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HIGHER EDUCATION
FOR
AMERICAN DEMOCRACY

HIGHER EDUCATION FOR AMERICAN DEMOCRACY

A Report of The President's Commission on Higher Education

Volume I. Establishing the Goals

Volume II. Equalizing and Expanding Individual Opportunity

Volume III. Organizing Higher Education

Volume IV. Staffing Higher Education

Volume V. Financing Higher Education

Volume VI. Resource Data

HARPER & BROTHERS PUBLISHERS NEW YORK

PRINTED IN THE UNITED STATES OF AMERICA

Letter of Transmittal

THE PRESIDENT'S COMMISSION ON HIGHER EDUCATION

WASHINGTON, D. C., *December 11, 1947.*

DEAR MR. PRESIDENT:

On July 13, 1946, you established the President's Commission on Higher Education and charged its members with the task of examining the functions of higher education in our democracy and the means by which they can best be performed.

The Commission has completed its task and submits herewith a comprehensive report "Higher Education for American Democracy." The magnitude of the issues involved prompted the Commission to incorporate its findings and recommendations in a series of six volumes of which this is the first.

The Commission members and the staff are grateful for the opportunity which you have given us to explore so fully the future role of higher education which is so closely identified with the welfare of our country and of the world.

Respectfully yours,

GEORGE F. ZOOK,
Chairman.

The Honorable
The PRESIDENT OF THE UNITED STATES.

President's Commission on Higher Education

GEORGE F. ZOOK, *Chairman*

SARAH G. BLANDING
O. C. CARMICHAEL
ARTHUR H. COMPTON
HENRY A. DIXON
MILTON S. EISENHOWER
JOHN R. EMENS
ALVIN C. EURICH
DOUGLAS S. FREEMAN
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T. R. MCCONNELL
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MARK STARR
GEORGE D. STODDARD
HAROLD H. SWIFT
ORDWAY TEAD
GOODRICH C. WHITE
Rabbi STEPHEN S. WISE

FRANCIS J. BROWN, *Executive Secretary*

A. B. BONDS, JR., *Assistant Executive Secretary*

Letter of Appointment of Commission Members

THE WHITE HOUSE

WASHINGTON, D. C., *July 13, 1946.*

DEAR ——— ———:

As veterans return to college by the hundreds of thousands, the institutions of higher education face a period of trial which is taxing their resources and their resourcefulness to the utmost. The Federal Government is taking all practicable steps to assist the institutions to meet this challenge and to assure that all qualified veterans desirous of continuing their education have the opportunity to do so. I am confident that the combined efforts of the educational institutions, the States, and the Federal Government will succeed in solving these immediate problems.

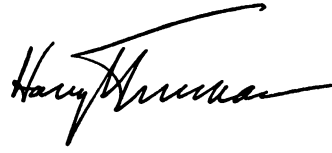
It seems particularly important, therefore, that we should now reexamine our system of higher education in terms of its objectives, methods, and facilities; and in the light of the social role it has to play.

These matters are of such far-reaching national importance that I have decided to appoint a Presidential Commission on Higher Education. This Commission will be composed of outstanding civic and educational leaders and will be charged with an examination of the functions of higher education in our democracy and of the means by which they can best be performed. I should like you to serve on this body.

Among the more specific questions with which I hope the Commission will concern itself are: ways and means of expanding educational opportunities for all able young people; the adequacy of curricula, particularly in the fields of international affairs and social understanding; the desirability of establishing a series of intermediate technical institutes; the financial structure of higher education with particular reference to the requirements for the rapid expansion of physical facilities. These topics of inquiry are merely suggestive and not intended to limit in any way the scope of the Commission's work.

I hope that you will find it possible to serve on this Commission.

Very sincerely yours,



Acknowledgments

The Commission gratefully acknowledges the enthusiastic cooperation and the invaluable assistance it has received from educational institutions and from individuals, organizations, and agencies both in and out of Government.

Dr John R. Steelman, the Assistant to the President, in his official capacity as liaison between the various agencies of Government and the Commission took a deep and personal interest in its work.

Dr. J. Donald Kingsley, former Program Coordinator in the White House office, was extremely helpful in the initial development of the scope and content of the Commission's program. Acknowledgment is also due to John L. Thurston of Dr. Steelman's office for his work in forwarding the activities of the Commission.

Almost every agency and department of Government assisted the Commission in its task. Special appreciation is expressed to the United States Office of Education, the Bureau of the Census, the Bureau of Labor Statistics, the Department of the Army and the Department of the Navy, the Department of Agriculture, and the Bureau of the Budget.

Through the cooperation of the American Council of Learned Societies, the American Council on Education, the National Research Council, and the Social Science Research Council, a special study was made of the faculties of thirty colleges and universities. The American Association of University Professors cooperated in extending the study of faculty personnel to members of its local chapters. The Association of Land Grant Colleges and Universities conducted a special survey of the extension activities of its member institutions. At the request of the Commission more than 50 professional and lay organizations submitted statements, or assembled data of much value.

Institutions of higher education and State Departments of Education in every State gladly and promptly supplied information requested by the Government agencies through which the Commission carried on much of its research activities.

This demonstration of cooperation reflects the deep public awareness of the problems which face higher education, and is a matter of much gratification to the Commission. It is hoped that these cooperative relationships may, in themselves, suggest a pattern for the continuing cooperation of individuals, organizations, Government agencies, and institutions interested in the future welfare of higher education in America.

The following served as Consultants to the Commission in the

preparation of these separate volumes: Dr. Newton Edwards, Professor of Education at the University of Chicago, on Volume I; Dr. Ordway Tead, Chairman of the Board of High Education of New York City and a member of the Commission, on Volume II; Dr. Fred J. Kelly, formerly Chief of the Division of Higher Education, U. S. Department of Education, and a member of the Commission, on Volume III; Dr. L. D. Haskew, Dean of the School of Education, University of Texas, on Volume IV; Dr. James E. Allen, Jr., Assistant Professor of Education, Syracuse University, on Volume V.

The Commission is especially indebted to the members of its staff for the loyal, persevering and intelligent way in which they have served the Commission. Dr. Francis J. Brown, Executive Secretary, A. B. Bonds, Jr., Assistant Executive Secretary, and Anita R. Kury, who served as statistician to the Commission, deserve special mention.

VOLUME ONE

Establishing the Goals

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PREFACE

The Task of This Commission

The President's Commission on Higher Education has been charged with the task of defining the responsibilities of colleges and universities in American democracy and in international affairs—and, more specifically, with reexamining the objectives, methods, and facilities of higher education in the United States in the light of the social role it has to play.

The colleges and universities themselves had begun this process of reexamination and reappraisal before the outbreak of World War II. For many years they had been healthily dissatisfied with their own accomplishments, significant though these have been. Educational leaders were troubled by an uneasy sense of shortcoming. They felt that somehow the colleges had not kept pace with changing social conditions, that the programs of higher education would have to be repatterned if they were to prepare youth to live satisfyingly and effectively in contemporary society.

