Some Recommendations of the President's Commission on Higher Education

Alfred B. Bonds, Jr.

Assistant Executive Secretary of the Commission

THE EARLIER PAPERS IN THIS PANEL (see *Science,* April 9, pp. 355–363) have very wisely assessed adequacy of scientific personnel resources in terms of what demands are likely to be over a reasonably foreseeable future. I should like, however, to move to a totally different type of appraisal and offer some suggestions as to their adequacy in terms of what our demands *should* be. As a means of doing this, I shall present to you the conclusions of the President's Commission on Higher Education, as they are contained in Volumes I and II, both of which have just been published as part of a series of 6 volumes carrying the general title, *Higher education for American democracy.*

The Commission, appointed by President Truman on July 13, 1946, is made up of 28 distinguished citizens from education and lay groups alike. George F. Zook, president of the American Council on Education, is chairman of the group, and Francis J. Brown, also of ACE, is executive secretary. The Commission was charged by President Truman with the task of re-examining our system of higher education "in terms of its objectives, methods, and facilities; and in the light of the social role it has to play."

Five major areas of inquiry were selected: (1) Establishing the Goals, (2) Equalizing and Expanding Individual Opportunity, (3) Organizing Higher Education, (4) Staffing Higher Education, and (5) Financing Higher Education.

A sixth volume of resource data will contain many of the basic statistical materials from which the Commission has formulated its recommendations.

The basic relationship of the Report of the President's Commission to our present discussion lies in the Commission's strong stand in behalf of the "Education for All" thesis. The Commission has pitched its judgment of the dimensions of American higher education upon the consideration of providing opportunities for all who have the talent to profit from such experiences.

Let us see what this means in terms of numbers. Those who are experiencing the extraordinary crowding occasioned by the highest collegiate enrollment in history may be somewhat shocked to know that the Commission has advocated a doubling of this enrollment by 1960. It should be noted that the Commission is not offering this figure as a prophecy of how many students *will* be enrolled in 1960, but rather is going on record as believing that at least 4,600,000 of our young people *should* be enrolled at that time. This conclusion is based on a long and careful appraisal of the mental profile of our population.

The basic material for this appraisal was drawn from the results of the Army General Classification Test which was given to 10,000,000 men entering the military service. The scores made on this test, when equated with the American Council on Education's college entrance examination, indicated that nearly one-half of our population of college age (18–21) has the ability to complete at least two years of the traditional type of college education. The studies show, further, that nearly one-third of our young people have the ability to complete four years of college education, plus graduate and professional work.

These are startling figures when taken in their historic perspective. Never in our history have more than 16% of our young people between the ages of 18 and 21 been enrolled in colleges. The present enrollment of 2,300,000 is equivalent to more than 30% of the number of our young people between 18 and 21. We should remember, however, that this enrollment includes 1,200,000 veterans borrowed from an older age group, and actually the percentage of college students among youth of the usual college age is even less today than it was in 1941. In constricting the educational opportunities of our young people we are building a cumulative national deficit, and we cannot permit this condition to continue.

The Commission does not expect that its pronouncement on the number of young people who should attend college will be unanimously acceptable. The fact remains, however, that the greatest testing program in history has simply confirmed the generally accepted assumption that a high native intelligence is rather widely distributed among the American people. The Commission believes that failure to develop this intelligence to the utmost is not only a wastage of our most precious natural resource, but

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also a denial of our basic concept of equality of opportunity.

There are some who say that such a massive program of higher education can lead only to a disgruntled intelligentsia ripe for extreme political movements of the right or of the left. This, of course, was true in Germany, but the premise has little basis here. In the first place, the humane tradition of our system of education sets it apart, in most respects, from the German pattern, and we must continually strengthen this tradition as one of our surest bulwarks of democracy. Secondly, our system of government requires a very widely informed and a socially and morally competent people. We cannot overproduce socially intelligent citizens.

Thomas Robert Malthus, the English economist, in 1798 put forth the doleful theory that the increase of population would outstrip the means of production and bring eventual starvation. Malthus has since been proven wrong, for even our present shortages are relatively unrelated to our total means of production.

In the Malthus tradition, there are those today who hold that any material increase of college-trained personnel will outstrip the number of jobs requiring such training. But what they fail to consider is the creative leaven which is a part of effective education. For the present let me simply advance the premise that more education will produce more jobs, services, arts, and crafts and, better still, should aid us in raising generally our moral and social perspective—and this moral and social perspective must be raised. In Volume I, the Commission declares:

> In a real sense the future of our civilization depends on the direction education takes, not just in the distant future, but in the days immediately ahead. The three objectives selected by the Commission as deserving topmost priority are . . . to bring to all the people of the Nation:
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> Education for a fuller realization of democracy in every phase of living.
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> Education directly and explicitly for international understanding and cooperation.
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> Education for the application of creative imagination and trained intelligence to the solution of social problems and to the administration of public affairs.

