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ABSTRACT

This comparative evaluation of the differing educational systems in North America, Europe, the USSR, and Japan examines the goals and values of these systems. It is pointed out that Americans value equality, practicality, and utility and that they are both individualistic and suspicious of government authority. Contrasts between these values and those implicit in the societies in Western Europe, Russia, and Japan are explored. The structure and organization of educational systems is also discussed. Judgments are offered concerning the effective locus of power in such matters as school organization, curriculum, and personnel policies. The Soviet Union, France, and Japan are identified as highly centralized systems and comparison is made between the structure of these sytems and those of Western Europe (mixed local, regional, and central control), and America and Canada, where local control is usually decisive. The selectivity of these systems is discussed as they reflect cultural attitudes toward the upward mobility of citizens. Differences and similarities in educational outcomes and policy implications between the systems are are also pointed out, and special consideration is given to changes in attitudes toward schooling over the past few decades. Appendix I contains an analysis of science and mathematics education in the Soviet Union and Japan. Appendix II discusses equivalencies in secondary schooling in the United States, Canada, Japan, the Soviet Union, Japan, and West Germany. Statistics on school enrollments are presented in tabular format. (JD)

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AN ANALYTIC COMPARISON OF EDUCATIONAL SYSTEMS: OVERVIEW OF PURPOSES, POLICIES, STRUCTURES AND OUTCOMES

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INTRODUCTION

It is well known that schooling (and educational institutions in general) occupies a far more important place in modern societies than it enjoyed in the past. Americans today attend educational institutions for an average of nearly 12 years, increasingly starting schooling before the first grade and continuing after high school graduation in some institution of higher education. One major reason that more and more people are attending school for longer periods of time is that success (or perhaps one should say, persistence) in school has become more closely associated with jobs and with adult status, in general, that it ever was in the past.[1]

Even more dramatic trends can be noted in other countries. In much of the developing world since independence, for example, governments have greatly increased education budgets, partly in response to the great demand for elementary education by the population, but also because they regard education as perhaps the most important key to the creation of a "modern" or "developed" society. Indeed, in a large number of non-communist developing countries, it has proved much easier to build and staff universities and schools than to create jobs outside the government sector in which the graduates of these institutions might be employed.[2]

Educational expansion has hardly been less dramatic in Europe. It may be surprising to some, but historically, participation in education in Europe has been far lower than in the United States. As late as 1959 in Italy, for example, only a third of 14 years old were still in school, but by 1975 the percentage was over 75%; and in England as late as 1957 only 3% of those 18-22 were enrolled at universities compared to around

12% today.[3] But the expansion that followed in virtually every European country during the 1960's and 1970's was dramatic. In country after country, the number of university students trebled or quadrupled in a twenty year period, so that the gap in proportions attending institutions of higher education between the United States and other countries, although still large, has narrowed appreciably.

The great post-World War II expansion was not entirely unprecedented in scope or rapidity. Although the dates vary considerably with the countries involved, an extraordinarly rapid rise in elementary schooling, prompted partly by compulsory schooling laws, took place in every society between the last quarter of the nineteenth century and the 1920's. That expansion made elementary schooling close to universal throughout the developed world, just as the more recent expansion has made the completion of secondary education--close to universal in the United States and some secondary education virtually universal everywhere.

These trends and facts are well known; their interpretation is not as clearcut. More specifically the dominant interpretation of these trends has recently been challenged on a number of counts and, in our judgement, found defective in crucial respects.[4] Since the interpretation in question is close to what we believe of the everyday assumptions of a great many people involved in educational policy and planning, this is a serious matter which warrants attention.

The assumptions to which we refer go roughly as follows: the educational expansion of the last 100 years (and, in particular, the expansion of the last quarter century) is essentially a response to the needs of an

increasingly complex knowledge and skill-dependent society. In the early stages of industrialization, this argument goes, industrial societies begin to require mere literacy on the part of most of the workforce. In later stages of industrialization, however, knowledge becomes a crucial ingredient of economic growth. From the societal point of view, education becomes a rational investment in human capital which yields dividends in the form of greater economic growth and productivity. As a corollary, therefore, societies which make high investments in education should experience high rates of economic growth; those that neglect education will experience economic decline sooner or later. That education contributes importantly to economic growth was a major rationale of the emphasis of the Organization for Economic Cooperation and Development (OECD) on the expansion of higher education and widened access to it in member countries in the 1960s. The OECD conference on "Economic Growth and Investment in Education" held in Washington, D.C. in 1961, set directions for research and policy in this field for a decade or more. Among the many scholars writing on the interrelationship of economic growth and educational expansion were Friedrich Edding of Germany, Edward F. Denison and Theodore W. Schultz of the United States, and Ingvar Svennilson of Sweden.

Modern societies, the argument continues, are dependent on the knowledge which is produced and transmitted by educational institutions in several respects. First, economic growth is increasingly dependent upon scientific and technological research which takes place within the universities. Secondly, post-secondary institutions provide advanced

training for a whole series of professions and semi-professions upon which the economy increasingly depends, and which either did not exist in the past or have exploded in numbers and importance in the last quarter of a century. Finally (and often stressed more than either of the above), primary and secondary educational institutions perform the vital function of providing a broad base of cognitive skills for the mass of the population--skills which are needed not merely in a narrow or vocational sense, but which provide the building blocks from which a whole series of more specialized and advanced skills can be learned. In some versions of this argument, indeed, it is believed that the pace of economic change is so rapid that future skills will become quickly obsolete and life-long learning will become a necessity.

The new importance of education that these changes require, the argument continues, is reflected in shifts in educational institutions themselves. Thus, the relative salience of liberal arts in the curriculum decreases and the significance of training in the sciences and technology increases. Elementary schools become less concerned with moral instruction and with requiring students to engage in such practices as memorization of dates, places or names. Slowly and haltingly schools begin to shift to new curricula and to teaching methods which are more rational and effective in the development of students' cognitive skills.[5]

For critics of these assumptions, however, the ideas we have stated are less an adequate explanation of what has happened and of the real role of education in modern society, than a justification for and ex post facto rationalization of educational institutions. It is profoundly misleading, the critics argue, to see education as meeting "the new needs"

of industrial society and to interpret the history of educational expansion as a more, or less rational response to those changing needs. As evidence, the critics cite the following: the expansion of education in the last century has been far greater than the expansion in the percentage of jobs which, even by a generous interpretation, could be said to require high levels of skill. This is true if we compare the expansion of professional jobs with the increase in numbers of college graduates, and is even more true if we consider the changing size of the skilled non-professional labor force.[6] In the second place, studies of the skill levels and training requirements of particular jobs indicate that the level of complexity involved is often greatly exaggerated, and, for most nonprofessional jobs, can be acquired on the job in six months or less.[7] Most studies of the relationship between education and job performance, furthermore, have failed to establish clear relationships between performance in school (as measureed, for example, by grades), and performance on the job as measured by supervisor ratings or salary.[8]

Finally, there is no research which clearly demonstrates a relationship between measures of educational quality and economic growth. In this connection, it is of interest that Frederick Harbison and Charles A. Myers in their remarkable study of the correlations of economic and educational indices in seventy-five countries, Education, Manpower and Economic Growth: Strategies of Human Resource Development (1964) found a negative correlation between the percentage of university students enrolled in science and technology and the countries' GNP. We know of no research which shows that the mathematical skills or scientific

literacy of the mass of a society's population has effects on national productivity or even on the level of scientific achievements in that society. Perhaps such relationships do exist--relationships, for example, between enrollment in business courses and increasing entrepreneurial activity, or between the low quality of high school science teaching and a possible relative decline in American as compared with European or Russian scientific achievement. But it is beyond our skills to validate them.

Such relationships are by no means implausible. But that is also true of a series of quite different assumptions: that successful entrepreneurial activity depends more on the level of savings or on the prestige in which business is held than upon what is learned in business courses; or that scientific achievement depends more on the quality of the selection and training of a tiny gifted minority than upon the scientific literacy of the mass of the population.

Our point here is not to debunk education, but only to draw attention to the character of an increasing percentage of the arguments that are made on its behalf. In these arguments, more investment in education is seen as essential to growth in productivity and even to national survival. President Sovern of Columbia, for example, recently connected our lack of investment in education to the fact that the U.S. per capita G.N.P. "has slipped to tenth place in the world," and asserted, as if it were common knowledge, "that the skill, dexterity and knowledge of the population has become the critical input that determines the rate of growth of the economy."[9] There are two dangers with this kind of argument. First, to the extent that the argument is not true or not demonstrably

true it can backfire and undercut support for education. Justifications for education in rather narrow economic or utilitarian terms run the risk that if the society does not get richer (and another society which spends less on education does) or if the individual does not get a better job, the public will become entirely disenchanted with our educational institutions. Something of this sort already appears to be taking place, particularly among recent graduates whose diplomas, because of the inflation of educational credentials, have lost much of their anticipated value.

Viewing education as an investment in human resources which will pay off in the future also tends to increase the already strong vocational tendencies in American education and thereby may undermine other educational values. Growing percentages of undergraduates in recent years have been deserting courses in History, Physics, French, Biology and Mathematics for courses in Marketing, in Travel Administration, in Leisure Studies and Food Science. These students seemed to have learned well the implicit message of the "education as an investment argument" that only directly and immediately useful knowledge is valuable, and that the rest of education is a luxury.

PURPOSES, GOALS AND VALUES OF EDUCATIONAL SYSTEMS

Introduction

We are distinctly uncomfortable with the term "educational purposes" and only slightly less so with the expression "educational goals." To address the issues which we believe that the Commission has in mind we

prefer instead to talk about values or ideology which justify or underlie a particular educational system. A word of explanation is in order.

First, the problems of comparing official statements of educational purposes or goals are quite formidable. Lists of educational objectives from different societies might at first sight appear to offer a basis for comparing educational priorities. One might compare the priority that societies give, for example, to citizenship training or patriotism on the one hand as opposed to academic competence or the development of the individual personality on the other. But the problems which surround obtaining truly comparable material from a number of societies are immense. The statements must be representative of official opinion, not of the potentially idiosyncratic views of a particular educational organization in that society. For example, one should not confuse statements of educational goals issued by the Japanese Teachers Association with statements issued by the Japanese Ministry of Education. The list of official purposes should be for comparable schools and comparable curricula as well as the same age group in the different societies. And if this were not enough, a comparative study of educational objectives must find some way of comparing societies that tend to have explicit national goals and those which do not. We have not been able to gather such materials which even begin to meet these strictures. Gathering a representative sample from the school districts of the United States alone, for example, would be a formidable task, and even with highly centralized systems like the Soviet Union, frequent changes in official statements make the sampling task very difficult.

In addition, these statements of purposes are uninterpretable without knowledge of the values and the cultural meanings that are attached to education in different societies. Many of the statements of purposes we have seen address the objective of development of the potentialities (or personality) of the child. Consider, for example, that the educational objectives of the current Constitution of the Soviet Union include giving "citizens more and more real opportunities to apply their creative energies and talents, and to develop their personalities in every way."[10] Shades of American progressivism 1970's style! It is hardly necessary to add that these apparently similar objectives have quite different meanings in the Soviet Union, Japan and the United States.

For these reasons we try to avoid comparisons of educational purposes. We find it more illuminating instead to compare the values which justify and surround schooling in the different societies, calling attention to cases where official values sharply conflict with the values that are implicit or actually conveyed to students.

The Distinctiveness of American Values

There are many structural and organizational differences between American schools and schools in the industrialized world, and we shall describe some of the more significant differences later in this paper. But these structural differences can only be understood in the context of the very different values which justify and support educational practice in America and elsewhere. This is not to say that all or even most organizational or structural differences in American schooling are primarily a reflection of differences in values betweeen America, Europe

and Japan (we shall show below, for example, how the variable of local versus centralized control over education has effects which are powerful in their own right and separable from the effects of value differences). Nor do we wish to imply that values are always static or permanent features of a particular society. Japan, for example, underwent a substantial change in values during and after the American occupation. Value emphases in the Soviet Union shifted radically from the 1920s to the Stalinist era. We do want to argue, however, that very little of the distinctive character, organization or outcomes of American education can be grasped without prior consideration of long standing value differences between America and the rest of the world. These values have shaped our relative lack of selectivity, our lack of national examinations, and our suspicion of the traditional "high culture" liberal arts curriculum. They have also had a profound effect on educational standards and the meaning of excellence in American education.

