College of the 17th century was neither a university nor a part of a university. It had to provide its own lectures and examinations and grant its own degrees. As a result the American colonies established a new educational pattern—that of the separate undergraduate college, independent of any university. Harvard eventually became a university but independent liberal arts colleges spread across the United States while they remained very rare in the rest of the world. This was a new educational development, indigenous to the New World, not a transplantation from the Old.

Another educational pattern, new to the New World and particularly to the United States, is the comprehensive high school which accepts students of all social and economics levels and of all levels of intelligence and educates them together. Some European nations are now moving in the direction of such comprehensive schools but the idea developed first in the United States.

Still another indigenous institutions is the Land Grant College

or Land Grant University. The older European universities prepared men for the learned professions, theology, law medicine, and scholarship. The Land Grant University prepares for these but also prepares for agricultural, technological, and engineering vocations.

Because of differences in European background, and also because of geographical differences in the demands placed upon the schools, education has taken different forms in different parts of the United States. Although there are some general patterns, the schools and colleges of New England differ from those of the Middle West, the Far West, or the South. Schools in Puerto Rico differ from those in Alaska or Hawaii. We must ask ourselves which of these differences are necessary and desirable and which ones are had and ought to be eliminated.

In the days of the frontier, when travel was slow and difficult, and most of the movement was in a single direction—westward—it was natural that the schools and colleges of the frontier should differ from those in Boston. Today transportation is much faster and reaches in all directions. All U. S. citizens are free to move to other parts of the nation. The child who is educated in Wyoming, Alaska, Alabama or Puerto Rico, may spend his adult years in New York or in Los Angeles. The child educated in a rural village may live out his years in a great city. As a result, education is increasingly a national rather than a local problem, even though our constitution, our traditions, and most of our laws, delegate educational responsibilities to states and local communities. This inevitably will lead to a greater uniformity of standards but let us hope it will not eliminate all the differences that make each school or college unique and give it a character of its own. Too great a uniformity can be deadening. It is legitimate for a community to try to make its schools equal to the best—a mistake to try to make them identical with the best.

I have been asked to discuss the problems of higher education in societies undergoing rapid social changes. This makes it necessary for us to attempt to reach at least a tentative agreement as to what we mean by “higher” education as contrasted with elementary and secondary education. When we look at a single nation the answer appears to be obvious. In the United

States it is usually assumed that any schooling that comes after grade 12 is "higher" and anything up through grade 12 is either elementary or secondary. Our liberal arts colleges, teachers colleges, professional schools, and all divisions of the university are considered "higher". Higher than what?—Higher than a secondary school, and since our secondary school is called a "high" school this shows what a semantic problem we can quickly get into.

In many European nations the institutions most nearly comparable to our undergraduate colleges in content and difficulty are considered a part of secondary rather than higher education—the *real gymnasium* is an example. But the nations of Continental Europe have no true equivalent of our liberal arts college—the student in Germany, France, and many other nations goes directly from the secondary school to the university where his work is what we would call graduate or professional.

It would seem to follow that the first problem facing a society undergoing rapid social change is that of deciding how the schools should be organized. At what age, or level of maturity, should the pupil go from the elementary to the secondary school? At what age, or level of intellectual achievement, should he go from the secondary school to the higher institutions?

The answers are not at all obvious. Even if you should decide to follow tradition you must ask, "Whose tradition?" You have, of course, a tradition of your own but patterns change with the changing times and perhaps some of them ought to be changed.

The organizational patterns of education in the United States have changed greatly in the past 100 years and many of the changes have come as a result of accident rather than as a result of intelligent planning.

In the colonial period, and in many parts of the country up until the Civil War, the public schools were small, ungraded, schools which the pupil attended until he was old enough to go work—often at the age of 12 or 14—. There were no public high schools in most parts of the nation until about the middle of the last century and the public schools was not designed to prepare for college. Girls rarely went to college and the boys who were college-bound entered a private institution,

Latin Grammar school, or a private academy at the age of 8 or 9 and remained until they were ready for college at 14 or 15. It was not at all unusual in the early 19th. century for a boy to graduate from Harvard or Yale at 19 or 20 and sometimes he graduated at 18.