What does this mean in terms of "Insuring the Adequacy of Scientific Personnel Resources"? Let me quote again from the first volume of the Commission:

> It is imperative that we find not only the will but the ways and means to reorder our lives and our institutions so as to make science and technology contribute to man's well-being rather than to his destruction. We need to experiment boldly in the whole area of human relations, seeking to modify existing institutions and to discover new workable patterns of association. We must bring our social skills quickly abreast of our skills in natural science.

The irony is that the very developments which have precipitated this critical situation seem likely to aggravate it. The spectacular achievements of natural science, especially during World War II, are certain to bring increased pressure for scientific advance. Already it is suggested that scientific pre-eminence will be the keystone of national security. But will it? Can we depend solely, or even primarily, on natural science for our national safety?

In the recent war the margin of our scientific and technical superiority over our enemies was dangerously narrow at times, and the scientists themselves are warning us at every opportunity that they can provide no defense against the new weapons. It is they who are proclaiming most vigorously that this defense can be found only in the realm of social and political organization on a world-wide scale. To quote Albert Einstein for one: "Being an ingenious people, Americans find it hard to believe there is no foreseeable defense against atomic bombs. But this is a basic fact. Scientists do not even know of any field which promises us any hope of adequate defense. . . . Our defense is in international law and order."

Arnold Toynbee has identified in the history of civilizations what he calls the rhythm of "Challenge and Response." This is an interesting designation for what we have known usually as the survival of the fittest. His massive appraisal is simply a reiteration of what happens when political and social sclerosis grips a once-virile commonwealth. Those civilizations which do not meet the challenge fail. Those which have met the challenge in the past have often done so through an empirical procedure, made possible by time and circumstance. But the chances for such success on a trial-and-error basis have diminished steadily with the increasing complexity of social events. Today, although our power for influencing social and physical forces is greater than at any time in our history, the problems which must be faced have grown proportionately in their complexity. But we are nearer than ever before to the point where we can *control* our history. It is a prospect so staggering in its immensity that for the moment it must be, as described in the less-well-known second verse of our National Anthem, "the shore dimly seen."

Let me point out that in emphasizing education for democracy the Commission in no sense desires to suggest limitations on progress and on experimentation in other directions. Neither does its stand for a vast expansion in enrollment carry the idea of unguided increases in all subject matter fields. The recommendations are very explicit on this point:

> In accepting its fundamental responsibility to help individuals prepare to make a living and to help society

get on with its work, higher education cannot rely on chance or on automatic processes to determine the number of persons it is to train in the various professions.

Educators must study carefully and continuously the professional requirements of society, so that the number of graduates in each field may approximate as closely as possible the estimated need for that kind of service.

Estimating the future needs in the various occupations and the number of persons to be trained to meet the needs is a complicated process in which many factors of varying weight must be taken into account and certain basic assumptions must be made. It is easy to go wrong in such attempts at forecast. Nonetheless, rational planning for the vocational programs of higher education must be based on the best expert estimates that can be made.

A thorough and continuing national survey of professional needs is necessary and should be developed promptly, but only after careful consideration and clear decision as how it is to be made and under whose auspices. Without such a decision, as awareness of the need for an occupational survey grows, many of them will be undertaken. And not only is this kind of duplication costly; it may well contribute to the danger of competition in the recruiting of professional personnel. Such competition is especially likely to occur in fields and periods of manpower shortage, although these are precisely the places and times when carefully planned use of manpower is most necessary to the Nation's welfare.

The Commission felt strongly that the major impetus for adjusting the number of professional personnel in terms of social needs should come from within the various professional groups. Its Report lashes at the tendency in some professions to restrict numbers arbitrarily in order to maintain prestige of the profession and the market value of its services. Natural factors, such as adequate facilities and high costs, are restrictive enough; deliberate limitation, regardless of social need, cannot be defended. If we could find a way of securing fair and equal distribution of the graduates of professional schools, we probably should discover that we are nearer starvation than saturation in many of the professions.