Education in America bears indelible marks of several longstanding values which together form a distinctive and recognizable American pattern. Americans value equality, practicality and utility; and they are both individualistic and suspicious of governmental authority. These values, noted in slightly different forms by Tocqueville in the 1830's, have been described repeatedly by European and American observers since that time.[11] And although most Western European societies have moved closer to these American values in the last 25 years, the differences between the U.S. and Canada, on the one hand, and virtually the whole of Western Europe on the other, remain notable.

Equality. The thrust of equality in America has always been toward equal rights and equal opportunity rather than toward equal income. As Tocqueville stressed, Americans have been hostile to the idea of rank or degree or to any conception that one man is better than another except through his worldly accomplishments. There is little question that the influence of these ideas upon American schooling has been powerful. Since the early days of the Republic, schools have been looked to as the major avenue of opportunity and mobility from poverty to fame and fortune. Virtually from its inception, as Horace Mann reminds us, the common school was seen as an instrument for creating a more equal society and as an antidote to poverty.[12] Through public schooling, many Americans have believed that class distinctions could be erased or neutralized.

With the exception of Canada and possibly Australia, no other non-Communist society viewed schooling in this way until well after World War II. The traditional Western European pattern was to provide separate schools and separate curricula for what were thought to be different kinds of students, and to sponsor the mobility of a few students from low status origins into that part of the system designed for the future elite. The system was not designed to provide American style equality of opportunity but to provide a ladder for only a few outstandingly talented students from humble origins. In America, this pattern of separate public schools for the elite and the masses has been very rare, appearing only in the instances of a relatively small number of highly selective high schools in the larger cities of the Eastern seaboard. But throughout Western Europe and Japan until after World War II, it was taken for granted that only a relatively small proportion of the children of the poor could

the highest status. Thus, only about twelve per cent of Japanese twelve-year-olds went on to an academic secondary school at the outset of World War II, and only about twenty per cent of the age group passed Britain's notorious 11+ examination to gain access to University preparatory grammar schools in the late 1940's.[13]

The contrast is almost as sharp between America and the rest of the industrialized world in the kind of the subjects which are believed appropriate for students to study. Americans have been distinctly catholic in their view of what constitutes a worthy or prestigious course of study for students. American universities and high schools have for many decades offered courses of study that would have been close to unthinkable at virtually any European university or selective secondary school: courses in marketing, accounting, nursing, creative writing, typing and home economics. Part of the reason for this catholicity is a pragmatic and utilitarian attitude towards education. But the extraordinary breadth of the subject matter deemed appropriate for American youth to study also reflects the absence of a clear and immutable hierachy of prestigious or "patrician" and low status or "plebian" subject matter, and is part of a more general reluctance to distinguish between patrician and plebian classes of people by sending them to separate schools. In America, no one curriculum and no two or three schools have enjoyed the kind of effortless prestige accorded to the classis curriculum at Oxford or Cambridge or French literature at the Sorbonne.

Some of these sharp distinctions between education in America and that in much of the rest of the industrialized world are disappearing. The traditional liberal arts curriculum still commands high prestige in

The traditional liberal arts curriculum still commands high prestige in foreign secondary schools and universities, particularly in France and England, and in the latter it is still linked in almost a symbiotic way with access to the topmost level of the civil service. But its relative prestige has declined virtually everywhere and other almost equally prestigious models have become serious rivals. The separation of early adolescents into university preparatory and terminal separation secondary schools with quite different curricula and prestige has been blurred or reduced throughout the industrial world. For specifically egalitarian reasons, for example, the British division between grammar, technical and secondary modern schools has been largely abolished in favor of a unitary comprehensive school plan modeled on the American high school. Even where the old divisions between academic and vocational schools are retained, as in much of West Germany, France and Japan, selection has been postponed and the percentage of students attending the academic schools has vastly increased since World War II.[14] Large numbers of Europeans now believe that separate schools for able and mediocre students lead to reinforcement of class divisions and make for bitterness and rancor between rich and poor. Finally in this regard, the previously enormous gap between the United States and the rest of the industrialized world in the percentage of young people who attend college has been dramatically closed in the years since 1960. College enrollments have more than trippled in the United States since 1960, but they have quadrupled and quintupled in many countries in Europe and in Japan. Part of this increase reflects the spread of the ideology of equal opportunity from the United States to the rest of the industrial world.

All these changes mean that the stark contrast that used to exist between the egalitarian open access American systems and much of the rest of the educational world is less sharp than it was. West European universities are now expected to show progress in their admission of working class youth. It is now commonplace for curricula and teaching style in Germany, France and England to be attacked as "elitist" or as irrelevant to the needs of lower class youth, so that educational policy in these countries becomes linked quite explicitly to larger programs of egalitarian reforms.[15]

But in its thorough-going egalitarianism, the U.S. remains distinct. In affirmative action, in open admissions and in easy transfer of credit between institutions, American higher education has shown a preference for access, for equity and for equal opportunity over maintenance of a set of unambiguous and rigorous standards. Britain's Open University, by contrast, while open to all comers, is especially careful to maintain the same standards of evaluation as the most prestigious British Universities. The provision of opportunity alone is not, as it has tended to be in the United States, a criterion of legitimacy or justification for public expenditure or education in Western Europe.

Pragmatism and Utilitarianism. Many observers have noted that Americans are by and large rather practical-minded people who tend to see institutions in primarily utilitarian terms. Much of the appeal of education to Americans has been that it has been seen as a preeminently useful activity, useful in that it provides skills (from fluency in foreign languages to mathematical competence or typing), advances careers, and enhances job prospects. After talking to contemporary American undergraduates, one could be forgiven for thinking that no other concep-

tion of education was possible. But in most of the world and for most of human history, education has not been viewed in such a utilitarian manner. The highest prestige and esteem have frequently been reserved for subjects which are distinctly, even defiantly, non-utilitarian. The famous toast at Cambridge University in the 1930s, "To pure mathematics, may it never be of use to anyone"! expressed these sentiments exactly, with the added irony that the subject very rapidly became immensely useful in ways that could not be foreseen before World War II in the demand for cryptographers and decoders. One could almost say that throughout Europe and Japan prior to World War II subjects were prestigious to the degree that they were useless, and lacking in prestige to the degree that they were directly or immediately useful in providing some skill of a technical or applied variety.[16] Thus in the traditional prestige hierachy of that period, classical languages had higher status than modern languages, Oriental languages higher than European, Mathematics a higher status than Science, and theoretical science a higher prestige than applied science.

From the point of view of the individual students, of course, studying these arcrane subjects was far from useless: the more prestigious the subject and the more prestigious the institution at which it was studied, the greater the student's chance of a high status occupation. But the link between education and jobs was through their common relationship to prestige rather than a particular skill that the education provided. British, French and Japanese civil servants were not trained in the public administration or even the history of the civil service. To be sure, there were claims made about the moral character and respect for high

ideals which a traditional, classical education was thought to provide, but such an education was never seen primarily as training and still less as the acquisition of directly useful skills.[17] It was seen rather as the absorption and acquisition of high culture which, in turn, was thought to fit applicants for high office. Only Canada and post-Revolutionary Russia represent significant exceptions to this dominant pattern.

This traditional European conception of education has never been entirely absent in America (one thinks especially of preparatory schools in the Northeast, and the high prestige enjoyed by Ivy League universities). But Americans have long possessed two, to some extent competing, models of a good education. On the one hand, a good education has meant something modeled after traditional European education with a few minor modifications. A good education has meant the acquisition of the knowledge and particularly the values and tastes of an elite, and is ranked as excellent or indifferent to the extent that it conforms to that elite model. At the same time, Americans have subscribed to a very different conception of a good education: that which is most worthwhile is that which is most useful and practical. Prestige is accorded to utilitarian knowledge because it is useful. Suspicion and even disdain are shown toward what is seen as useless knowledge.

In many institutions (and this is perhaps the genius of the American system), these two conceptions have coexisted rather happily. The land grant universities of the Midwest, for example, have long offered distinguished vocational programs in Agriculture and Engineering without

in the least consigning Philosophy or History or Mathematics to oblivion. In many high schools, too, there is a juxtaposition of what, to European eyes, are extraordinarily different areas of study. The inclusions of vocational subject matter in the curriculum does not "contaminate" the curriculum as a whole, nor has there been a sharp prestige distinction between students who take vocational subjects and those who do not. French students bound for the university rarely take typing in high school. American, and to a lesser degree Canadian, students, frequently do.

The greater prestige of vocational subjects is not the only consequence of American utilitarian conceptions of education. There is also a tendency to see virtually all the subject matter of the curriculum in broadly utilitarian terms. The enormously influential Progressive Movement, whether in its most recent reincarnation in the 1960's or its earlier manifestations in the 1920s and 1930s, has been very much an attack on what was considered to be the irrelevance of the traditional curriculum.[18] In contrast to the situation in Western Europe, American educational rhetoric has long stressed how education should meet the "needs" of students and the "needs" of society, and this rhetoric has been employed as a weapon to attack the traditional curriculum and the traditional teaching methods. (We note parenthetically that Japan, after a strong dose of progressive education during the U.S. occupation, has steadily retreated from progressive principals since about 1960.)

Progressives have long argued that contemporary literature and contemporary history meet student needs more closely than ancient history or classical literature and that, following the logic of meeting the "needs

or more relevant than any history or any literature. The very logic of Progressivism and its requirement of relevance, therefore, tends to be corrosive of the traditional liberal arts and even the science curriculum. Since much of that curriculum is not of demonstrable utility, and a considerable part of it clearly bores substantial numbers of students, one can well ask, according to this logic, why students should be required study it. During the latter part of the 1960's and 1970's, American educators had considerable difficulty responding convincingly to these arguments precisely because they tended to accept their utilitarian premises.

Not only do vocational subjects, broadly defined, have greater prestige in American schools than in Western Europe and Japan, but, at the same time, progressive ideas and beliefs that education should be useful have tended to produce a more thoroughgoing transformation of the traditional curriculum and traditional disciplinary boundaries in America than elsewhere. Latin and Greek disappeared early from American high schools - as did emphases upon penmanship and grammatical drills. American schools led the way in developing new 'useful' and 'relevant' curriculum in the emergence of social studies as a partial substitute for history, geography and moral instruction, and in the development of new "science" courses which attempted to break down disciplinary boundaries between physics and chemistry or biology, and at the college level, in the emergence of business or commerce. And while the gulf between America and Europe has closed somewhat in recent years, we do not know of any European country where an undergraduate specializing in business would enjoy as high a status as a student studying history or mathematics.

In Japan, Germany and the Soviet Union, educators are frequently called upon to persuade the public that a 'good' education and a vocational education (or that excellence and utility) are not necessarily incompatible. In America, by contrast, such exhortations are not really necessary.

Individualism and Authority. A final American value with important implications for education is individualism. By this, we mean the belief that a society's worth depends on the extent to which individuals can achieve such personal goals as happiness or fulfillment.[19] Such fulfillment, moreover, is not usually seen as resulting from working for collective or societal goals (as it is in the official ideology of the Soviet Union). Rather, the thrust of individualism is that roads to fulfillment or happiness cannot be socially prescribed. Liberals and conservatives have not always agreed on the meaning of individualism - and particularly on the role of government in safeguarding or reducing individual freedom. But even conservatives, unlike their European counterparts, have not dissented from the American impatience with tradition and emphasis upon innovation.[20] Americans are supposed to innovate, not merely to follow tradition. Children are encouraged to strike out on their own and to stand on their own two feet. And authority of virtually any kind, especially governmental authority, is seen as potentially threatening to freedom and to individual autonomy.