One factor contributing to this sense of inadequacy has been the steadily increasing number of young people who seek a college education. As the national economy became industrialized and more complex, as production increased and national resources multiplied, the American people came in ever greater numbers to feel the need of higher education for their children. More and more American youth attended colleges and universities, but resources and equipment and curriculum did not keep pace with the growing enrollment or with the increasing diversity of needs and interests among the students.

World War II brought a temporary falling off in enrollment, but with the war's end and the enactment of Public Laws 16 and 346, the "Veterans' Rehabilitation Act," and "The G. I. Bill of Rights," the acceleration has resumed. The increase in numbers is far beyond the capacity of higher education in teachers, in buildings, and in equipment. Moreover, the number of veterans availing themselves of veterans' educational benefits falls short of the numbers that records of military personnel show could benefit from higher education. Statistics reveal that a doubling of the 1947–48 enrollment in colleges and universities will be entirely possible within 10 to 15 years, if facilities and financial means are provided.

This tendency of the American people to seek higher education in ever greater numbers has grown concurrently with an increasingly critical need for such education. To this need several developments have contributed:

(a) Science and invention have diversified natural resources, have multiplied new devices and techniques of production. These have altered in radical ways the interpersonal and intergroup relations of Americans in their work, in their play, and in their duties as citizens. As a consequence, new skills and greater maturity are required of youth as they enter upon their adult roles. And the increasing complexity that technological progress has brought to our society has made a broader understanding of social processes and problems essential for effective living.

(b) The people of America are drawn from the peoples of the entire world. They live in contrasting regions. They are of different occupations, diverse faiths, divergent cultural backgrounds, and varied interests. The American Nation is not only a union of 48 different States; it is also a union of an indefinite number of diverse groups of varying size. Of and among these diversities our free society seeks to create a dynamic unity. Where there is economic, cultural, or religious tension, we undertake to effect democratic reconciliation, so as to make of the national life one continuous process of interpersonal, intervocational, and intercultural cooperation.

(c) With World War II and its conclusion has come a fundamental shift in the orientation of American foreign policy. Owing to the inescapable pressure of events, the Nation's traditional isolationism has been displaced by a new sense of responsibility in world affairs. The need for maintaining our democracy at peace with the rest of the world has compelled our initiative in the formation of the United Nations, and America's role in this and other agencies of international cooperation requires of our citizens a knowledge of other peoples—of their political and economic systems, their social and cultural institutions—such as has not hitherto been so urgent.

(d) The coming of the atomic age, with its ambivalent promise of tremendous good or tremendous evil for mankind, has intensified the uncertainties of the future. It has deepened and broadened the responsibilities of higher education for anticipating and preparing for the social and economic changes that will come with the application of atomic energy to industrial uses. At the same time it has underscored the need for education and research for the self-protection of our democracy, for demonstrating the merits of our way of life to other peoples.

Thus American colleges and universities face the need both for improving the performance of their traditional tasks and for assuming

the new tasks created for them by the new internal conditions and external relations under which the American people are striving to live and to grow as a free people.

It is against the background of these conditions that the President's Commission has been called upon to reexamine higher education in the United States. In doing this, the Commission has undertaken to appraise our most urgent national needs, to define in terms of those needs the major goals toward which higher education should move, and to indicate certain changes in educational policy and program which it considers necessary for the attainment of these goals.

A total of six volumes will be issued by the Commission under the general title, "Higher Education for American Democracy."

This volume, "Establishing the Goals," sets the general pattern for the entire report.

Volume 2, "Equalizing and Expanding Individual Opportunity," is concerned with the barriers to equal opportunity for higher education and with the means of removing them.

Volume 3, "Organizing Higher Education," presents an appraisal of organizational problems at the national, State, and local levels.

Volume 4, "Staffing Higher Education," is the Commission's recommendation for a greatly expanded and improved program for the preparation and in-service education of faculty personnel.

Volume 5, "Financing Higher Education," is an appraisal of fiscal needs and policies necessary for the program of higher education recommended by the Commission.

Volume 6, "Resource Data," is a compilation of some of the basic information used by the Commission in preparing its reports.

Education for a Better Nation and a Better World

Education is an institution of every civilized society, but the purposes of education are not the same in all societies. An educational system finds its guiding principles and ultimate goals in the aims and philosophy of the social order in which it functions. The two predominant types of society in the world today are the democratic and the authoritarian, and the social role of education is very different in the two systems.

American society is a democracy: that is, its folkways and institutions, its arts and sciences and religions are based on the principle of equal freedom and equal rights for all its members, regardless of race, faith, sex, occupation, or economic status. The law of the land, providing equal justice for the poor as well as the rich, for the weak as well as the strong, is one instrument by which a democratic society establishes, maintains, and protects this equality among different persons and groups. The other instrument is education, which, as all the leaders in the making of democracy have pointed out again and again, is necessary to give effect to the equality prescribed by law.

THE ROLE OF EDUCATION

It is a commonplace of the democratic faith that education is indispensable to the maintenance and growth of freedom of thought, faith, enterprise, and association. Thus the social role of education in a democratic society is at once to insure equal liberty and equal opportunity to differing individuals and groups, and to enable the citizens to understand, appraise, and redirect forces, men, and events as these tend to strengthen or to weaken their liberties.

In performing this role, education will necessarily vary its means and methods to fit the diversity of its constituency, but it will achieve its ends more successfully if its programs and policies grow out of

and are relevant to the characteristics and needs of contemporary society. Effective democratic education will deal directly with current problems.

This is not to say that education should neglect the past—only that it should not get lost in the past. No one would deny that a study of man's history can contribute immeasurably to understanding and managing the present. But to assume that all we need do is apply to present and future problems "eternal" truths revealed in earlier ages is likely to stifle creative imagination and intellectual daring. Such an assumption may blind us to new problems and the possible need for new solutions. It is wisdom in education to use the past selectively and critically, in order to illumine the pressing problems of the present.

At the same time education is the making of the future. Its role in a democratic society is that of critic and leader as well as servant; its task is not merely to meet the demands of the present but to alter those demands if necessary, so as to keep them always suited to democratic ideals. Perhaps its most important role is to serve as an instrument of social transition, and its responsibilities are defined in terms of the kind of civilization society hopes to build. If its adjustments to present needs are not to be mere fortuitous improvisations, those who formulate its policies and programs must have a vision of the Nation and the world we want—to give a sense of direction to their choices among alternatives.

What America needs today, then, is "a schooling better aware of its aims." Our colleges need to see clearly what it is they are trying to accomplish. The efforts of individual institutions, local communities, the several States, the educational foundations and associations, and the Federal Government will all be more effective if they are directed toward the same general ends.