It was the coming of the public high school that changed this and led to a new tradition that the proper age for entering college was 17 or 18. This developed by chance. When the public high schools spread across the land, after the Civil War, the public lower school had already become eightyyear graded institutions. The work offered in grades 7 and 8 were not really elementary at all, they included a study of history, geography, physiology, advanced arithmetic, literature and other subjects that had always been, and ought to be, regarded as secondary. They were included in the curriculum of the one-room country school of rural 19th. century America because this school was the only school then available to most children.

But, when the new "high school" was superimposed upon the eightyyear school, secondary education had to be delayed until the age of about 14 because most children did not complete the eighth grade before that. Then when the high school diploma, rather than a certificate from a Latin Grammar school, became the common entrance requirement for college, the college age was moved upward. We need to keep in mind the fact that the delaying of college was *not* based upon any evidence that students cannot do college work prior to the age of 18.

The junior high school came into existence as an effort to solve some of these problems by making grades 7 and 8 a part of the secondary school. What it actually did was to pile one secondary institution on top of another without a sufficiently clear distinction between the purposes of the two. As the years passed the junior high school, which had begun as a fairly rigorous and departmentalized secondary school, changed, under the impact of new philosophies of education to a different kind of institution with home rooms and core curricula that make it more like an elementary institution.

Meanwhile both grade skipping and grade repetition or failure became unpopular in American schools and the result is

that we now have a ladder system. The typical child begins at the first rung of the ladder at the age of six—ready or not—. He completes the eighth grade in his fourteenth year and the 12th. grade in his 18th. year.

This ladder system of promotion based, as it is, on chronological age, does violence to everything that we know about the nature and extent of individual differences in rates of maturity and of intellectual development. We know that a few fifteen-year-olds are ready for calculus while others of the same age are only ready to begin algebra and some are still having difficulty with simple fractions. We know that some boys and girls can be ready for college at 15 while others will never be ready. We know that a child may be advanced in his understanding of one subject and only average in another. Obviously, a well planned educational system would adjust itself to all these facts.

If we could start over again I think we would give much less attention to age in years. In asking whether a boy or girl is ready for high school or for college we would ask; "How mature is he intellectually, emotionally, socially and physically?" and "How much does he know, and at what level is he able to grasp ideas and to solve problems?" We would not, I think, worry a great deal about how long ago he was born.

If this course were followed we might still divide our educational institutions into elementary, secondary, and higher, but there would be much less rigidity about the time to be spent in each. The elementary school might be an ungraded school through which each child would move at his own best rate. Perhaps the average child would complete his elementary preparation in about six years as he does now but other would take longer and some would move on after 4 or 5 years. Secondary education might require five years for some students and four for others.

Under this system many bright boys and girls would be ready for college at 15 or 16. The usual argument given against such early admission is that it would take the bright youth "out of his peer group". The answer to this is simple and obvious—"take the peer group along".

A great deal of nonsense has been talked and written about this term "peer group". A true peer group, as competent social

psychologists use the term, may not be an age group at all. It is a group of individuals who are roughly equals for the activity being engaged in at the time. In asking "who are my peers?" I should ask, not "who is of my age group?" but rather, "what group has ability and maturity roughly the equivalent of mine in whatever we are trying to do as a group?"

A *bright* boy or girl of 14 will not find his peer group for purposes of academic instruction among *average* 14-year-olds. He may have the mental age of an average adult but he probably will not find his peer group among adults either. He is most likely to find them among other boys and girl who are approximately as bright as he is. This is the group with whom he can most profitably associate for purposes of academic learning. His social peer group may, of course, be quite a different group. It is good for him to learn to associate with several different peer groups during his adolescent years just as we all do in adult life but this does not mean that they must all be with him in his mathematics class or his philosophy class. The true genius, of course, presents a special problem—he may never find a true peer group at all because he has few peers. But his problems will not be solved requiring him to associate only with those of his own chronological age.

When our student gets to college, what should he find there? How should his time be occupied? What should he study and how should he go about it? These are our major problems as we look at higher education.

I hope that societies undergoing rapid change, including rapid expansion of their higher institutions, can avoid some of the errors made in older societies in which institutions have become rigid. Much can be learned from the errors made in the history of higher education in the United States.