Several distinctive features of American education suggest the impact of individualistic values. More than other people, Americans have tended to see the primary goal of schooling in essentially individualistic terms: to help them get a job, to achieve personal fulfillment or self-

realization rather than as an instrument to mold citizens or to teach a common body of knowledge.[21] Especially in recent decades, Americans have tended to view schooling as a "resource" which helps meet their own objectives. In much of the rest of the industrial world, on the other hand, important stress is placed upon how education should awaken in the individual a sense of his participation in and relationships to a community and a tradition, as in France, for example. Such a sense of obligation seems extraordinarily powerful in Japan, where loyalty to the school becomes very much a part of developing a broader loyalty to the society as a whole. Soviet educators make enormous efforts (though with what success is unclear), to overcome selfishness and individuality among students in favor of a career of collective or societal goals. More generally, in virtually every society, education has been seen as a process by which the individual learns his place in the larger scheme of the moral and material world, a process of subordination of the individual to societal authority.[22]

Some such subordination exists in American schools today. Learning is not highly individualized, and there remain at least vestiges of a common body of knowledge, values and moral maxims that virtually all students must learn. The pledge of allegiance and the singing of school songs still dramatize the subordination of the individual to a greater authority. But if we leave aside such special institutions as West Point and Annapolis, where precepts like 'duty' and 'honor' still resound, the rhetoric of duty and obligation is not much heard today in contemporary American schools. Increasingly in recent decades educators have spoken

of the "rights" of students as well as their responsibilities, and of the obligations of schools to serve students rather than the moral claims that schools might have upon their students.[23]

Individualism shapes not only the goals of American education; it has also shaped its organization and structure. High school and college curricula in America have long been organized into a series of courses, each of which is evaluated separately by the instructor teaching that course and at least some of which are elected or chosen by the individual student.[24] In contrast to the system of external examinations in much of the rest of world, educational authority, and more specifically the authority to evaluate students, is extraordinarily decentralized. For example, in Japan, West Germany, Russia, or France a small number of examinations taken over a couple of days time and graded by several usually anonymous figures virtually determine one's whole educational fate. In the United States, on the other hand, the authority to evaluate students is spread over a substantial number of individual teachers and over many years.

Instead of a system of relatively uniform or national academic standards, Americans leave the job of separating the able and the hard working students from others to dozens of individual teachers, each of whom, of course, may have quite different standards of his own. And where Americans do use national tests, as when universities use S.A.T. scores to help make admission decisions, the tests are quite unlike European examinations in that there is no firm benchmark of a passing or failing mark nor any real attempt to test knowledge of the particular subject matter which has been studied and worked up for the examinations. [25]

A system of examinations sets severe constraints on the freedom of individual teachers and individual schools. Much of Japanese secondary education, and the later years of Russian and French secondary schooling, are dominated by forthcoming examinations. Teachers must teach the syllabus and curriculum which will be tested in the examination. Teaching methods, particularly in Japan, tend to be those which it is thought will best ensure the rapid assimilation of large amounts of material. And severe limits are placed on the students' freedom of choice. The great bulk of classroom time must be spent preparing for examinations which are offered only in a limited number and usually rather traditional fields of study.

Recent developments do little to change the sharp contrast between the American (and Canadian) course credit system and the national or regional examination system of most of the rest of the world. Over the past twenty years, the authority of the traditional curriculum has generally declined and the amount of student choice increased in most societies, but they have been kept severely in check by the limits imposed by the examination system. French students can now offer a greater variety of subjects at their baccalaureate examination, German students recently have begun to enjoy more choice in the subjects for their Arbitur (academic school final) examinations, and the number of subjects in which the British student can take the "A" level General Certificate of Education examinations has greatly increased. But decisions to add new subjects are made by national or central educational authorities who see themselves as guardians of educational standards and who are often acutely sensitive to the charge that any innovation means a lowering of standards. Demands that the curriculum be made more relevant or responsive to student needs,

therefore, are met only after well-established educational authorities have placed their seal of approval on them.[26]

By contrast, American secondary schools and universities have become veritable supermarkets of educational choice. The traditional liberal arts curriculum never had the authority that it enjoyed in Europe. Nor was its legitimacy prevented from erosion by central guardians of educational standards. Increasingly, therefore, American education has been seen in individualistic and anti-authoritarian terms: not as submission to a particular discipline or course of study but as a series of choices made by individuals in accordance with their needs. There is dissatisfaction among many at the disappearance of a core curriculum and a common course of study. But there are few signs of consensus as to what that core should be, and consensus is a prerequisite for a reversal of recent trends. Ironically, both deeply held individualistic values and the decentralized character of American educational authority work to undermine attempts to prescribe a fixed course of study or an unambiguous set of educational standards.

Our review of the educational implications of some major American values has left us convinced both of the importance of these values in shaping the American educational system and of their distinctiveness. One might say that, compared to people in other advanced industrial societies, Americans have held different cultural assumptions about what education is for and what its outcomes should be. Americans have tended to see education as a means to an end rather than as a good in itself, have been far less overawed by the prestige of high culture than Europeans and have been reluctant to prescribe in any detail what any "well-educated"

educated" person should know. They have seen schooling both as a way to achieve success and mobility for each individual and as a way of achieving a more egalitarian society. Viewed separately, of course, none of these beliefs is distinctive, but seen as a complex, these values are clearly distinguishable from those held by much of the rest of the world. Let us illustrate this theme by contrasting the American values and the U.S. educational system with those of societies about which little has been said thus far, the Soviet Union and Japan.

Soviet Educational Values. The Soviet Union and the United States have a number of apparent similarities: both are societies born out of revolution which consciously attempted to distance themselves from previous tradition; both value egalitarianism and emphasize the importance and dignity of the common man; and both have instrumental views of schooling so that vocational education enjoys greater official prestige than in Western Europe.[27] Soviet educators made a conscious effort to cripple the prestige of the traditional curriculum and to increase respect for manual labor and for technical and vocational skills. At the same time, there were drastic attempts to reverse the previous tendency towards the virtual exclusion of low status students from universities by a policy of favoring the children of manual workers and excluding the children of former businessmen. In this early period, much of the language of Soviet educators is reminiscent of American progressivism - and of John Dewey in particular.[28] There was a strong thrust to break down the barriers between life and education and between school and work, and to abolish the old disciplines in favor of a newer interdisciplinary curriculum.

It seems quite clear, however, that the Soviet system has retreated a great deal from its earlier commitment to these values. Stalin restored the traditional disciplinary boundaries and ended much of the experimentation of the 1920s with the integration of school and work. Krushchev attempted to revive compulsory manual labor for univeristy students, but this effort seems to have failed.[29] In pedagogical style and in curriculum content indeed, the contemporary Soviet system is deeply hierarchical. Students have little choice in what they study, teaching methods do not encourage student participation, and the curriculum is highly prescriptive and centrally determined. Examinations, though of a face-to-face nature, determine admission to a university, but access to prestigious institutions remains strongly connected to possession of privileged status. The implicit values of the Soviet system, with its stress upon authority and hierarchy, are rather close to those of the Europe of the 1950s and far removed from the contemporary U.S.[30]

The greatest difference between Soviet educational values and those of Western Europe and America is clearly the stress upon collectivism as an ideal. Soviet educators stress repeatedly that their first objective is to make Soviet citizens who live up to the ideal of socialist man. The ideal citizen keeps the welfare of the collectivity uppermost in his mind and is constantly willing to sacrifice individual interest on behalf of that greater good. Soviet children are taught the parable of a twelve-year-old boy who, on discovering that his father was concealing his own private plot of land in defiance of laws requiring collectivization, informed the authorities and, it is hardly necessary to add, saw his father executed for the offense. Such shunning of otherwise admi-

rable filial piety in favor of a higher duty to the collective exemplifies Soviet virtues.[31]

In addition to such explicit moral teaching, Soviet schools try to harness the energies of the peer group to impress students with the importance of the collective rather than their own selfish interest. There is competition within classes of students by rows as well as individual competition. Able students are expected to help those failing with their work. There is a close articulation between school clubs and societies and the nationwide organizations of Soviet youth: the Young Pioneers and the Komsomol.

Reports by Western observers of the effectiveness of this system in instilling loyalty to the collective vary a great deal. In the early 1960's, Bronfennbrenner described what he claimed was a highly effective system for enlisting the energies of the peer group in support of school and official goals. He argued that in America, by contrast, there had been a massive erosion in society's control over youth since World War II: family, youth organizations, and school organizations having lost their effectiveness with the result that most American youth were, in the early 1960's, aimless and bored.[32] Quite explicitly, Bronfennbrenner points out the Soviet Union as a model of how to enlist youthful energies for societal goals.

Hedrick Smith, on the other hand, who both spoke Russian fluently and whose children went to Soviet schools, paints a very different picture of the system in the mid 1970s.[33] Smith reports that older students hold, as cynical an attitude toward the Russian school system as other Soviet citizens hold concerning other Soviet institutions. He notes that although the official prestige system rewards students who support the

practice of informing on other students who break school rules, informal prestige among students is not allocated on this basis. Smith argues that the ideal qualities of the new Soviet man have little resemblance to how Soviet youth behave with each other. The difference between Smith and Bronfennbrenner may reflect a ten year gap between the visits of the two men; but it may also arise from the fact that Bronfennbrenner was confined to classrooms selected by the educational authorities. We tend to think the Smith's account conforms more closely to current realities.[34]

We think it reasonable, therefore, to speak of the Soviet system as one which is questionably effective in transmitting its key values and which is characterized by a large gap between official values and implicit values. The fierce competition among individuals for admission to universities, the authoritarian character of teaching methods, the relative lack of discretion and choice in the curriculum for students - all display an implicit message which is rather different from the official values of the Soviet system.

Japanese Educational Values. The Japanese educational system provides an instructive contrast to both the Soviet and the American. What is perhaps most notable about the Japanese system--and this seems true of Japanese industry as well as Japanese educational institutions--is the amount of cooperative and selfless behavior which is married to a fierce competitive spirit, a combination which seems contradictory to Westerners. In a number of respects, ironically, Japanese school children display the qualities that the Soviet system hopes to encourage in their students.

Japanese schools, for example, have virtually no janitorial staff.[35] Students and teachers are expected to play the major role in cleaning buildings and serving lunchtime meals. The more able students are expected to (and by all accounts do), help the less able students with their work. Japanese school children, furthermore, "yearn for the day when they can don (school) uniform which gives them identity and status."[36] High levels of participation in school clubs and societies, weekly school assemblies where songs are sung and inspirational messages read, and the importance of friendships made in school for later life - all these are evidence that school solidarity and school spirit are stronger in Japan than in either the Soviet Union or the contemporary United States. Even the examination system, with its fierce competition for scarce places at prestigious secondary schools or universities, does not appear to undermine peer classroom or school solidarity.[37] The examinations are national so that it is theoretically possible, though unlikely, for all the students in a particular school to pass. Furthermore, unlike the case of the American grading system, one's own failure does not imply an acquaintance's success. Japanese school children are encouraged to work for the honor and glory of their school, their class and their family in these examinations.

The Japanese educational system is a good example of the premises with which we introduced this section: that official statements of purpose or objectives are a much less significant guide to the messages and ideals conveyed by school systems than the long-standing values of the culture as a whole. During the American occupation, Japan promulgated a new

Fundamental Law of Education which replaced the objectives of "loyalty and filial piety" and "national unity" with the distinctly progressive ideals of "full development of the personality," "individual dignity," and "independent spirit."[38] The emphasis on duties was replaced with an emphasis on rights, and the stress on nationalism and patriotism was changed to a new emphasis upon the United Nations and International cooperation. Under American pressure, the schools were radically decentralized and elected local boards were established, much of the traditional "morals" curriculum was replaced by American style social studies, and the traditional teaching method of dictating the text was much criticized and officially abandoned.[39] In the early years of the Occupation, the Japanese, who were in no position to resist, embraced virtually all of these and other recommended changes (with the notable exception of the Romanization of the alphabet).[40] Junior high schools were established, comprehensive high schools began to replace the old separate vocational and academic schools, the curriculum was radically revamped, and new educational objectives reflecting these more progressive ideals were drawn up.

Some of the American influenced proposals--the decentralization of education, the establishment of comprehensive high schools, the abolition of the teaching of Japanese mythology--were virtually stillborn and disappeared shortly after the Occupation ended. Others--the recommendation for junior high schools, the broadening of access to higher education, the introduction of coeducation--were adopted enthusiastically and are now successfully institutionalized. But a number of proposals which are embraced by the Japanese have come to be interpreted in a rather different spirit than what their original American advocates envisioned.