In the future as in the past, American higher education will embody the principle of diversity in unity: each institution, State, or other agency will continue to make its own contribution in its own way. But educational leaders should try to agree on certain common objectives that can serve as a stimulus and guide to individual decision and action.

A TIME OF CRISIS

It is essential today that education come decisively to grips with the world-wide crisis of mankind. This is no careless or uncritical use of words. No thinking person doubts that we are living in a decisive moment of human history.

Atomic scientists are doing their utmost to make us realize how easily and quickly a world catastrophe may come. They know the

fearful power for destruction possessed by the weapons their knowledge and skill have fashioned. They know that the scientific principles on which these weapons are based are no secret to the scientists of other nations, and that America's monopoly of the engineering processes involved in the manufacture of atom bombs is not likely to last many years. And to the horror of atomic weapons, biological and chemical instruments of destruction are now being added.

But disaster is not inevitable. The release of atomic energy that has brought man within sight of world devastation has just as truly brought him the promise of a brighter future. The potentialities of atomic power are as great for human betterment as for human annihilation. Man can choose which he will have.

The possibility of this choice is the supreme fact of our day, and it will necessarily influence the ordering of educational priorities. We have a big job of reeducation to do. Nothing less than a complete reorientation of our thinking will suffice if mankind is to survive and move on to higher levels.

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.

This crisis is admittedly world-wide. All nations need reeducation to meet it. But this fact does not lessen the obligation of colleges and universities to undertake the task in the United States. On the contrary, our new position in international affairs increases the obligation. We can do something about the problem in our own country and in occupied areas, and hope that by so doing we will win the friendly cooperation of other nations.

The fundamental goal of the United States in its administration of occupied areas must be the reeducation of the populations to the individual responsibilities of democracy. Such reeducation calls for the immediate removal of authoritarian barriers to democratic education, and inculcation of democratic ideals and principles through the guidance, example, and wisdom of United States occupation forces. The primacy of the objective of reeducation, however, appears too often to have been lost sight of in the press of day-to-day administrative problems. Yet every contact by Americans with Germans or Japanese either strengthens or retards the achievement of the goal. Evidence reaching this Commission indicates that while many specific existing barriers to democratic reform have been removed, new obstacles are being created daily by inadequacies of educational personnel and policy. Cognizant of the great responsibility of American education to promote democratic ideals in occupied areas, this Commission recommends the formation of a special committee to appraise

progress and offer advice to the Departments of State and National Defense on educational policy and administration in occupied areas.

The schools and colleges are not solely or even mainly to blame for the situation in which we find ourselves, or that the responsibility for resolving the crisis is not or can not be entirely theirs. But the scientific knowledge and technical skills that have made atomic and bacteriological warfare possible are the products of education and research, and higher education must share proportionately in the task of forging social and political defenses against obliteration. The indirect way toward some longer view and superficial curricular tinkering can no longer serve. The measures higher education takes will have to match in boldness and vision the magnitude of the problem.

In the light of this situation, the President's Commission on Higher Education has attempted to select, from among the principal goals for higher education, those which should come first in our time. They are to bring to all the people of the Nation:

Education for a fuller realization of democracy in every phase of living.

Education directly and explicitly for international understanding and cooperation.

Education for the application of creative imagination and trained intelligence to the solution of social problems and to the administration of public affairs.

TOWARD A FULLER REALIZATION OF DEMOCRACY

The dramatic events of the last few years have tended to focus our attention on the need for a world view, for global vision, for international-mindedness. This is an urgent necessity, but it would be unwise to let this necessity blind us to the fact that America's leadership in world affairs can be effective only as it rests upon increasing strength and unity at home.

Understanding Among Men

Harmony and cooperation among peoples of differing races, customs, and opinions is not one thing on the regional or national level and another on the international. The problem of understanding among men is indivisible, and the mutual acceptance and respect upon which any reliable international cooperation must depend, begin at home.

If we cannot reconcile conflicts of opinion and interest among the diverse groups that make up our own Nation, we are not likely to succeed in compromising the differences that divide nations. If we cannot make scientific and technological progress contribute to the greater well-being of all our own citizens, we shall scarcely be able to exercise leadership in reducing inequality and injustice among the other peoples

of the world. If we cannot achieve a fuller realization of democracy in the United States, we are not likely to secure its adoption willingly outside the United States.

A century ago even political thinkers who did not approve the trend toward democracy accepted its eventual triumph as inevitable. Today we cannot be so sure that the future of the democratic way of life is secure. Within recent decades democratic principles have been dangerously challenged by authoritarianism, and World War II did not by any means resolve the conflict. The issue of a free society versus totalitarianism is still very much with us. It has been called "the critical and supreme political issue of today."

It is the American faith that the ultimate verdict in this conflict will go to that form of human association and government which best serves the needs and promotes the welfare of the people. We firmly believe that democracy is this form, but we shall convince others only by demonstration, not by words.

It is certainly to be hoped that we of America will continue to give democracy, and not its opponents, our full moral and economic support wherever efforts toward freedom appear, but we can do most to strengthen and extend the democratic ideal in the world by increasing the vigor and effectiveness of our achievement at home. Only to the extent that we make our own democracy function to improve the physical and mental well-being of our citizens can we hope to see freedom grow, not vanish, from the earth.

"To preserve our democracy we must improve it." Surely this fact determines one of today's urgent objectives for higher education. In the past our colleges have perhaps taken it for granted that education for democratic living could be left to courses in history and political science. It should become instead a primary aim of all classroom teaching and, more important still, of every phase of campus life.

Development of the Individual

The first goal in education for democracy is the full, rounded, and continuing development of the person. The discovery, training, and utilization of individual talents is of fundamental importance in a free society. To liberate and perfect the intrinsic powers of every citizen is the central purpose of democracy, and its furtherance of individual self-realization is its greatest glory.

A free society is necessarily composed of free citizens, and men are not made free solely by the absence of external restraints. Freedom is a function of the mind and the spirit. It flows from strength of character, firmness of conviction, integrity of purpose. It is channeled by knowledge, understanding, and the exercise of discriminating

judgment. It consists of freedom of thought and conscience in action. Free men are men who not only insist on rights and liberties but who of their own free will assume the corresponding responsibilities and obligations.

If our colleges and universities are to graduate individuals who have learned how to be free, they will have to concern themselves with the development of self-discipline and self-reliance, of ethical principles as a guide for conduct, of sensitivity to injustice and inequality, of insight into human motives and aspirations, of discriminating appreciation of a wide range of human values, of the spirit of democratic compromise and cooperation.

Responsibility for the development of these personal qualities cannot be left as heretofore to some courses or a few departments or scattered extracurricular organizations; it must become a part of every phase of college life.