The Commission's stand on these matters is direct and constructive:

> What we need in this situation is social imagination. Instead of being afraid that we will overcrowd the professions, we should seek ways and means of expanding their horizons of social usefulness, of multiplying opportunities for professional service, of creating new professions and more employment opportunities in some of the old ones.
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> Our society has not reached the limits of its development. In the whole area of medicine and public health there is need for a vastly expanded professional service. The growing field of communication will open up an array of new occupations on the technical and professional levels. So will developments to come in regional and community planning, in social service, in public administration, in clinical psychology and psychiatry, in personal and social counseling services of all sorts.
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> The new opportunities, occupations, and professions that may come with the development of atomic power and its application to industrial purposes cannot be foreseen. This development is likely to effect changes in our ways of living and working as far reaching as any that attended the historic industrial revolution.
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> Higher education must be alert to anticipate new social and economic needs, and to keep its programs of professional training in step with the requirements of a changing and expanding cultural, social, and economic order.

Let me emphasize that in advocating the selective expansion of higher education the Commission is greatly concerned that there be no dilution in the quality of the work offered. There is an abiding overtone throughout the Commission's Report looking toward the constant improvement of the educational process. In the physical and natural sciences, the Commission has put forward proposals aimed at equipping the prospective scientist with a broad understanding of the social issues related to his subject-matter field. These proposals have been discussed briefly. It is time now to turn to the matter of the actual subject-matter education.

Volume IV of the Commission's Report, *Staffing higher education,* will deal in some detail with the actual procedures recommended for improving the student's mastery of research training techniques. Along this line, there are a number of unique proposals to which I commend your attention.

Many of you are doubtless convinced that a program of the magnitude suggested by the Commission is greatly to be desired. At the same time you are undoubtedly wondering how the students could be found to warrant a program of such size. It is perfectly true that no such expansion of enrollment is possible under existing circumstances. For every college student—good or bad—enrolled in 1941, there were at least two other young people, within the 18–21 age bracket, with above-average mental ability, yet unable to enroll. This condition has been prevalent for years and, under the pressure of higher tuition and living costs, is worsening steadily.

The Commission does not subscribe to the belief that higher education should be confined to an intellectual elite, much less an elite drawn from high-income families. Yet, in many of the professions, and even in the straight liberal arts course, this condition is becoming increasingly prevalent. The Temporary Commission to Study the Need for a State University in New York has compiled con-

vincing evidence to attest the wide distribution of intelligence among children in all income groups. There is tragic and overwhelming evidence, too, supporting the absolute lack of correlation between high mental ability and college attendance. The President's Commission sums up its position with these words:

> It is the responsibility of the community, at the local, State, and National levels, to guarantee that financial barriers do not prevent any able and otherwise qualified young person from receiving the opportunity for higher education. There must be developed in this country the widespread realization that money expended for education is the wisest and soundest of investments in the national interest. The democratic community cannot tolerate a society based upon education for the well-to-do alone. If college opportunities are restricted to those in the higher income brackets, the way is open to the creation and perpetuation of a class society which has no place in the American way of life.

The economic barrier is not alone as a major deterrent to higher educational opportunity. For thousands of our youth, regional, racial, religious, and similar issues unduly constrict access to higher education in many institutions. Against such obstacles the Commission is strongly committed:

> Discrimination in the admission of college students because of an individual's race, creed, color, sex, national origin, or ancestry is an antidemocratic practice which creates serious inequalities in the opportunity for higher education. The Commission is opposed to discrimination and believes it should be abandoned.

Further, the Commission believes that:

> Colleges have a unique opportunity to offer an experience in tolerance and understanding which grows out of democratic relations with students from various national and religious backgrounds. Colleges should become laboratories of inter-race and interfaith fellowship.
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> This Commission urges educational institutions to act as pioneering agents of leadership against discrimination. Each institution should conscientiously plan and prosecute a well-organized program to reduce and, where possible, promptly to eliminate discrimination, not only by correcting its policies and practice, but also by educating its students to seek the abolition of discriminatory practices in all their manifestations.

Let me point out that the Commission is fully aware of the explosive social content of this problem. There is full recognition also that the changes advocated cannot occur overnight. I think the Commission's solution can best be described as "expedited evolution."

It is often said that colleges and universities reflect rather than shape public attitudes; that educational institutions cannot run counter to community sentiment, tradition, and alumni attitudes. To some extent, of course, this is true. But this factor cannot be made the excuse for inaction within the colleges.

> When colleges admit all qualified students—when scholarship, ability, and other defensible standards are made the basis of admission rather than race, color, creed, sex, national origin or ancestry—then a democratic solution will have been reached. When our colleges and universities are being vigorously administered in ways which promote equal opportunity for all qualified students, the local communities and the community of the Nation cannot help but follow such leadership in other areas of our national life.