One of the innovations in the social studies courses was the establishment of discussion of social issues, but that discussion has remained a search for the "correct" position rather than an airing of diverging points of view.[41] It is still likely to be dominated not only by the teacher but by the position advocated in the approved textbook chosen by the Ministry of Education in Tokyo. No doubt teaching styles did become more flexible in the post-war period; but even as late as the early 1970s many teachers dictated from the text and students were expected to memorize vast amounts of material. At the beginning of the first class period, furthermore, students in many classrooms still rise and chorus "Good morning, teacher," and at the end rise again, bow, and thank the teacher for the lesson. Student desks in Japan are still almost universally arranged in rows rather than in circles or in horseshoes; and teacher desks remain on raised platforms symbolizing their high authority.[42]

Implicitly, therefore, Japanese schools are conveying very different messages to their students than those which were intended by American progressive educators during the Occupation. They imply what, to American eyes at least, is an extraordinarily high level of deference to authority: a sense that the individual has very serious obligations towards the community, the society and the school before he may indulge in private interests. There is some evidence furthermore, that Japanese children are very satisfied with this particular regimen and that they believe what they are taught.[43]

THE STRUCTURE AND ORGANIZATION OF EDUCATIONAL SYSTEMS

The Control of Educational Systems

One way to compare the locus of power and control in educational systems would be to provide a kind of organizational chart for different countries. Thus, in centralized systems, decisions could be shown flowing down the organizational hierarchy from Ministers of Education to regional administrators to school superintendents (or their equivalent) and then to teachers and their students. In decentralized systems, a more complex model could be presented showing how, in theory at least, grass roots support at the local level affects day to day educational decisions. But we think such a formal approach is often misleading as a guide to how important decisions are actually made. From a strictly formal point of view, for example, Japan c. 1950, with its locally elected and American inspired school boards, was as decentralized a system as the United States in its educational decision-making.[44] Even by that time, however, effective power had reverted to the Ministry of Education, although school board elections continued to be held.

Instead of this formal approach, therefore, we would rather offer judgements concerning the effective locus of power in such matters as school organization, curriculum and personnel policies. Viewed in this way, the Soviet Union, France and Japan stand out as highly centralized systems where virtually every important educational decision is made at the national level. England and Germany, though very different from one another, are cases of mixed local, regional and central control. And in this respect (as in so many others), the United States stands, with much

of Canada, virtually alone at the other end of the continuum, as perhaps the only remaining example of an educational system where local control is usually decisive. Although the decisions of state and federal courts, in recent years, have increasingly had an impact on standards, funding, and other matters, considerable local and popular control is still evident.

To the extent that power to make educational decisions is centralized, the role of parents and of local community opinion, is minimized. In the Soviet Union, for example, parents are often criticized to their face by teachers for their child's shortcomings--for allowing the child to stay up late, or for failing to insist on homework. In considerable part, this relationship reflects the relatively weaker power of parents and the greater prestige of teachers that seems to be associated with centralized systems. Japanese, Soviet and French teachers are in fact civil servants, paid a salary by the central government and enjoy considerable independence from parental or community control.[45] Teachers' career paths often involve considerable geographic mobility. A French secondary teacher, for example, might expect to begin a career in a small provincial town as one of two subject matter specialists in the school, rise gradually in a series of jobs to department head, and end a career as a vice principal or principal in the largest school in a big city in another part of the country.[46] In these respects, the teacher lives in the community but is not, in the American sense, a part of the community.

In these three societies, the curriculum is also centrally determined. In Japan, for example, a great deal of effort is made to create the best and most "objective" textbook which then becomes the official textbook for a particular course of study throughout Japan. Textbooks and curriculum guides are similarly uniform throughout France and throughout the Russian republic. It is not only the students who have little choice; teachers and principals also have little control over the curriculum.

Central control of education means that educational change, when it occurs, is likely to be planned change. A great deal of this planning has taken place in Europe in the last 25 years.[47] While the expansion of American four year colleges after World War II and the extraordinarily rapid growth of junior colleges and private vocational schools was, in considerable part, a market response to student demand, the European expansion of higher education has been shaped by professional educational planners. New universities, polytechnics and technical schools were created after World War II as part of what was in many countries a national plan of educational expansion.[48] Planners' conceptions of likely future educational needs as well as political pressures and student demands helped shape the expansion of higher education in much of Western Europe. Planners' projections were frequently wrong--student demands shifted, educational fashions as to what was relevant and worth studying changed, and the huge increase in demand for college graduates, which was anticipated in the 1960s, failed to materialize in the 1970s. The British government, to take one example, is now engaged in the painful task of partial or total elimination of a number of the institutions that it

created in the last quarter century.[49] This suggests that planners cannot necessarily forecast the future better than the market.

Central educational planning has also been important in the transformation of secondary education since World War II. In virtually every country, there has emerged a recognition that separate schools for able and for less able students tend to work to the disadvantage of low status children, and that access to schools should be democratized and made less selective.[50] It is not clear that these beliefs were held by the mass of the population in most countries; indeed, there is considerable evidence from a number of countries of deeply felt opposition to the abolition of the old separate college preparatory schools and their replacement by comprehensive schools on the American model. In large part, educational change in centralized systems does not originate from popular opinion as much as from theories about how to achieve equality of access or to discover "talent." Centralized systems provide a greater role for educational experts and educational planners and to the ideas and theories of intellectuals than do decentralized systems.[51]

In most of these respects, the U.S. offers the greatest possible contrast. America does not have a federal system of influence over education as much as local control. In a very real sense, primary and secondary schools are creatures of local government and of popularly elected school boards. Local property taxes continue to supply slightly over half of all elementary and secondary school revenues, with the wealthier districts contributing rather higher percentages and the poorer districts rather lower percentages. In recent decades, this percentage has been reduced (even more sharply in Canada). State and federal governments have greatly increased their influence over education, particularly

in the areas of minority education, busing, and in the education of the handicapped.[52] But although the states control teacher training and specify curricular guidelines, they do not employ teachers or hire or fire principals. Nor do they usually decide whether sex education should be taught in the school or whether Lady Chatterly's Lover should be in the library. In a way that would be incomprehensible to most Europeans and Japanese, many American high school principals must worry least their teachers be found in compromising positions and can be faced with demands from angry parents for their abrupt dismissal on grounds of moral turpitude.

Local control tends to be associated with low status of teachers. American teachers are believed to be answerable to the local community and parents in particular both for their own and their students' conduct and performance. In contrast to French or Japanese teachers, contemporary American teachers routinely seem to suffer from harrangues of angry parents, even if demands for their behavioral and moral conformity are less exacting than was the case in the past. And although, in large cities, both the pay and professional autonomy of teachers are somewhat more favorable, given the current condition of local finances and the public's current disillusionment with schooling, the prospects for American teachers nationwide can only be described as dismal.[53]

Local control of education has also accentuated the utilitarian and vocational emphasis described earlier. The vocational thrust of American high schools has long been noted. In their study of Muncie, Indiana, in the 1920s, for example, the Lynds' pointed out that, perhaps because of

the higher wages they could command outside, vocational and 'shop' teachers were paid more than the rest of the teaching staff and that it was the vocational curriculum which was most stressed by the school on civic and ceremonial occasions.[54] Although these tendencies have been reduced in recent decades, as smaller school districts have been consolidated into larger ones and cosmopolitan ideas previously restricted to the large cities have spread throughout the society, large numbers of high schools must still gain local political support for scarce revenues by stressing how their educational programs are useful in a quite specific vocational sense. American schools must justify and explain their activities to local business elites whose view of education is likely to be more narrowly vocational than that of the national elite to which more centralized systems appeal.

The decentralization of the American system finally makes long range educational planning or even a national educational policy difficult if not impossible. It is both significant and ironic, for example, that we are presenting this paper in Washington and not in Springfield, Illinois, Jackson, Mississippi, or Austin, Texas. Educational expertise and new educational ideas are concentrated in this country, as elsewhere, in the same places as expertise and new knowledge in general: in the large cities, in the central government, in the major universities. State governments (with the conspicuous exception of California) do not routinely commission papers on high school physics in Russia or in Japan.[55] Whatever many virtues they may possess, state capitals (unless they are in the largest city) are not usually full of the best educational talent in that particular state, still less in the nation as a whole. The irony, of course, is that the states and the local communities have the

power to introduce such innovations as new certification requirements for high school teachers of science or to require that all students must take a serious mathematics course or study a foreign language in order to graduate from high school. Thus, there are severe limits in the extent to which national educational problems in the United States can be addresed nationally.[56]

Selectivity of Educational Systems

Compared with virtually all other industrial societies, the United States has an extraordinarily non-selective educational system. In the United States (and virtually nowhere else until very recently), it is possible for a mildly persistent but singularly untalented student to complete high school, attend a two year ccollege, transfer to a four year institution and obtain a bachelor's degree. Virtually every other society places a series of checkpoints along this path so as to screen out the less able or determined students. In Britain and France, a series of examinations render it unlikely that such a student would achieve a university place. In the unlikely event that this occurred, examinations at universities would screen out the student before graduation. In Germany or Japan, furthermore, this hypothetical student would probably not be admitted to the academic preparatory secondary school, and thus, would have almost no chance to attend a non-vocational higher educational institution.[57]

But this example oversimplifies a complex matter. The contrast between the American and Canadian systems and those of most other societies in this regard is really three-fold. First, the American system permits

or encourages high percentages of students to remain in the system for long periods of time. Second, the American system tends not to erect clearly marked boundaries between high and low status education either in the form of separate schools or in the form of impermeable divisions within schools. Finally, the American system tends to select by attrition rather than examination. American students tend to drop out as often as they are flunked out.

Although America remains considerably ahead of the rest of the world in the number of years that students spend in schooling, the differences have narrowed dramatically. Japan and the Soviet Union, for example, now approach or equal American rates for secondary completion.[58] The expansion of higher education in virtually all countries has been even more rapid than in the United States, so that by the end of the 1970's a number of countries began to approach or surpass the 25% rate of attendance achieved by the U.S. in the mid-1960's. In much of Europe and Japan, the size of the more prestigious institutions has greatly increased--Rome as the most extreme example, now has over 150,000 students.

This expansion has been accompanied by changes in how students are selected. Early selection for an academic secondary school has been either postponed or abolished entirely. Some societies, notably England and Sweden, have adopted a comprehensive secondary model in which selection occurs within the institution. Others, like Japan, have kept the division between the academic, more prestigious secondary school and the vocational school but have introduced comprehensive schools for the junior high school years. In virtually all societies, furthermore, there

has been an expansion in the percentage of students enrolled in schools or curricula which are academically or college oriented.. At the secondary as well as the postsecondary level, the problem of selection has been addressed partly by allowing more students to take the same kind of curriculum that was previously reserved for the small minority.

Despite this evidence of convergence between the American system and the rest of the industrialized world, the differences remain profound. Access has been democratized almost everywhere, but the process of democratization remains controlled by examinations which imply the existence of agreed upon academic standards. Examinations, in turn, mean that boundaries between different kinds of institutions and between curricula within institutions are relatively impermeable. At first sight, for example, comprehensive schools in England may resemble American comprehensive schools.[59] Certainly they aim to overcome the kind of rigid divisions between curricula and students which characterized the difference between the old academic preparatory 'grammar' schools and the 'secondary modern' schools. But between one third and half of the student body in the new comprehensive schools are preparing for the relatively prestigious General Certificate of Education Examination and the remainder for the much less prestigious Certificate in Secondary Education, and sometimes for no examination. The difference in the curricula appropriate for preparation for these two examinations is substantial. And since the curricula are different as a whole--in Math, English, History, and languages--they are difficult to move between.

This tendency toward impermeable boundaries which is characteristic of examination based systems is also visible in higher education. American universities, with the conspicuous exception of Harvard, allow the ready transfer of courses and credits from one institution to another. Thus, students can move sharply upward in educational prestige from a community college to a major state university because of the (probably fictional) assumption that an introductory biology course at both institutions is comparable. In the American and Canadian system, courses and credits are a kind of currency, which, with minor exceptions, is accepted virtually everywhere. But elsewhere, with the possible exception of West Germany, transferring between institutions tends to be difficult.[60] Difficult and demanding examinations either before admission (in the Japanese case) or before graduation, separate the more prestigious institutions from others as guardians of high educational standards, standards which would be threatened by easy movement from lesser institutions.

Because of the existence of examinations, therefore, selectivity takes on a different character outside North America. Courses and credits create a system of equivalence of the knowledge or skills acquired at different institutions or by different students within the same institutions. Differences in prestige exist, of course, but they do not approach the sharpness of the differences between institutions in other nations. Examinations, by contrast, often tend to be associated with almost caste-like divisions between institutions and sharp distinctions between those students who are preparing for prestigious examinations and those who are not. Thus, in Ontario in the 1960's when the old

British inspired secondary school examination system was still in place, divisions between tracks or streams of the high school were equivalent to the division between separate schools.[61] With the replacement of examinations by a course credit system, the boundaries between academic and vocational tracks were reduced.

All these differences are differences of degree, not of kind. Community colleges, for example, complain that their unique mission is not sufficiently appreciated and that they are regarded merely as inferior kinds of colleges. American high school students enrolled in primarily vocational courses may feel that there are virtually caste-like divisions between them and the students who will be going on to college. The American system of education exhibits a hierarchy of prestige. Some American students still feel excluded from any activities that are highly valued, many students fail to make the grade in their freshman year in college, and in some states a goodly proportion fail high school equivalency examinations.