Social Responsibility

Higher education has always attempted to teach young people both spiritual and material values. The classroom has imparted the principle of collective responsibility for liberty—the rule that no one person's right to freedom can be maintained unless all men work together to make secure the freedom of all.

But these efforts have not always been effective. All too often the benefits of education have been sought and used for personal and private profit, to the neglect of public and social service. Yet individual freedom entails communal responsibility. The democratic way of life can endure only as private careers and social obligations are made to mesh, as personal ambition is reconciled with public responsibility.

Today, all are agreed, we need as never before to enlist all the abilities and energies we can command in the conduct of our common affairs. Today less than ever can we afford the social loss that occurs when educated men and women neglect their obligations as citizens and deliberately refrain from taking part in public affairs.

To preserve everybody's right to life, liberty, and the pursuit of happiness, then, we need first to become aware of the fact that there is no longer room for isolationism in any successful life, personal or national. No man can live to himself alone, expecting to benefit from social progress without contributing to it.

Nor can any *group* in our society, organized or unorganized, pursue purely private ends and seek to promote its own welfare without regard to the social consequences of its activities. Business, industry, labor, agriculture, medicine, law, engineering, education . . . all these modes of association call for the voluntary development of codes of conduct, or the revision of such codes as already exist, to harmonize the special interests of the group with the general welfare.

Toward these ends, higher education must inspire its graduates with high social aims as well as endow them with specialized information and technical skill. Teaching and learning must be invested with public purpose.

Meaning of Democracy

Basic to the practice of democracy is a clear understanding of its meaning. This resides in the human values and ethical ideas on which democratic living is based.

Democracy is much more than a set of political processes. It formulates and implements a philosophy of human relations. It is a way of life—a way of thinking, feeling, and acting in regard to the associations of men and of groups, one with another. The assumption, judgments, values, and necessities of this way of life have been set down by many great minds of the Western tradition and they are embodied in the documents that make up the American bible of democracy: such documents as the Declaration of Independence, the Constitution and its Bill of Rights, the papers of Thomas Jefferson, the addresses of Abraham Lincoln, the Atlantic Charter.

The fundamental concept of democracy is a belief in the inherent worth of the individual, in the dignity and value of human life. Based on the assumption that every human being is endowed with certain inalienable rights, among which are life, liberty, and the pursuit of happiness, democracy requires of its adherents a jealous regard, not only for their own rights, but equally for the similar rights of others.

From this basic tenet have derived the specific ingredients in the American idea of democracy; the right of all men to equality of opportunity, the equal right of all citizens to vote and to hold office, the rights of religious liberty, freedom of speech and all forms of expression, freedom of association, freedom from want and from fear and ignorance; the obligation of the majority in power to respect and protect the rights of the minority.

The Government of our country embodies the effort to express these principles and to effect them in practice. Its institutions and agencies are based on the ground plan of the Constitution, amended by experience and modified in form and function through trial and error. Modifications are made whenever the people come to feel that changes are necessary in order to realize more effectively the ends of human betterment and individual development which democratic government is intended to serve.

The processes and institutions of democracy are not static or fixed; it is essential that they be flexible, capable of adaptation to the changing needs and conditions of men. The everlasting moral essence of

democracy lies in its fundamental principles, not in its means and methods of the moment.

To educate our citizens only in the structure and processes of the American Government, therefore, is to fall far short of what is needed for the fuller realization of the democratic ideal. It is the responsibility of higher education to devise programs and methods which will make clear the ethical values and the concept of human relations upon which our political system rests. Otherwise we are likely to cling to the letter of democracy and lose its spirit, to hold fast to its procedures when they no longer serve its ends, to propose and follow undemocratic courses of action in the very name of democracy.

Processes of Democracy

Young people will be better fitted to perform the duties of citizenship with wisdom and vision if to an understanding of democratic principles they join a realistic knowledge of the actual processes by which the political, economic, and social life of the people is carried on.

It will help little toward the fuller realization of democracy to have our colleges and universities turn out a generation of impractical visionaries. Youth certainly should possess inspiring vision, but it should also be familiar with the procedures and institutions through which long-range social goals are achieved in our democracy. Citizens need to understand thoroughly the functioning of political parties, the role of lobbies and pressure groups, the processes of ward and precinct caucuses. They need to know not only the potential greatness of democracy, not only the splendor of its aspirations, but also its present imperfections in practice.

These imperfections are no cause for cynicism. In the relatively short span of our history we have made tremendous strides toward equity, justice, and freedom for all. We have deepened and widened our social conscience. We have come to demand and support programs of social action designed to free common men from poverty and insecurity and make them participants in the benefits of social and cultural progress.

We do not undervalue these accomplishments when we admit that they stop far short of our purpose. The discrepancies between America's democratic creed and how Americans live are still many and serious.

Democracy's Unfinished Business

Democracy rests upon a belief in the worth and dignity of human life, yet democratic nations within a generation have had forced upon them two world wars taking millions of human lives. Democracy is

dedicated to the proposition that all men are entitled to an equal chance to be free and to seek happiness, yet our society is plagued with inequalities, even in so fundamental a right as education. Democracy insists on freedom of conscience and expression, yet Americans often seek to deny this freedom to those who do not agree with the majority opinion of the moment. Democracy is designed to promote human well-being, yet many thousands of our citizens continue to live in poverty, disease, hunger, and ignorance. Democracy sets up reason as the final arbiter in human relations, yet the appeal to emotion and prejudice is more common and often more effective among us than the appeal to reason.

Only by seeing today's democracy in the light of our vision of democracy as it can be will we come to appreciate the size of the job that remains to be done. It is a task to challenge the energies of young people and one that is worthy of their passionate devotion. It must be so presented to them.

To recognize and admit defects is not to disparage democracy. It is merely to see clearly the extent of its unfinished business.

Allegiance to Democracy

Many thoughtful observers are convinced that one of America's urgent needs today is a continued commitment to the principles of democracy. These Americans are troubled by a seeming lack of purpose in our national life. They feel we have lost our sureness of the way toward a better tomorrow.

If we have lost our sense of direction, it is a serious matter in this period of rapid and revolutionary change. Societies, like men, need a sound core of clear purpose to keep them stable in the midst of swirling uncertainties. Only with a sure view of the goal toward which they are moving can they adapt wisely and well to changing conditions along the way, and upon a society's capacity for such adaptation rests its chance of survival.

The democratic ideal will provide this core of purpose for our people if we keep it a warm and living thing. When it is a vital vision of future good, it engages the passionate loyalties of youth. But young people will not dedicate themselves to a version of democracy whose vitality and whose results for the common man they believe to be in doubt.

It becomes, then, an urgent task for our scholars and our teachers to restate and revivify the ideals of democracy. Clearing away whatever has become outworn or been debased by tawdry uses, they must rephrase in dynamic form for our day the vision of free men in a free society, so that it may remain a living faith and an inspiring dream for the American people.