One of our great error has been the proliferation of courses taught in our colleges. An inspection of the catalogues of our universities reveals that some of them offer thousands of different courses ranging from the most profound to the most incredibly trivial. Even a small undergraduate college offers from 200 or 300 to a thousand different courses even though no one student

can take more than 35 or 40 during his four undergraduate years and many take fewer than that.

Some variety is necessary because of individual differences in interest and aptitude. But it does not seem reasonable that any student desiring a college degree should be allowed to choose between philosophy and mathematics or between history and economics or between literature and music. If these subjects are a part of the equipment of an educated man—and I think they all are—he should have them all. Certainly, he should not be allowed to substitute trivial courses for these fundamental ones and I think we ought not to be reluctant to say that some of the things offered in many of our colleges *are* trivial.

Within limits, the elective system has its virtues; but the limits ought to be carefully established and strictly maintained. To ask a college freshman to select from among such valuable subjects as anthropology, epistemology, psychology, and a thousand others when he has no clear idea of the content or importance of any of them is like asking a blind man to name his favorite color. The faculty, if it is a good one made up of liberally educated professors who are able to think beyond the bounds of their own disciplines, ought to be able to plan a better course for a student than he can be expected to plan for himself. He should of course, select his major subject for specialization but only after he has had a sufficiently broad introduction to all the important areas of knowledge to have an adequate basis for making a wise decision. He may if he wishes, decide against more philosophy, but only after he has been introduced to philosophy. He may decide against physics, but he should not do so until he knows what he is rejecting.

The problem of vocational training in college is a difficult one. Universities have always offered vocational training in the sense that they have prepared for the learned professions: Theology, law medicine, and teaching. Obviously they must continue to do so and must do it well if our culture is to flourish. But should the university also prepare for a hundred or more other vocations as many American universities now do?

In the case of some of the newer professions they clearly must do so. We must have engineers, and we need university



trained experts in agriculture. New professions will no doubt continue to emerge but we should not attempt to make a profession of every skilled trade or vocation merely because its members wish to seek professional status.

In asking whether preparation for any given vocation should become a part of the work of a university a proper first question is this: "Does this vocation rest upon a substantial body of scholarly knowledge such as requires university education?" If the answer is yes—if the vocation cannot be learned properly without a scholarly knowledge of mathematics, the sciences, the humanities of the social sciences—the preparation for it belongs in the university. If, on the other hand, the vocation can be learned on the job, or if it consists largely of physical and social skills rather than of intellectual activity, there is no need for the university to undertake it—it can be learned more easily and cheaply elsewhere.

However, the liberal education that properly belongs in the undergraduate years of a university is useful to citizens in a free nation, regardless of their vocational plans. It should be made available to as many as possible of those young people capable of profiting from it and not limited to those preparing for the learned professions. An understanding of the sciences, the humanities, and the social sciences is a proper part of the preparation for living as well as for making a living. But since college education cannot be made available to the entire citizenry it follows that the secondary schools should accept a large part of the responsibility for education that is truly liberal—the education that liberates mankind from the limitations of ignorance, prejudice, and provincialism.

Finally, it now appears obvious that, during the decade just ahead, all our colleges and universities will face an alarming shortage of qualified faculty members. Student enrollments will double because the students will be drawn from a generation born after World War II when birthrates were high. But the faculty must, for a time at least, be drawn from among those born during the 1930's when birthrates were low and there just won't be enough to go around. It seems clear that we must find ways of bringing the best faculty members to more students. This

will require more effective use of educational television, programmed learning, teaching machines, and language laboratories so that professors may be freed of the more mechanical aspects of the learning process and given more time for those aspects of teaching that require direct communication between teacher and student.

There will be vast changes in higher education in the years just ahead but there need be no deterioration of quality—indeed there must be a vast improvement of quality. A greater proportion of our national resources must be brought to bear upon the problems of education but even more than money we must make better use of our intellectual resources—imagination, intellectual vigor, and willingness to clarify our educational goals and to meet new problems with new ideas.

Societies undergoing rapid social change have a remarkable opportunity to break the barriers of tradition that hold us back and make it difficult to adjust our educational institutions to the changing times. They are in a position to develop new patterns of education different from, and superior to, those of more traditional and more slowly changing communities.