But the contrast with Japan, France or England is still significant. In all these societies, the hierarchy of educational prestige among institutions and between curricula is more clear cut than in the United States. And perhaps psychologically more important, the experience of failure and exclusion is more prevalent. Not only are students excluded (some choose to exclude themselves) from schools or tracks which prepare for particular examinations, but examination failure is common. A tiny percentage pass every hurdle and graduate with high honors from the Universities of Cambridge, Oxford or the Sorbonne. But the great majority fail at some (usually rather early) point in this journey and learn in a rather unambiguous way that "they are not good enough." These blows to

self-esteem are the price paid by a system of high selectivity and unambiguous educational standards.[62]

OUTCOMES AND IMPLICATIONS

Comparing the outcomes of different educational systems is rather like comparing apples and oranges. First, the differences in selectivity that we have noted make any comparisons of educational attainment between the U.S. and other countries very difficult. In the mid-1960s, for example, comparing mathematics achievement among 17 year olds in Germany, France, and the U.S. involved comparing the achievement of somewhat less than 20% of the age group in France and Germany with somewhat over 70% in the age group in the U.S. Most American 17 year olds in the mid-1960s continued to be in school and continued to study mathematics.[63] In much of Europe, on the other hand, far fewer 17 year olds were in school at all, and of those that remained many were no longer studying mathematics, having started to specialize in other subjects.

Comparing the performance or achievements of college students is even more difficult. One cannot compare the achievements of students in universities which are both highly selective and where all students have specialized early and intensively with the achievement of students in typically non-selective American four year institutions. Which system one prefers depends on one's values and on how one ranks the various "goods" of equal access, opportunity, intensive specialization, general education and educational standards.

Second, comparisons of different countries are treacherous because educational objectives are weighted differently in different societies.

It has become fashionable in the last few years, for example, as it was fashionable in the 1950s, to lament the decline of literacy.[64] Frequently, this seems to mean the increasing use of inelegant or jargon-laden phrases as well as the increasing incidence of grotesque grammatical or spelling errors. French or British or German students, it is often said, are vastly superior in this regard. But while this is perhaps true, it is also quite misleaing because it assumes that American education, and American society, in general, places as high a relative value on cultivated and elegant speech and writing as do these other societies. Outside of relatively small literary circles and a few prestigious universities, however, this seems hardly the case. American presidents do not (as a French president recently did) appear on a T.V. literary game show to demonstrate their knowledge of poetry. Elegance and refinement of style, as John Simon and William Safire point out virtually every week, are not widely practiced or emulated in our media on public platforms or in our classrooms. American students spend little if any time writing "precis" of the work of famous authors and infrequently write esays whose evaluation depends upon their clarity and elegance.

Closely related to this theme is the problem of standards in American education and the difficulty of comparing systems where standards are essentially imposed upon schools by external examinations with systems where standards must arise out of myriad decisions of individual teachers balancing the claims of academic rigor with all the other objectives that they wish evaluation to accomplish. For all the current rhetoric about accountability of teachers and schools, it is far from clear against which standards American teachers can or should evaluate students since

no external criteria of excellence or high achievement are universally accepted or even available.[65] Lacking such an external standard, virtually all that remains for the guidance of the evaluator are the actual achievements of a teacher's current students and the remembered achievements of previous students. The American standard of grading, therefore, tends to be a moving one, rising and falling as student achievement rises and falls. And these grades, of course, must serve the function not merely of evaluation but also of motivation: an objective which could hardly be acheived by failing one-third of the student body as many examinations in other countries routinely do.

If we define excellence as the maintenance of high academic standards (and that is one, though a limited, definition), one could say that the whole thrust of the American educational system is in a rather different direction. Other values, such as giving encouragement to the average student, motivating the less able student, and meeting community demands for useful knowledge, have historically taken precedence in America over the maintenance of centrally determined and unyielding standards against which both students and schools could be measured. Consider, for example, the likely reaction if faculty at leading universities were to devise and perhaps even grade examinations for college students at unselective universities, community colleges or high schools. Yet, this or something rather close to it, is standard procedure in England and several continental European countries where the maintenance of standards is of great importance.

For all these reasons, therefore, comparisons of educational achievement in different societies are extraordinarily difficult. Since it is our understanding that others are reporting on these differences, we

simply note here that such comparisons are generally not to the advantage of the U.S. even after adjustments have been made for selectivity.[66] In achievements in science and mathematics, in particular, American students fall behind those of most other industrialized countries and a considerable way behind Japan, a country which manages to achieve not only high achievement levels for the minority of gifted students but high average achievement as well.[67]

If achievement levels in American schools are generally low by comparison with those in other industrialized societies, this may reflect differences in both curriculum and in the amount of homework assigned.[68] By comparision with the Soviet Union and Japan, American students tend to spend relatively few classroom hours studying the sciences in a systemmatic way, far less time in mathematics, and appear to be assigned perhaps half as much homework as Japanese and Russian students.[69] And while comparisons with countries which encourage earlier specialization are highly problematic, it appears that here, too, American high school students do not work very hard and attain rather low levels of mastery of most subjects.

In considerable part, as we have repeatedly emphasized, these differences result from cultural emphases and the organization of American education rather than from what might be considered a failure in the system itself to deliver what it promises it can deliver. Thus, it would be foolish for us to become righteously indignant because French or British students achieve high levels of literary proficiency while ignoring the fact that French middle class adults, by comparison with Americans, are singularly incapable of a simple home repair. We can deplore the pragmatic values which produced these different outcomes, but it seems profitless to

claim that the schools are failing when such "failure" reflects long-standing priorities and preferences in American culture. Criticisms of the relative absence of foreign languages in Amerian schools, for example, often seem to ignore the fact of a more general societal lack of interest in events occuring outside the English speaking world as well as the lack of kind of obvious immediate utility that, for example, a foreign language has for a typical Dutchman.[70] No doubt Americans should be less insular than they are, and it is distressing to find evidence which suggests that they have become less rather than more internationally minded in the last 10 years. But it is rather unreasonable to blame our educational system for reflecting societal insularity and for placing its priorities in directions that most people prefer.[71]

At the same time, however, we do not believe that all of these differences in achievement and in what appears to be a relative lack of academic effort on the American side can be thus "explained away." We have stressed differences in emphases and objectives precisely because Americans sometimes forget their tendency to believe that the grass is greener somewhere else, and to think that all educational objectives can be simultaneously maximized: equality and academic standards, high culture and practical skills, "discovery learning" and acquisition of vast amounts of factual knowledge. There is considerable and disturbing evidence, however, that, in important respects, secondary education in the U.S. has deteriorated significantly in the last 25 years, with the possible result that the gap between ourselves and other industrialized societies has widened.

The major evidence for the argument that achievement has fallen consists of changes in standardized test scores administered over time to

large numbers of high school students.[72] (It is important to note here that there is no evidence of a decline in the test scores of elementary school students, a fact which should be borne in mind throughout the following discussion.) The results of several rather sophisticated analyses of this data indicate that there is little doubt that the decline in SAT scores from the mid 1940s to 1980 represented a real fall in levels of academic achievement.[73] Studies of the effects of an increase of proportion of the cohort taking the test suggest that in the 1970s, where most of the decline is concentrated, only about one-third of the fall could be so explained.[74] Furthermore, careful research on the content of the tests suggests that they have become rather easier, and thus, the real decline is understated rather than overstated.[75] In addition, and potentially most serious of all, the absolute number of students scoring above 700 on each part of the test (verbal and mathematical) has fallen, suggesting that the most able students, assuming they are still taking the tests (which is not absolutely clear), are learning less than they used to.[76] Studies of other sources of test data indicate, in the majority of cases, a decline in academic achievement among high school students over the same period.[77]

The evidence for long term historical trends is much weaker; but studies of the comparative reading ability over long periods of time and studies of trends in I.Q. scores over this century have not supported what some conservative critics allege is a steady decline in the intellectual skills of the population since the 1920s or 1930s.[78] The decline in academic achievement among high school students, therefore, does not seem to be part of the long secular trend, and since elementary scores

have not declined similarly, it would not seem appropriate to explain the decline with reference to changes in child rearing or early childhood experiences.[79]

Yet, a number of other changes over the same period suggest possible but partial explanations of the decline in achievement. There seems to be a decline in homework during the period over the twenty-year period from 1960 to the present, and if widespread reports of failure to do homework on the part of large numbers of students are to be believed, the decline in homework assignments may understate the extent of the decline in work accomplished.[80] Elective course enrollments increased greatly over the period and it appears that there has been a reduction in the number of hours spent in studying those subjects which would be most relevant for performance on the SAT tests.[81] Absenteeism rates in high schools increased during the late sixties and early seventies, as did reports of student assults upon teachers.[82] All of these changes, it should be noted, took place against a background of generally rising grades given to students in high schools for what, apparently, was increasingly less satisfactory work.[83] Thus, by this measure, at least, academic standards fell during the period in question.

Research currently in progress by one of the authors of this report indicates a number of shifts in the character of the relationship betwen high schools and students over the past 20 years which may illuminate these discouraging trends. School assemblies, prize winning ceremonies and banquets have tended to disappear or have become much less frequent than they were in the past. There is some evidence, though not conclusive, that attendance at sporting events and try-outs for school teams have fallen off. Membership in school clubs and societies seems to have

declined. In one small town school in Massachusetts, for example, membership fell from over 60% of the student body in 1960 to rather less than 35% of the student body in 1979.[84] Many schools which were beehives of social activity in the late afternoon in the early sixties are now often virtually deserted by 2:30 or 3:00. Schools attempt less control over the deportment and demeanor of students than in the past, from such matters as running in corridors to twisting in one's seat in class, or chewing gum or smoking on school grounds. These changes partly reflect new conceptions of "student rights" in which high school students come to be defined much more as adults with rights than as children with privileges.[85] And it may well be that the reduction or narrowing in scope of the school's authority that these rights symbolize is related to a more general decline in the ability of schools to get students to do homework and to attend class regularly and on time.[86]

As conservative critics suggest, these changes may reflect the influence of deeply held progressive ideas over the last twenty years: a surrender of traditional school authority as educators became convinced that schools should be less "repressive" and "authoritarian" and should meet "students needs". The loss of morale and solidarity may also represent the strain of the extraordinary demographic bulge of the 1960s and early 1970s combined with increasing retention rates. As the market for unskilled teenagers deteriorated, high schools faced increasing numbers of students who would not traditionally have been high school graduates and found themselves having to play a babysitting or holding operation at a time when the courts and public opinion were placing severe limits on their coercive authority. High schools have also became more rationalized

and impersonal institutions over the last 20 years.[87] The consolidation of school districts and the increased enrollments of the late 1960s and early 1970s made many schools much larger--a fact which we should note was probably very important in making increasing number of elective courses possible. Schools began to hire more specialists--vocational counselors, psychologists, specialized administrators--who have tended to usurp the traditional multifaceted role of teachers, who in turn, it seems, have tended to withdraw from the extra-curricular activities that were expected of them in the past. Relationships between administrators and students, too, have tended to take on a more impersonal and bureaucratic character, reflecting the increase in the size of the institutions, the declining frequency of ceremonies at which administrators were visible to students in other than a disciplinary role, and the increasing importance of written rules and regulations governing the relationships between schools and students as the courts have become more involved in the life of educational institutions. As a result of all of these changes, it is likely that the school has become for many students simply a physical place where they do work and receive credit rather than an institution to which students owe loyalty or for which they feel affection.[88]

But there are also a number of changes in youthful behavior as a whole during the last two decades which help explain some of the difficulties schools have been facing. Rates of teenage pregnancy, despite increasing contraceptive knowledge, have increased sharply. Rapid increase in drug usage has occurred and spread to earlier age groups.[89] Perhaps most notable of all, a sharp increase in youthful suicide has

taken place, an indication perhaps of an increasing disturbance in the collective psyche of American youth during the last 15 or 20 years.[90] Interestingly enough, there is some evidence (although it is almost entirely impressionistic) that similar trends in youthful behavior are evident in Japan, Soviet Union and a number of Western European countries. In many of these countries, we have reports of increasing rates of suicide, far greater rates of juvenile delinquency, sexual activity at an earlier age, and a sharp rise in hostility towards adult authority.

Policy implications. The policy implications of the above arguments are generally discouraging. Let us consider the problem of declining U.S. achievement first, and then the problem of comparisons between America and other countries.