But putting the democratic faith into words, no matter how new

or how vital they are, is not enough. When the democratic spirit is deep and strong in a society, its expression is not limited to the sphere of government; it animates every phase of living: economic and social and personal as well as political, relations between man and man and among groups as well as within and among nations.

This integration of democratic principles into the active life of a person and a people is not to be achieved merely by studying or discussing democracy. Classroom teaching of the American tradition, however excellent, will not weave its spirit into the innermost fiber of the students. Experience in the give and take of free men in a free society is equally necessary. Democracy must be lived to be thoroughly understood. It must become an established attitude and activity, not just a body of remote and abstract doctrine—a way for men to live and work harmoniously together, not just words in a textbook or a series of slogans.

To achieve such practice in democratic action the President's Commission recommends a careful review of administrative policies in institutions of higher education. Revision may be necessary to give students every possible experience in democratic processes within the college community. Young people cannot be expected to develop a firm allegiance to the democratic faith they are taught in the classroom if their campus life is carried on in an authoritarian atmosphere.

Admittedly there is danger in seeking to inculcate in youth a passionate loyalty to one way of life. Rededication to democracy will necessarily involve the emotions as well as the intellect. Yet the allegiance we want dare not be unreasoning and intolerant, fanatic and self-righteous. If it is, it will only aggravate excessive nationalism that is at the root of current failures in international cooperation. The task of college faculties is to inspire in our young people a consuming enthusiasm for the democratic way of life and at the same time develop in them an active appreciation of different cultures and other peoples.

To state the seeming dilemma is to point the way out of it. The heart of democracy is a constant regard for the rights and freedoms of others, and this regard cannot stop short at national boundary lines. In the measure that our renewed commitment is to the fundamentals of democracy, it will set up no barrier to international understanding; it can only further cooperation among nations.

TOWARD INTERNATIONAL UNDERSTANDING AND COOPERATION

That citizens be equipped to deal intelligently with the problems that arise in our national life is important; that they bring informed

minds and a liberal spirit to the resolution of issues growing out of international relations is imperative.

Defense of Peace

Education for peace is the condition of our survival, and it must have a high priority in all our programs of education. In the words of the constitution of the United Nations Educational, Scientific, and Cultural Organization, wars begin in the minds of men and it is in the minds of men that the defenses of peace must be constructed. However much the political and economic arrangements of governments may contribute to world union, the peace must be founded upon the intellectual and moral union of mankind.

In a world in which technology is acting as a solvent of cultures, the historic conception of international relations—political, economic, and cultural—will have to be modified if contemporary civilization is to survive. No longer can peoples hope to build their security and the peace of the world on national strength and balance of power arrangements.

The competitive principle, so long dominant in international relations, must give place, if nations are to survive, to the principle of cooperation. Men will have to invent and perfect institutional forms—such as the United Nations, UNESCO, the International Monetary Fund, and yet others—through which this cooperation can effectively take place. But these institutional arrangements will have to be built upon and buttressed by an understanding among people—an understanding that embraces cultural heritage, value premises, political ideology, legitimate national interests, folkways, and patterns of sentiment and feeling.

If the peoples of the world are to work together to build a unified, prosperous, and peaceful world, there must be freedom of communication. And this freedom must include both the *agencies* and the *subject matter* of communication. Freedom of the press, of the radio, and of reporting must be maintained in all parts of the world if we are really to understand one another. Full and free discussion of all aspects of national and international life—including the basic facts involved in diplomatic relations—is essential in a world society of free men.

American institutions of higher education have an enlarged responsibility for the diffusion of ideas in the world that is emerging. They will have to help our own citizens as well as other peoples to move from the provincial and insular mind to the internationa! mind.

This will involve providing expanded opportunity in colleges and universities for the study of all aspects of international affairs: the nature and development of other civilizations and cultures; national-

ism in its relation to internationalism; the tensions leading to war as well as war itself; the ways in which war has been used as an instrument of national policy and the attitudes which nations have had in each war with respect to the justice of that war as they saw it—in other words, an analytical study of war and its causes as these have developed in the past.

Development of the international mind will also involve study of the effect of technology on the present world situation and analysis of the structure and operation of the various new world organizations designed to further international security and the peaceful solution of common problems.

Peace today is indivisible. Never again can war anywhere in the world be dismissed as a "local conflict" or a matter of "domestic jurisdiction." A threat to peace anywhere menaces the security of people everywhere. But we shall not achieve a stable and lasting peace if we think of it negatively as the mere absence of armed conflict. The creation and preservation of an affirmative peace demands the establishment of just and humane relationships among the peoples of the world, the development of a state of solidarity and mutual confidence in which men and women may live secure and satisfying lives.

Preparation for World Citizenship

In speed of transportation and communication and in economic interdependence the nations of the globe already are one world; the task is to secure recognition and acceptance of this oneness in the thinking of the people, so that the concept of one world may be realized psychologically, socially, and in good time politically. It is this task in particular that challenges our scholars and our teachers to lead the way toward a new way of thinking.

Traditionally the United States, having the conquest of a continental wilderness to occupy its energies and two mighty oceans to protect it, has sought to remain aloof from "foreign entanglements." But now foreign affairs are no longer foreign. The airplane and the radio have wiped out the ocean barriers; they have brought us next door to our neighbors overseas. And World War II and its aftermath have committed us to a responsible role in world affairs beyond any possibility of turning back to the illusive safety of detachment.

But the American people are not adequately prepared for world citizenship. The new role has come upon us so suddenly that we approach it with hesitation instead of with an exciting vision of its possibilities. Our thinking still bears marks of provincialism. We tend to see other countries and peoples in our own image and to view them with suspicion or dismiss them as inferior and backward when we find them different from ourselves.

For effective international understanding and cooperation we need to acquire knowledge of, and respect for, other peoples and their cultures—their traditions, their customs, and attitudes, their social institutions, their needs and aspirations for the future. We must learn to admit the possible worth of human values and ways of living we ourselves do not accept.

In the past the liberal arts college has stressed the history, arts, and institutions of Western culture, without giving much time or attention to the kinds of civilization that exist in other parts of the globe. In the new world it is not enough to know and understand our own heritage. Modern man needs to sense the sweep of world history in order to see his own civilization in the context of other cultures.

We need to perceive the rich advantages of cultural diversity. To a provincial mind cultural differences are irritating and frightening in their strangeness, but to a cosmopolitan and sensitive mind they are stimulating and rewarding. They are colorful elaborations on the common humanity of men everywhere. We must develop a deep sensitivity to the emotions, the hopes, and the needs of human beings everywhere and so come to accept, not merely in abstract terms but in concrete forms, the brotherhood and interdependence as well as the individuality of all men.