Discrimination and segregation affect a relatively small percentage of our youth of college age. Economic handicaps play a major role in constricting the higher educational opportunities of literally millions of our ablest young people. The Commission is operating on the premise that the most conscientious efforts of individual families and of the several states will be inadequate to care for a large proportion of these poor but talented youth. To this end, the Commission has evolved proposals for a national program of scholarships and fellowships which could eventually amount to nearly $1,000,000,000 a year.

The Commission is convinced that existing scholarship and fellowship funds are inadequate if higher education is to fulfill its responsibility to the individual, to the Nation, and to the world. Consequently, it is advocating that, beginning in 1948, there be established a National program of Federal scholarships in the form of grants-in-aid for at least 20% of all undergraduate, nonveteran students. The Commission is convinced that individual need, coupled with the requisite qualifications of total personal abilities and interests, should be the controlling factor in the selection of the recipients of such aid. The amount of this aid for the individual student might go as high as $800 per year. It is believed that such a program might provide aid for as many as 300,000 students at a total cost of $120,000,000 for the first year.

The Commission proposes that, as the number of nonveteran students rises, the amount of money available and the number of students aided should increase for the 5-year period between 1948 and 1953. At the end of that time, the program would be reexamined in order to determine if variations were needed.

The Commission is also anxious to provide appropriate and adequate encouragement of graduate study as a means of assuring the Nation of an adequate supply of highly trained personnel. To this end, it has been recommended that Federal funds be appropriated to provide for the establishment of a

national program of fellowships. The amount of each fellowship is set at $1,500 per year. Provision should be made for 10,000 such grants in 1948–49; 20,000 in 1949–50; and 30,000 in 1950–51 through 1952–53. Recipients should be selected on the basis of a national competitive examination. Each fellowship would continue for a maximum of three years if the student maintained acceptable academic standards of attainment, with explicit renewal each year to qualifying students. The holder of each fellowship would be allowed to select his own field of graduate study and to pursue it at an institution of his own choice, if the university selected offers appropriate courses in his chosen field.

The program here recommended would entail a Federal appropriation of $15,000,000 for the academic year 1948–49, $30,000,000 for 1949–50, and $45,000,000 for 1950–51 and the two succeeding years. This appropriation is in addition to that proposed for the Federal scholarship program and in addition to funds provided for other fellowships already made available in specialized fields.

The Commission recommends that, to carry out the scholarship and fellowship programs proposed, an appropriate and nationally representative Federal Board for Student Aid should be created. This board should be associated closely with the Federal agency primarily responsible for higher education.

Only as the opportunity for higher education is equalized for every potential student who has the interest and the ability to profit from college and university study at both undergraduate and graduate levels, can the ideals of democracy in education be realized. The program of scholarships and fellowships here proposed is not for the welfare of the individual alone, but is vital in the national interest.

This vast system of scholarships and fellowships should be supplemented by immediate action on the part of the colleges in reducing their fees. The Commission recommends that in publicly controlled institutions there be no tuition or fees in the 13th and 14th school years and that fees above the 14th grade be cut back to the level prevailing in 1939. This proposal is tied directly to one of the Commission's most important recommendations—*the nationwide establishment of community colleges to provide free instruction for the 13th and 14th school years.* This massive expansion of educational opportunity will go far toward increasing the reservoir of talent from which our top-flight scholars may be recruited.

How can we insure the adequacy of our scientific personnel resources? I hope that more and more we can focus our thinking on this issue in terms of what we want America's future to be. I believe that future can be as satisfying as we choose to make it. The events of the 20th Century have thrust upon us an unprecedented opportunity for choosing a future of security and abundance for all. That choice can be made and sustained only if we continue to improve the social and moral responsibility of all of our citizens. In the eyes of the Commission, subject-matter competence alone is no longer the mark of an educated man. The colleges are now obliged to produce an ever-increasing number of humane and socially alert citizens. Advances in nuclear research have given us a power potential which in 1947 is 40,000,000 times greater than that which was available through all of our power combined in 1939. We have certainly made no commensurate advance in our ability to give socially constructive direction to that power. The direction of this great power toward the achievement of a free and secure world is the challenge which the rhythm of history has brought to 20th-century America.

The fullest development of our human resources, based upon the broadest possible expansion of educational opportunities, answers that challenge. And the answer is given in a manner consonant with the highest aspirations of the American tradition of democracy.