The causes of the decline in high school achievement in the last twenty years are not clearly understood nor, it must be added, does there seem to be a major research effort to answer this question. Instead of serious inquiry into the root causes of this decline, we find (as it often the case with educational policy) a reliance upon the fashionable certainties of the present. In the current public mood, this means a belief that the decline can be remedied by a reassertion of school authority, by insistence on excellence, and by a general abandonment of permissiveness. Perhaps this is true, although it is difficult to point to the effects of a rather similar diagnosis made just over twenty years ago.[91]

Our argument here, on the other hand, has suggested that, to the extent that they are understood, the changes associated with the achievement decline are rather deep-rooted and largely outside the policy-

maker's direct control. Schools have indeed lost a good part of their authority to control youthful behavior and to inspire the loyalty and affection of the young. But a good part of this decline may result from changes in youth as much as from changes in schools--young people will not accept child-like behavior controls anymore and demand to be treated as adults. Another part has much to do with the increasing limits the courts have placed on school's coercive power and corresponding rights granted to students. Finally, the increasing size and specialization of high schools, with the effects of bureaucratization and impersonality, have probably undercut efforts by schools to win the loyalty of new students. None of these changes can be readily reversed and we do not believe that a simple attempt to reassert authority without understanding the reasons why it has declined will be successful.

We do not believe that any clear cut policy recommendations flow from our comparative analysis. This is not because of chauvinism on our part but because it is both difficult and misleading to take an institution or practice out of the context of the system and to transfer it to another very different system. We cannot simply borrow Japanese homework practices, Russian mathematics curricula, or French examinations. Each is part of a system which has different priorities and a different organization from our own. And in comparative perspective, America has perhaps the most unusual and most distinctive system in this regard. Excellence in America does not mean what it means in France or Britain. In these countries, excellence tends to mean the maintenance or achievement of the high academic standards that prevail in the most prestigious educational institutions. There are national standards against which all can compare themselves in regular examinations--even, for example,

in such subjects as piano or art--and standards are maintained by individuals who are trained in or employed by leading universities. But Harvard or Andover or New Trier High School do not play even a remotely equivalent role in the U.S. to that played by the University of Tokyo and the prestigious schools that prepare for its examinations in Japan. By comparison with the rest of the industrialized world, the U.S. has multiple criteria of excellence and no clear hierarchy of excellence. American community colleges are not necessarily inferior to state universities; they have rather different objectives. Demographic or equal access and the acquisition of useful skills are more highly valued in the U.S. than elsewhere, and institutions which sacrifice rigorous academic standards to achieve these other objectives do not necessarily lose support. Nor do prestigious American universities, as their Japanese and Russian equivalents tend to do, shape or determine the high school curriculum.

Consider, for example, as an illustration of the complexities of borrowing institutions or practices, the increasing use of state-wide examinations in conjunction with the award of the high school diplomas. In the last decade, there has been a move by some states to establish examinations for high school graduates partly in response to concern that the high school diploma has become devalued. But the examinations we are aware of bear little resemblance to the examinations in much of Europe and Japan. They appear to be oriented as much to practical or useful skills as to academic or intellectual mastery and (unlike examinations in much of the rest of the world) and they seem to be designed so that

the great majority will pass them. Most examinations in America seem to have this latter characteristic, which makes them less than ideally useful as a way of raising or setting high academic standards. Examinations designed for raising academic standards would likely run into the problem of the absence of agreed upon nation-wide or even state-wide standards of excellence, opposition on the grounds that they discriminated against minorities, and claims that they measured skills of dubious utility.

Differences between systems also render rather problematic proposals to borrow or emulate foreign curricula, especially the science and mathematics curricula from the secondary schools of Japan or the Soviet Union. Such rigorous curricula would demand a great deal more effort from students and teachers alike, some substantial retraining of a good number of teachers, and a willingness to sacrifice some of the more immediately useful skills which the elective curriculum teaches. In Japan and Russia, these efforts are made in part because of pressure from competitive examinations which govern access to prestigious universities. It is true that some state universities have begun to tighten admission standards as competition for admissions has increased because of a tight job market and a cohort size that remains large. But the long run trends seem to be in the opposite direction: toward a scramble by institutions of higher education for available students which (unless we have a radical devaluation of college degrees from lesser institutions) is likely to mean a lowering of standards.

None of this means that we are pessimistic about the trend of academic achievement in the United States or that we predict a decline in achievement relative to that of other countries. Indeed, to the contrary, one

could well argue that an end of demographic bulge and a greater emphasis upon requirements and excellence in public opinion may signal a reversal of the trend of the past 20 years. But our major recommendation is that policymakers abandon the hubris which has led them in the past to propose solutions for problems that do not exist and policies aimed at correcting trends whose causes are only remotely understood.

Rather than ending on this rather sour note, however, we conclude with three economical and practical suggestions for improving excellence.

We think that excellence is more likely if it is honored and publicly recognized. It is our impression that scholastic excellence in America is honored and recognized rather less than was the case in the past: that high school prize award ceremonies are often attended by the prize winners families and few others, that dean's lists and other honors are less publicized than they were. Some of the following inexpensive suggestions might help change this state of affairs: (1) Expand the National Scholarship Program and encourage Public Television to broadcast the ceremonies and to produce some short documentaries on the winners, stressing particularly those from minority, southern or rural backgrounds. (2) Give small grants to each state (much less than one million dollars) specifically for the purpose of staging and publicizing state-wide competitions and award ceremonies for outstanding student achievement in mathematics, the physical and biological sciences and foreign languages. Some of this money could be earmarked for awards in each school (these could be televised over local access channels), and in the larger states for regional competitions. (3) Any federal monies that are presently

used to devise tests to weed out incompetent teachers should be used instead to give prizes and honors to outstanding teachers, again at well publicized ceremonies. The states should be encouraged to use their own funds for this purpose and to abandon efforts to purge incompetent teachers' efforts whose major effect, we suspect, will be to lower still further the extraordinarily low morale of the teaching profession.

APPENDIX I

SCIENCE AND MATHEMATICS EDUCATION: THE SOVIET UNION AND JAPAN

There appears to be increasing concern in the United States that this country has lost its leadership internationally in science and technology. A major factor, it is alleged, is the much greater emphasis on science and mathematics in the school systems of other countries, notably the Soviet Union and Japan. A recent report by the Congressional Research Service states that "Technical education in the United States trails that in the Soviet Union and Japan because of inadequate laboratory facilities and shortages of science and engineering instructors at both the secondary and university levels" (Chronicle of Higher Education, Vol. XXIII, No. 20 [January 27, 1982], p. 12).

Izaak Wirtzup, professor of mathematics at the University of Chicago and one of the leading observers of Soviet education, has reported in an unpublished study for the National Science Foundation that the new Soviet science education has brought changes which "are trantamount to an educational mobilization of the entire population." Its program in mathematics, he says, "is modern in content, innovative in approach, well integrated and highly sophisticated. It gives strong emphasis to theore-

to Wirtzup, the Soviet high school student "is required to complete five years of physics, four years of chemistry, one year of astronomy, five and one-half years of biology, and so on down a list that would empty America's high schools via the dropout route" (Daniel S. Greenberg, "The Intellect Gap," The Guardian Weekly, Vol. 122, No. 23 [6/1/80], p. 9).

Japan likewise stresses mathematics and science in its schools. It is introduced at an early age: three hours per week in the first grade, increasing to six hours each in the fourth to sixth grades. In lower secondary school (grades 7-9) all students have four hours weekly in grades 7 and 8; the non-college-bound have three hours in grade 9, the college-bound five. The college-bound student takes six hours of mathematics weekly in grade 10, five and three respectively in grades 11 and 12. Students admitted to the 100 top senior secondary schools in Japan take 18-20 hours of mathematics. College-bound students complete calculus in high school in Japan (Anderson, pp. 119, 130-31, 147, 167-68), and Soviet high schools offer two years of this subject, whereas in the U.S. it has mostly disappeared from the public high school curriculum.

Both the Soviet Union and Japan place a major emphasis on teaching science in the schools. In Japan, the special Science Education Centers set up beginning in 1960 in all 46 prefectures offer tuition-free programs to school teachers at all levels to upgrade their knowledge and learn about the latest in science education techniques. Interestingly enough, these centers, since broadened from science to include all school subjects, draw heavily on science curriculum studies in the U.S.: the Biological Science Curriculum Study, Physical Science Study Committee, Chemical Education Material Study, etc.

Chemical Education Material Study, etc.

While the record of Japan and the Soviet Union is undeniably impressive in strengthening science and mathematics teaching in their schools, one must look beyond curricular programs in assessing their impact. Thus, in Japan, where most youth elect the academic rather than vocational stream in senior secondary school, it is estimated that "30 percent cannot really handle it" (Anderson, p. 175). Moreover, as schools are judged on their ability to get their students admitted to the best universities, teaching in the lower secondary school is geared to students likely to be admitted to the senior academic secondary schools which prepare for university admission, to the neglect of students proceeding to vocational education. Thus, while the best students may excel in the structured rigorous school system, the less able experience frustration, alienation, and disillusionment.

In the Soviet Union, there are other side effects from the intensive school program. The enormous pressure on children from the highly structured curriculum (there are almost no electives) is allegedly producing increasing delinquency and violence, out-of-shool cramming for university admission, graduates who are too narrowly specialized, and rote learning rather than the ability to probe and analyze. Recent reports of a significant decline in student interest in the sciences and engineering may be another by-product of the extraordinarily demanding school programs in math and science.

One should therefore examine the costs and casualities of extensive compulsory school programs in math and science, and to inquire whether they are worthwhile (if indeed American schools were able to better

match the Japanese and Soviet records in these respects). The costs appear to include neglect of (and even hostility from) school children who cannot handle such demanding curricula, emphasis on memorization rather than analytic problem-solving, the paucity of opportunities for school children to pursue activities important to their social, artistic, and personal development because school demands are so all-encompassing, and a turning away from those fields characterized by force-feeding in school.

It would be difficult in this point of time to turn back the clock in American schools and impose compulsory and comprehensive programs in mathematics and science for all students. The system of electives is not only ingrained but reflects the educational values discussed earlier in this paper: individualism, pragmatism, utilitarianism (relatively few young Americans will find calculus useful later in life), and the possibility of making choices in education. If indeed more and better teaching of science and mathematics to more young people in American schools is a national priority, some measures can be taken which in an incremental way can take us in that direction. It is submitted, however, that the values and traditions of American education give priority to certain developmental processes and outcomes which would inevitably be a casualty of expanding compulsory curricular programs in our schools, even assuming this were feasible. The inadequacies of math and science teaching must become and be perceived to be a far greater national crisis for this to happen than appears now to be the case.

APPENDIX II

EQUIVALENCIES IN SECONDARY SCHOOLING: THE UNITED STATES, CANADA, JAPAN, SOVIET UNION, WEST GERMANY

It is extremely difficult to define precisely the level of secondary school study in Canada, Japan, the Soviet Union and the Federal Republic of Germany which is equivalent to the completion of high school in the United States. This task is all the more difficult because the substantial variation in quality among American high schools and the diversity of curricular choices open to high school students offer no firm yardstick which defines high school education in the U.S.

The graduate from a highly selective and rigorous American high school, public or private, has probably mastered more knowledge than his/her counterpart in a relatively less well funded and non-selective inner city high school. However, high ability and high achieving students from virtually any high school may graduate from it with an educational preparation enabling them to compete with the best students coming out of the best high schools for admission to the most selective higher education institutions in the U.S.

The Carnegie unit system was initiated early in this century so that a high school education could be assessed in terms of the numbers of years of study in different subjects that graduates had completed. This enabled colleges and universities to have some measure of the scholastic accomplishments of students seeking admission to them, about the quality of which they knew little. The importance given to electives in school (and college) curricula have reinforced the need to measure students'

educational experince in the absence of an external examination which, as discussed in this paper, is as common means in many countries for assessing educational accomplishment on a national basis.

The credit system is, thus, part and parcel of the individualistic American approach to education. But it measures achievement on a quantitative, rather than qualitative basis. Hence, Americans tend to look to numbers of years in courses in assessing equivalencies with foreign school systems, a measure which is inherently imperfect as it neglects qualitative criteria. National tests of scholastic achievement, such as those administered by the Educational Testing Service for some decades, give a national measure of students' achievement, and hence, indirectly, that of schools across the nation, but so far have not been factored into any system which produces a qualitative measure of what an American high school education represents.

This being the case, the determination of equivalencies between U.S. and foreign secondary school completion is mostly measured in terms of years in the school system.

The following charts of the high school systems of Germany, Japan, and the Soviet Union show the numbers of years involved, and pathways from one type of level of school to another.