To fit ourselves for the world leadership that has fallen to America in this crucial moment of history, we shall have to acquire quickly a sympathetic understanding of the values and aspirations that move men in the vast areas of eastern Europe, Asia, Africa, South America, and the islands of the sea. We can gain this understanding both through a study of their historical development and through knowledge of their contemporary culture. Information about their current activities in science, industry, literature, and the arts will be an invaluable aid and can be secured in part through the exchange of persons and goods.

It is especially important that we acquaint ourselves with the oriental world. Asiatics constitute the largest single segment of the human race. Yet American undergraduates and graduates know little or nothing about the history, the present problems, or the future needs of these millions with whom our relations are certain to increase. We must study the Orient—not as a remote and static display of artifacts in a museum, but as a living and dynamic factor in our own society. The East is shaking off its traditional passive attitude toward the West and more than ever we shall feel the impact of its cultures.

American students should be encouraged to discover why the Oriental properly considers himself as much a person of refinement,

of ethical standards, and of religious values as any citizen of Western society. East and West are coming together in one world order. We could not stem this development if we wanted to; we can only prepare to deal with it intelligently.

It is equally important that we learn the ways of thinking and living of the Russian people. The vast Russian state, part European, part Asiatic, is one of the world's greatest powers and her policies and deeds are of supreme importance. Yet the average American college graduate knows almost nothing about Russia. The study of the U. S. S. R., in a sincere attempt to understand it, must be given an important place in American education.

Instruments of International Cooperation

Every effort should be made to secure free and uncensored communication among the peoples of the world, so that they may come to understand one another, recognize their interdependence, and accept the rule of life that personal and national rights are extended and made more secure through international agreement and the progress of world-wide well-being.

International understanding and cooperation cannot be expected to elimiate disagreement and conflict among nations. But no well-ordered or civilized society permits a conflict of interests among its individual citizens to be settled by violent assault. National societies have outlawed killing by accepting a code of laws and a system of courts to which the strong as well as the weak are subject. International society must follow the same course to the same goal.

The nations of the world now have a new agency for effecting international amity and cooperation. It remains for the peoples of the world to make a United Nations work—by insisting that their governments shall use it and shall strengthen it step by step, supporting it by international law and international courts to which all nations, the strong as well as the weak, shall be subject.

Toward achievement of this ultimate goal UNESCO promises much, because its work lies largely in those areas in which international communication has been characteristic from the beginning. National boundaries have never been maintained effectively in the world of letters, art, music, and science. The citizens of that world are all people of all nations to whom words and images and music and mathematical formulas have meaning. Through widening the citizenship in that world, UNESCO can make a great contribution to effective communication between peoples who are still separated by the boundaries of national states.

Helpful too will be actual experience wherever possible, within our own Nation and among nations, in working with people of different races and cultures on measures for human betterment and world

brotherhood. The exchange of persons between nations—experts and scholars in all fields, teachers and students, writers and artists, businessmen and farmers, clubwomen and labor leaders—will further understanding also, if these individuals go and come, not as casual sightseers, but as coworkers seeking to learn.

The radio, the motion picture, newspapers, magazines, books—all the mediums of mass communication that proved so effective in creating unity and morale during the recent war—can be equally effective in creating unity and the will for peace.

But the major part of the task will still devolve upon the schools and colleges. Education has taught the concept of common humanity and brotherhood; the schools and colleges have tried to create world-wide understanding; teachers have presented the ideal of peace and cooperation among men and nations. But in the past these things have been done too indirectly; now we must do them directly, explicitly, and urgently.

Unfortunately we are handicapped by the lack of appropriate tools and materials. Studies have revealed how inadequate and prejudiced many of our elementary and secondary school textbooks are in their treatment of other nations and peoples. At the college level many of our disciplines and courses bear incidentally on the problem, but rarely do we educate systematically and deliberately for world-wide understanding.

The geographic area study programs that are being set up in a number of universities are a commendable development in this direction, but as yet higher education in America does not even approximate adequate presentation of any of the major Eastern and Middle Eastern civilizations. For no one of these cultures is our supply of trained scholars adequate, and for many of them we have virtually no competent teachers at all. Any considerable improvement or extension of foreign-area studies in the colleges is dependent upon the creation of an adequate teaching personnel.

In addition, this personnel must be provided with the necessary tools. For example, it is estimated that any college contemplating serious study of Russian culture must have in its library a basic collection of at least 500 specified books, and there will be no adequate development of Russian studies in this country until 200 or 300 American colleges possess these books or their equivalent. But these books cannot be bought; they do not exist; it will take a major publishing enterprise to make them available. And the same obstacle to serious scholarship exists in many other areas of non-European culture.

Nor are these difficulties of scholarship the whole of the problem. Specialized area studies are too limited in scope and touch too small a part of the student body to accomplish the necessary diffusion of

intercultural understanding. For this purpose, courses of broader scope and more general interpretation and synthesis are required. And for these again, the teachers are yet to be trained and the textbooks are yet to be written.

There is urgent need for a program of education for world citizenship that can be made a part of every person's general education. No one scholar, no one group of scholars, possesses the comprehensive knowledge needed to devise this kind of educational program. Men trained in many different areas must pool their knowledge—not arranging their fragmentary contributions in a loose sequence, but organizing them into an integrated pattern.

The task is not easy; it demands imaginative thinking, exceptional ingenuity, and concerted effort. But it must be done; we dare not again risk being too late with too little.

TOWARD THE SOLUTION OF SOCIAL PROBLEMS

It is essential that we apply our trained intelligence and creative imagination, our scientific methods of investigation, our skill in invention and adaptation, as fully to the problems of human association as to the extension of knowledge about the physical world. This is what is meant by the development of *social invention* and *social technology.*

Human Relations

We have worked wonders by the application of technology to the problems of our physical environment, but we have scarcely touched the fringes of its possibilities in the realm of human relations. In fact, we hardly recognize the existence of inventiveness in the social sphere. Yet the United Nations and UNESCO are inventions no less than the atom bomb, and they are just as capable of technical improvement.

As a people, Americans have come to appreciate the need for experimental research and technical training in the physical and natural sciences, but we tend still to think that good will, tolerance, and the cooperative spirit are all we need to make society function. These attitudes are vitally necessary; we shall make little progress without them; and, as has already been emphasized, education should concern itself with developing them. But alone they are not enough. Social techniques and social mechanisms must be found to express and implement them.

One often hears or reads, for example, puzzled questioning as to why man's intense desire for security and his fear of another war have produced so little actual progress toward peace in the world. But man's fear of smallpox did not eliminate that scourge until medical science and technology had invented and improved the technique of

vaccination. Nor did man's desire to fly enable him to accomplish the feat until scientific ingenuity and engineering skill had produced the necessary mechanism and had trained men to use it.