In the Soviet Union, high school completion involves eleven years of elementary and secondary schooling, on the theory that because schools have a six day week, as much schooling is completed in that country in eleven years as in twelve years in the U.S. and in other nations the twelve year system. In the Federal Republic of Germany, the combination of elementary and college-preparatory school involves thirteen years;

German specialists on equivalency claim that the combination of quality and quantity makes the Abitur, the certificate then achieved, the equalivalent of two years of higher education in the United States. College admissions profssionals in the U.S. tend not to agree with this and are likely to accord one year of advanced placement to holders of the Abitur. Japan has a system similar to the American in school education: 6 plus 3 plus 3. The situation varies in Canada depending on the province, with 12 years of schooling required in some, 13 years expected in others, but with a 13th year student admitted to university without the requirement of a "pre-university" year. The following charts set forth the school structures in Japan, the Soviet Union and the Federal Republic of Germany, but do not purport to provide answers to equivalency.

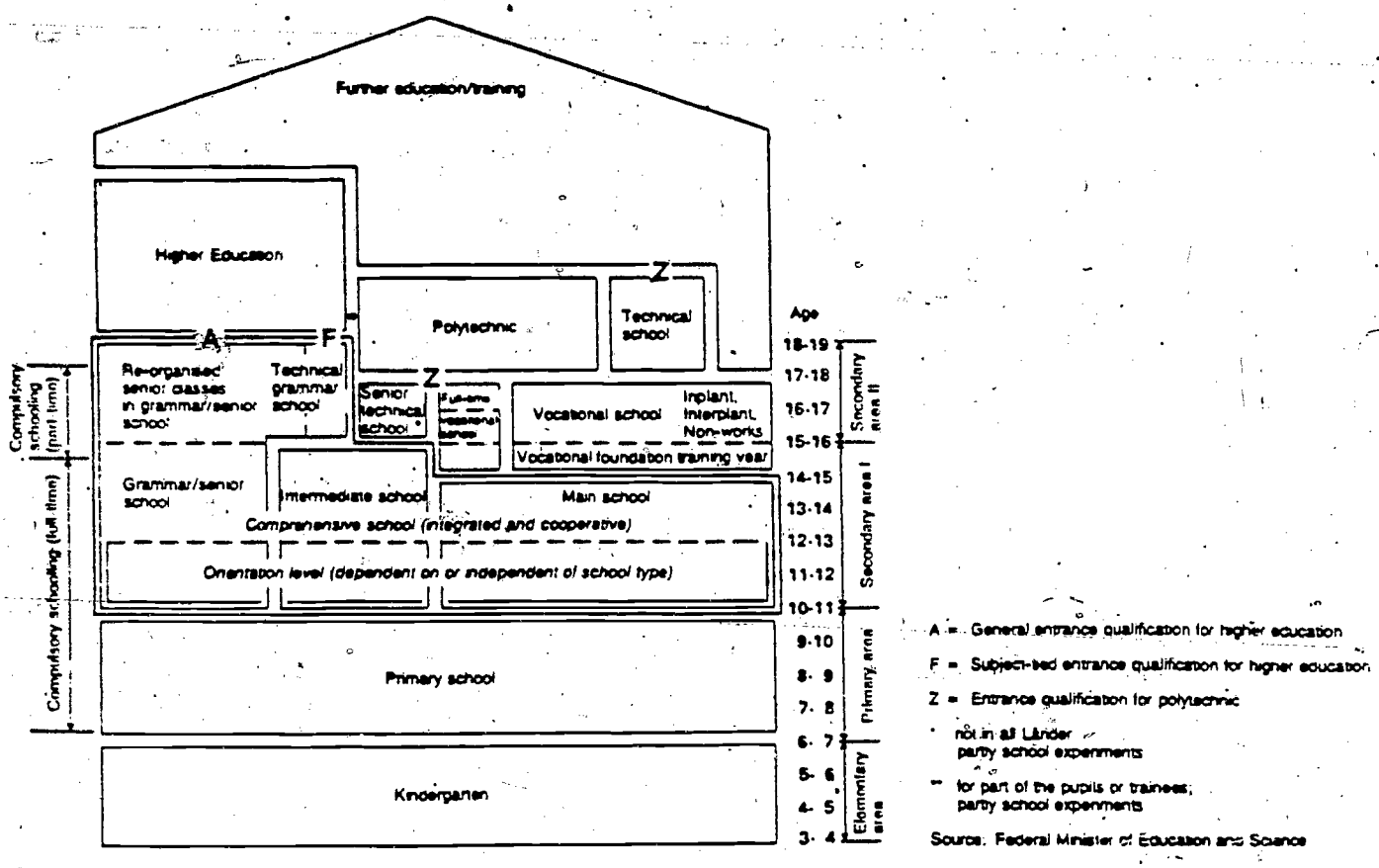
TABLE 1. Percentage of age group[a] entering higher education for selected countries

	65	71	73	76
Austria (18-20)	7.6	15.5	15.1	17.7
Belgium (18-20)	20.5	29.7	32.9	
France (18-20)	23.4	27.8	26.2	28.8
Germany (20-22)	11.6	17.4	24.4	20.2
Italy (19-21)	12.0	24.9	25.4	28.0
Japan (18-19)	14.5	26.5	31.2	37.0
Netherlands (17-20)	12.0	19.8	21.0	25.3
Sweden		33.4	33.0	41.6
United Kingdom(18-19)	11.5	20.6	21.5	
United States (18)	38.8	45.0	43.2	42.7

[a]Age group: age of at last 70% of new entrants.

Source: L. Ceryen and S. Colton, "Summarizing Recent Student Flows," European Journal of Education Vol. 15 No. 1. March, 1980, p. 29.

General structure of the Education System in the Federal Republic of Germany



THE SOVIET EDUCATIONAL SYSTEM

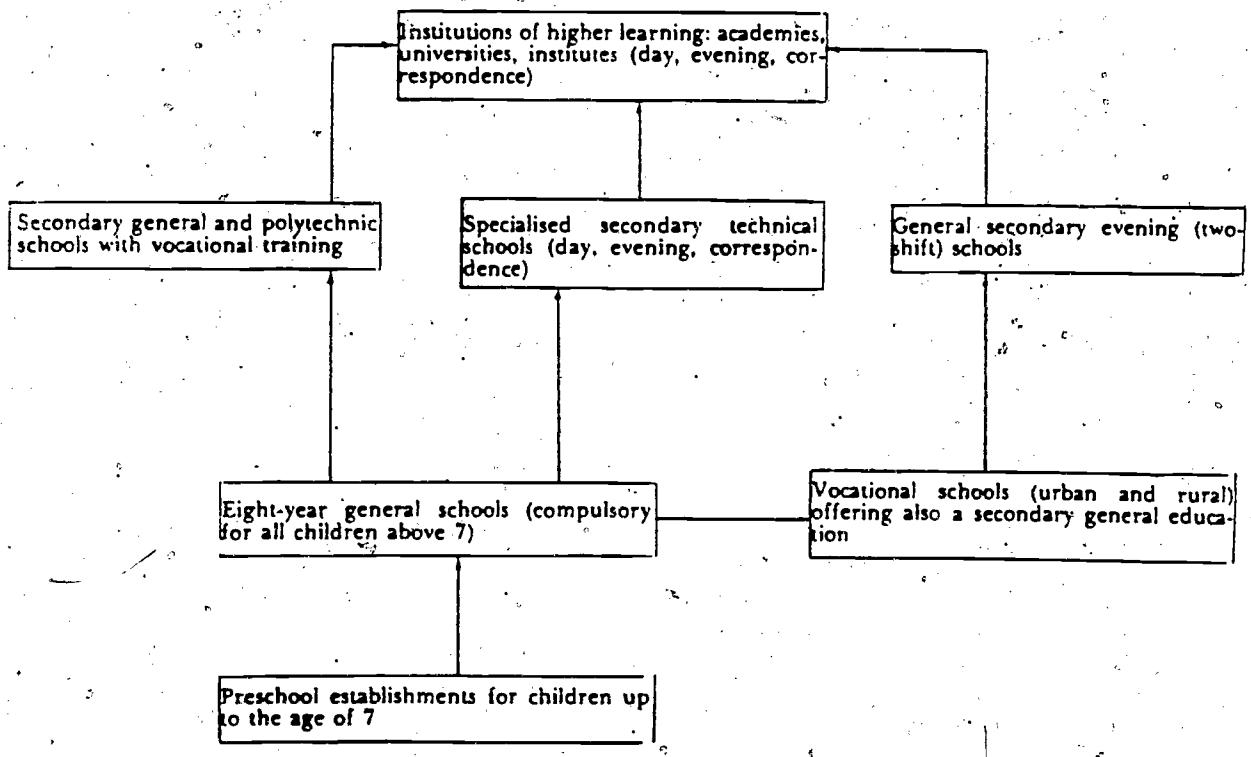
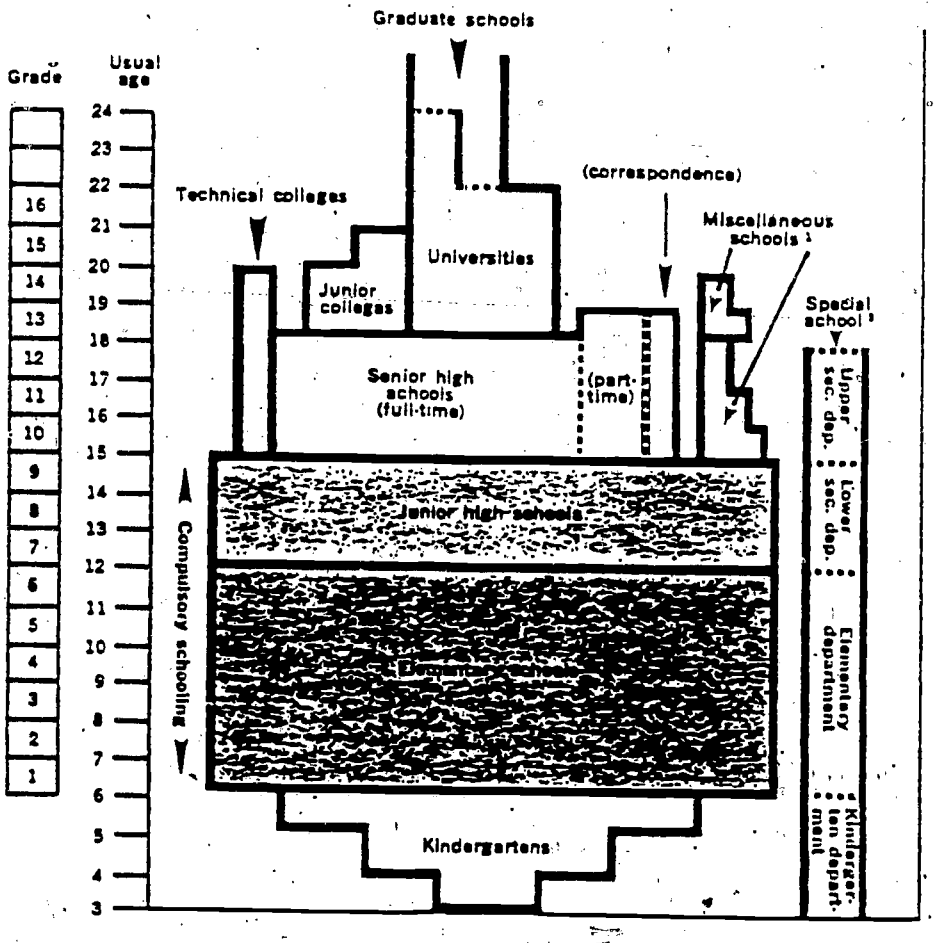


Chart 2.—Structure of the educational system of Japan: 1972



[1] For the blind, deaf, and "otherwise handicapped."
[2] Including a wide variety of institutions that provide practical, vocational, and cultural instruction in such skills as dressmaking, cooking, typing, and flower arrangement.
Source: Adapted from Agency for Cultural Affairs, *Outline of Education in Japan* (Tokyo, the Agency, 1972), p. 2.