In comparable fashion it will take social science and social engineering to solve the problems of human relations. Our people must learn to respect the need for special knowledge and technical training in this field as they have come to defer to the expert in physics, chemistry, medicine, and other sciences. Relieving the tensions that produce war, for example, will require methods as specific and as technical as are those of aeronautics or electronics.

The development of social technology is an imperative today because of the remarkable advances we have made in natural science. Scientific discoveries and their technological application have altered our physical environment profoundly in the space of only a few generations, but our social institutions have not kept pace with the changes—although by applying the methods of science we have achieved marked success in some forms of social organization.

Understanding of Self

Man's capacity to subdue nature to his will has raced far ahead of his ability to understand himself or to reconstruct his institutions. This is true in spite of the fact that higher education itself traditionally has followed the Socratic prescription of putting the study of man first. We have grown strong in the mastery of our physical world, but by no means equally strong in the ability to manage and direct the social forces that shape our lives.

The gap between our scientific know-how and our personal and social wisdom has been growing steadily through the years, until now with the release of atomic energy it has become too wide to be safe.

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 preeminence 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."

Leadership Needed

Upon leadership in social invention, then, as much as upon superiority in natural science and engineering, rests our hope of national survival. Unfortunately, the uneasy state of the world leads us to discuss these matters in terms of national defense. The ultimate justification for progress in science, social and natural, is the contribution it can make to the welfare of people everywhere. Continued advance in natural science will give strength to democracy in the eyes of other peoples because of the improvement it makes possible in our standard of living, and the development of a more effective social science will contribute to a fuller realization of the democratic principles of justice and freedom for all.

The colleges and universities, the philanthropic foundations, and the Federal Government should not be tempted by the prestige of natural science and its immediately tangible results into giving it a disproportionate emphasis in research budgets or in teaching programs. It is the peculiar responsibility of the colleges to train personnel and inaugurate extensive programs of research in social science and technology. To the extent that they have neglected this function in the past they should concentrate upon it in the decades just ahead.

We cannot pin our faith on social drift, hoping that if each individual pursues his own ends with intelligence and good will, things will somehow right themselves. We cannot rely on the processes of automatic adjustment. We must develop a positive social policy, both within and among nations. We must plan, with intelligence and imagination, the course we are to take toward the kind of tomorrow we want.

IT CAN BE DONE

In emphasizing education for democracy, for international understanding, and for more effective social science as objectives for higher education in America today, the President's Commission has no desire to suggest limitations on progress and experimentation in other directions. Diversity in purpose is a potential source of strength in demo-

cratic institutions. From the innovative and experimental approach of today may well come the general objective of tomorrow.

These three goals are stated as the minimum essentials of the program to be developed in all institutions of higher education. And they pose a truly staggering job for the colleges and universities. But it can be done. The necessary intelligence and ability exist. What we need is awareness of the urgency of the task, the will and the courage to tackle it, and a wholehearted commitment to its successful performance.

But to delay is to fail. Colleges must accelerate the normally slow rate of social change which the educational system reflects; we need to find ways quickly of making the understanding and vision of our most farsighted and sensitive citizens the common possession of all our people.

To this end the educational task is partly a matter of the numbers to be educated and partly one of the kind of education that is to be provided. We shall have to educate more of our people at each level of the educational program, and we shall have to devise patterns of education that will prepare them more effectively than in the past for responsible roles in modern society.

These two aspects of the task ahead are the subjects of the succeeding chapters of this volume.

Education for All

Education is by far the biggest and the most hopeful of the Nation's enterprises. Long ago our people recognized that education for all is not only democracy's obligation but its necessity. Education is the foundation of democratic liberties. Without an educated citizenry alert to preserve and extend freedom, it would not long endure.

Accepting this truth, the United States has devoted many of its best minds and billions of its wealth to the development and maintenance of an extensive system of free public schools, and through the years the level of schooling attained by more and more of our people has steadily risen.

RECORD OF GROWTH

The expansion of the American educational enterprise since the turn of the century has been phenomenal. The 700,000 enrollment in high schools in the school year 1900 was equal to only 11 percent of the youth of usual high-school age, 14 through 17 years old. This increased in 1940 to over 7,000,000 students representing 73 percent of the youth.

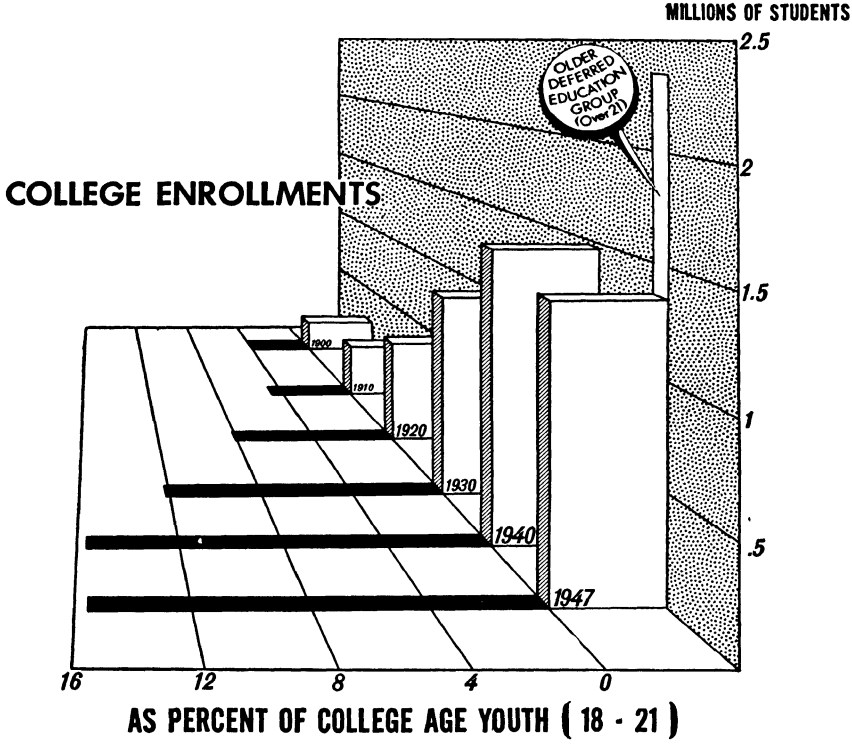
Almost as spectacular has been the increase in college attendance. In 1900 fewer than 250,000 students, only 4 percent of the population 18 through 21 years of age, were enrolled in institutions of higher education. By 1940 the enrollment had risen to 1,500,000 students, equal to a little less than 16 percent of the 18–21 year olds. In 1947, enrollments jumped to the theretofore unprecedented peak of 2,354,000 although approximately 1,000,000 of the students were veterans, older than the usual college age because World War II had deferred their education. The situation in the fall of 1947 gives every indication that the school year 1948 will witness even larger enrollments. (See Chart 1, "Growth of College Population.")