INCREASE IN RATE OF ENROLLMENT IN ALL HIGHER EDUCATION

Country and Age Group	Year	Enrollment in all Higher Education in relation to age group (%)		New Entrants in relation to age group (%)
France[1]				
18-23	65	12.9	18-20	23.4
	70	15.8		26.5
	75	20.9		28.3
	77	21.5		28.5 (1976)
Federal Republic of Germany[1]				
20-25	65	6.5	20-22	-
	70	12.3		15.9
	75	17.3		20.2
	77	18.2		19.4
Japan[1]				
18-22	65	10.1	18-19	14.5
	70	13.9		22.3
	75	23.8		37.1
	77	26.2		37.3
United Kingdom[1]				
18-22	65	-	18-19	11.5
(universities only)	70	5.6		19.7
	75	6.6		21.6
	77	6.8		-
United States[1]				
18-23	65	32.6	18	44.2
	70	39.2		53.8
	75	46.3		59.4
	77	45.5		58.1
USSR[1]				
20-24	60	11.0		
	65	29.5		
	70	25.3		
	75	21.7		
	77	20.3		

1. Ladislav Cerch, Sarah Colton, Jean-Pierre Jallade, Student Flows and Expenditure in Higher Education 1965-1979, Amsterdam: Institute of Education, European Cultural Foundation, 1981, pp. 58-59, 61-62, 79.

		University		Non-University	
Canada[2]	Year	Male	Female	Male	Female
18-21	1973-74	21.3	14.2	12.8	11.5
	1978-79	19.0	16.0	12.8	13.7

2. Information supplied by project consultant, Professor Robert M. Pike, Queens University, Ontario, Canada.

Percent of Age Group in Secondary School

		1960	1978
West Germany:[1]	percent of 13 year olds in: Hauptschule	70	40
	Realschule	11.3	24
	Gymnasium	15	25

Soviet Union:[2] 96% of pupils completed 8 years of schooling in 1975 and continued into various secondary education institutions, part- and full-time, 12% continued into specialized technical secondary schools. Over 15% continued into 1-4 year vocational schools.

		1960	1970	1973
Japan:[3]	percent of age group enrolled in:			
	elementary school	99.82	99.83	99.86
	lower secondary school	99.93	99.89	99.89
	upper secondary school	55.16	79.3	89.5
	higher education	9.7	18.7	25.7

		1961-2	1972-3
Canada:[4]	percent of 17 year olds in school: male	51	66
	female	42	63

1. Bildung und Wissenschaft, Bonn: Inter Nationes, BW 19 1, No. 12-79, pp. 158-9.
2. N. Kuzin and M. Kondakov, Editors, Education in the USSR, translated from Russian by Fainna Glagolera, Moscow: Progress Publishers, 1977, pp. 25-26.
3. Educational Statistics Japan, Ministry of Education, Government of Japan, 1974, pp. 18-19.
4. Information supplied by project consultant, Professor Robert M. Pike, Queens University, Ontario, Canada.

New Entrants Higher Education by Social Origin in % of Enrollment

Federal Republic of Germany	1965	1970	1975	1976-7
a) Universities				
self employed and civil servants	59.5	51.7	45.4	43.8
white collar workers	31.8	34.0	36.7	37.0
manual workers	6.5	12.0	15.0	16.0
other	2.2	2.3	2.9	3.2
b) Non-Universities				
self employed and civil servants	45.7		36.2	35.0
white collar workers	33.3		32.8	33.2
manual workers	17.5		27.6	28.0
other	3.5		3.4	3.8

U.S.A.- all higher education by % of income brackets in 1967 dollars	1967-8	1971-72	1975	1976-77
less than $5,000	20.0	20.8	23.5	22.4
$5,000 to $9,999	37.9	36.6	35.1	36.3
$10,000 to $14,999	51.9	48.4	45.4	47.5
$15,000 and up	68.3	61.7	59.6	58.2

Ladislav Cerych, Sarah Colton, Jean-Pierre Jallade, Student Flows and Expenditure in Higher Education 1965-79, Amsterdam: Institute of Education, European Cultural Foundation, 1981, pp. 68-9.

FOOTNOTES

1. Peter Blau and Otis Dudley Duncan, The American Occupational Structure. New York: Academic Press, 1967.

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3. Corrado de Francesco, "Myths and Realities of Mass Secondary Schooling in Italy," European Journal of Education. Vol. 15., No. 2, 1980, pp. 135-152.

4. Randall Collins, The Credential Society. New York: Academic Press, 1979.

5. Burton Clark, Educating the Expert Society. San Francisco: Chandler, 1962.

6. See the studies cited in Collins op. cit. Chapter 1.

7. Ivan Berg, Education and Jobs: The Great Training Robbery. Boston: Beacon Press, 1971.

8. See the evidence cited in Christopher Jencks et al., Inequality. New York: Basic Books, 1972.

9. Michael L Sovern, "The Care for Keeping U.S. Aid to Colleges." New York Times Magazine, Feb. 7, 1982, pp. 74-77.

10. Nigel Grant, Soviet Education, 4th Revised edition. London: Penguin, 1979.

11. Robin Williams, American Society: A Sociological Interpretation, New York: Knopf, 1970,

Seymour Martin Lipset, The First New Nation. New York: Basic Books, 1963.

12. Samuel Bowles and Herbert Gintis, Schooling in Capitalist America. Basic Books, 1977.

13. Ronald S. Anderson, Education in Japan. Washington, D.C.: U. S. Government Printing Office, 1975.

14. See Anderson op cit., and A. Harry Passow, Harold J. Novak, Max A. Eckstein, John R. Mallea, The National Case Study: An Empirical and Comparative Study of Twenty-one Educational Systems. New York: Wiley, 1976.

15. Thus an egalitarian reform of schooling was a major issue in West Germany's recent federal election. "Straus, Schmidt, and die Schulen," Times Educational Supplement, March 10, 1980, p. 12.

16. Christopher J. Hurn, The Limits and Possibilities of Schooling. Boston: Allyn and Bacon, 1978, Chapter 7.

17. For a discussion of the French case see Pierre Bourdieu and Jean-Claude Passeron, Reproduction in Education, Society and Culture. London: Sage, 1977.

18. Lawrence Cremin, The Transformation of the School. New York: Random House, 1961.

19. See Lipset op. cit.

20. For discussion of the different meanings of individualism see David Riesman, Abundance for What? And Other Essays. Garden City, N.Y.: Doubleday 1964, and Herbert Gans et alia (eds.), On the Making of Americans: Essays in Honor of David Riesman. Philadelphia: University of Pennsylvania Press, 1979.

21. See Hurn op. cit. for a discussion of the tension between these objectives.

22. Anderson's discussion of the Japanese case is illuminating in this regard. Anderson op. cit., Chapter 5.

23. David L. Kirp, "Proceduralism and Bureaucracy: Due Process in the School Setting," Stanford Law Review 28: 1975, 841-876.

24. For a rare detailed account of the elective course system as it existed in the mid-1920's see Robert S. and Helen Lynd Middletown. New York: Harcourt Brace, 1929.

25. The introduction of minimum competency tests by a number of States in recent years does not alter this contrast substantially.

26. It may be, however, that this generalization applies most to the more prestigious and less to the least prestigious schools. We know of no research on this point.

27. Joseph I. Zajda, Education in the U.S.S.R. New York: Pergamon, 1980.

28. Zajda op. cit. Chapters 2-3.

29. Grant op. cit., Zajda op. cit.

30. See Grant op. cit. for similar comparisons.

31. Urie Bronfenbrenner Two Worlds of Childhood: U.S. and U.S.S.R. New York: Basic Books, 1970.

32. This is Bronfenbrenner's characterization. Bronfenbrenner op. cit.

33. Hedrick Smith, The Russians. New York: Quadrangle, 1976.

34. The different periods (early 1960's mid-1970's) may be a factor here as well.

35. Ronald S. Anderson, Education in Japan. Washington, D.C.: U.S. Government Printing Office, 1975.

36. Anderson, op. cit. p. 125.

37. Ezra F. Vogel, Japan As Number One. Cambridge: Harvard University Press, 1979, Chapter 7.

38. Anderson, op. cit. pp. 66-71.

39. Anderson, op cit. p. 68.

40. Anderson, op. cit. Chapter 3.

41. Anderson, op. cit. p. 127.

42. Anderson, op. cit. p. 126.

43. Vogel op cit. See also William K. Cummings, Education and Equality in Japan. Princeton: Princeton University Press, 1979.

44. Anderson, op. cit. p. 66.

45. A Harry Passow et alia op. cit.

46. Lawrence Wylie, Village in the Vaucluse. Cambridge, Mass.: Harvard University Press.

47. A. Harry Passov et alia. op. cit.

48. Barbara B. Burn, Higher Education in Nine Countries: A Comparative Study of Colleges and Universities Abroad. New York: McGraw-Hill, 1971.

49. Interestingly enough it seems that traditional prestige criteria are as, if not more important as presumed relevance to job training in making decisions about which institutions will suffer most.

50. Torsten Husén, The School in Question. Oxford: Oxford University Press, 1979.

51. A. Harry Passow, et alia. op. cit.

52. Almost equally signficant has been the trend toward judicial control over local school boards. See Kirp op. cit.

53. Science and mathematics teachers are an exception to this.

54. Robert S. and Helen Lynd, Middletown. New York: Harcourt Brace, 1929.

55. Thus the President of the California State Board of Education has recently completed astudy of science and technical education in Japan. "Science Education -- the Japanese Advantage" A.A.H.E. Bulletin, Sept. 1981,p.6.

56. But this says nothing to minimize the importance of an aroused public opinion which at particular times may be virtually unanimous in supporting a particular charge.

57. See Anderson op. cit and A. Harry Passow et alia, op. cit.

58. Vogel op. cit. Zajda op. cit.

59. Julienne Ford, Social Class and the Comprehensive School. London: Routledge and Kegan Paul, 1969.

60. In England and Wales this is so even when universities have similar curricula and similar examinations.

61. Robert Pike, "Education, Class and Power in Canada," in R. J. Ossenberg (ed.), Power and Change in Canada. Toronto: McClelland & Stewart, 1980.

62. "Failure" in America is also tempered by less sharp divisions by high and low prestige institutions.

63. Torsten Husén, The School in Question: A Comparative Study of the School and its Future in Western Society. Oxford: Oxford University Press, 1979.

64. Arthur Bestor, Educational Wastelands: A Retreat from Learning in Our Public Schools. Urbane, Ill.: University of Illinois Press, 1953.

65. S.A.T. scores are not comparable into European style examinations for reasons already discussed.

66. L. C. Comber and John P. Keeves, Science Education in Nineteen Countries: An Empirical Study. New York: Wiley, 1973.

67. Vogel op. cit.

68. It may also reflect differences in general morale and commitment. c.f. Vogel's discussion of the Japanese case, Vogel op. cit.

69. Vogel op. cit. Zajda op. cit.

70. The fact that English has gained ground as the international language makes it possible for American businessness to "get by."

71. Here again the relevance of the centralized, expert dominated versus decentralized lay controlled systems is noteworthy.

72. College Entrance Examination Board Advisory Panel, On Further Examination. New York: College Entrance Examination Board, 1977.

73. College Entrance Examination Board Advisory Panel op. cit. See also Leo A. Munday, Declining Admissions Test Scores. Iowa City, Iowa: American College Testing Program, 1976.

74. College Entrance Examination Board Advisory Panel, op. cit.

75. College Entrance Examination Board Advisory Panel, op. cit.

76. College Entrance Examination Board Advisory Panel, op. cit.

77. Leo A. Munday, "Changing Test Scores," Phi Delta Kappan 60, 1979, 496-499.

78. Jeneks et alia, op. cit.

79. College Entrance Examination Board Advisory Panel, op. cit. Appendix.

80. Frank E. Armbruster, The U.S. Primary and Secondary Educational Process. Groton-on-Hudson, New York: Hudson Institute, 1975.

81. Janice J. Weinman, Declining Test Scores: A State Study. Massachusetts: Massachusetts Board of Education, 1977.

82. College Entrance Examination Board Advisory Panel, op cit. See also National Institute of Education, Violent Schools -- Safe Schools, Washington, D.C., Government Printing Office, 1978.

83. College Entrance Examination Board Advisory Panel, op. cit.

84. Christopher J. Hurn, "Authority in High Schools 1960-1980", Unpublished manuscript. Department of Sociology, University of Massachusetts.

85. Hurn, op. cit.

86. Hurn, op. cit.

87. Joseph Adelson, "What Happened to the Schools," Commentary. March 1981, 36-41

88. Adelson op. cit. Hurn op. cit.

89. Edward A. Wynne, "What are the courts doing to our children?" The Public Interest, Summer 1981, 3-18.

90. Wynne op. cit. though his discussion is rather tendentious.

91. For the earlier "excellence movement" see John W. Gardner, Excellence, New York: Harper, 1961.

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