This record of growth is encouraging, but we are forced to admit nonetheless that the educational attainments of the American people are still substantially below what is necessary either for effective individual living or for the welfare of our society.

Chart 1

GROWTH OF COLLEGE POPULATION

IN THE UNITED STATES



Resident enrollments from U. S. Office of Education. Population data from U. S. Bureau of the Census; that for 1947 adjusted to exclude numbers in the armed forces.

According to the U. S. Bureau of the Census, almost 17,000,000 men and women over 19 years of age in 1947 had stopped their schooling at the sixth grade or less. Of these, 9,000,000 had never attended school or had stopped their schooling before completing the fifth grade. In 1947, about 1,600,000 or 19 percent of our high-school-age boys and girls were not attending any kind of school, and over two-thirds of the 18- and 19-year-old youths were not in school.

These are disturbing facts. They represent a sobering failure to reach the educational goals implicit in the democratic creed, and they are indefensible in a society so richly endowed with material resources as our own. We cannot allow so many of our people to remain so ill equipped either as human beings or as citizens of a democracy.

Great as the total American expenditure for education may seem, we have not been devoting any really appreciable part of our vast wealth to higher education. As table 1 shows, even though in the last 15 years our annual budget for education has risen in number of dollars, it has actually declined in relation to our increasing economic productivity.

The $1,000,000,000 we have put into our colleges and universities in 1947 was less than one-half of 1 percent of the gross national product, which is the market value of all the goods and services produced in the country in that year.

TABLE 1.—*Direct Cost of Higher Education and Its Relation to the Gross National Product*

Fiscal year	Amount (in millions)[1]	Proportion of gross national product (percent)[2]
1932	$421	0.63
1940	522	.55
1947	1.005	.46

[1] Source: General and educational expenditures, not including capital expansion, as reported by U. S. Office of Education.
[2] Source of gross national product: U. S. Bureau of Foreign and Domestic Commerce.

BARRIERS TO EQUAL OPPORTUNITY

One of the gravest charges to which American society is subject is that of failing to provide a reasonable equality of educational opportunity for its youth. For the great majority of our boys and girls, the kind and amount of education they may hope to attain depends, not on their own abilities, but on the family or community into which they happened to be born or, worse still, on the color of their skin or the religion of their parents.

Economic Barriers

The old, comfortable idea that "any boy can get a college education who has it in him" simply is not true. Low family income, together with the rising costs of education, constitutes an almost impassable barrier to college education for many young people. For some, in fact, the barrier is raised so early in life that it prevents them from attending high school even when free public high schools exist near their homes.

Despite the upward trend in average per capita income for the past century and more, the earnings of a large part of our population are still too low to provide anything but the barest necessities of physical life. It is a distressing fact that in 1945, when the total national income was far greater than in any previous period in our history, half of the children under 18 were growing up in families which had a cash income of $2,530 or less. The educational significance of these facts is heightened by the relationship that exists between income and birth rate. Fertility is highest in the families with lowest incomes.

In the elementary and secondary schools the effects of these economic conditions are overcome to a considerable extent, though not entirely, by the fact that education is free and at certain ages is compulsory. But this does not hold true at the college level. For a number of years the tendency has been for the college student to bear an increasing share of the cost of his own education. Even in State-supported institutions we have been moving away from the principle of free education to a much greater degree than is commonly supposed.

Under the pressure of rising costs and of a relative lessening of public support, the colleges and universities are having to depend more and more on tuition fees to meet their budgets. As a result, on the average, tuition rates rose about 30 percent from 1939 to 1947.

Nor are tuition costs the whole of it. There are not enough colleges and universities in the country, and they are not distributed evenly enough to bring them within reach of all young people. Relatively few students can attend college in their home communities. So to the expense of a college education for most youth must be added transportation and living costs—by no means a small item.

This economic factor explains in large part why the father's occupation has been found in many studies to rank so high as a determining factor in a young person's college expectancy. A farm laborer earns less than a banker or a doctor, for instance, and so is less able to afford the costs of higher education for his children. The children, moreover, have less inducement to seek a college education because of their family background. In some social circles a college education is often considered a luxury which can be done without, something desirable perhaps, "but not for the likes of us."

The importance of economic barriers to post-high school education lies in the fact that there is little if any relationship between the ability to benefit from a college education and the ability to pay for it. Studies discussed in the volume of this Commission's report, "Equalizing and Expanding Individual Opportunity," show that among children of equally high ability those with fathers in higher-income occupations had greater probability of attending college.

By allowing the opportunity for higher education to depend so largely on the individual's economic status, we are not only denying to millions of young people the chance in life to which they are entitled; we are also depriving the Nation of a vast amount of potential leadership and potential social competence which it sorely needs.

Regional Variations

An individual's birthplace may also determine how much and what kind of an education he is likely to get. Regional differences are largely caused by differentials in wealth and human fertility. There is a tremendous variation in per capita wealth from State to State and even among counties within a State. And the poorer areas tend to have a larger proportion of young people to adults. Consequently the unequal distribution of children in relation to income represents an unequal distribution of the Nation's bill for education.

Where a community or State with a low income has an extremely high birth rate, it becomes next to impossible for it to provide the funds for an adequate educational program. In contrast, communities with a relatively small youth population are in a far better position to meet their obligation. In 1945, for example, only 18 percent of the population of California was between 5–17 years of age. In the same year, the 5–17 year age group amounted to 31 percent of the population of South Carolina. As a measure of potential support for the schools, the total income payments in each State was divided by the number of children in that State. The results of this appraisal are shown in table 2. If California's percentage of children had been as high as South Carolina's, the State income per child of school age would have been cut from $9,029 to $5,243. If South Carolina's percentage of youth had been as low as California's, her State income per child would have been raised from $2,363 to $4,070.

By devoting 1.5 percent of the 1945 income in the State to public elementary and secondary education, California managed an average expenditure per child of $131, whereas 1.8 percent of the total income in Mississippi averaged $36 per child. If Mississippi had equaled California's educational expenditures per child, it would have consumed 6.5 cents out of every dollar of income received by every person

in Mississippi. The resulting inequality of educational opportunity for the children of the two States is glaringly obvious.

TABLE 2.—*Income Per Child of School Age by State: 1945* [1]

State	Income payments to individual per child 5–17 in 1945	State	Income payments to individual per child 5–17 in 1945
California	$9,029	Iowa	$4,826
New York	8,674	New Hampshire	4,806
Washington	8,202	Minnesota	4,779
Connecticut	7,819	Maine	4,538
Montana	7,545	Vermont	4,503
Nevada	7,466	South Dakota	4,500
New Jersey	7,323	Idaho	4,362
Illinois	7,142	Texas	4,119
Oregon	7,109	Utah	4,058
Massachusetts	6,915	Arizona	3,864
Delaware	6,854	North Dakota	3,855
Rhode Island	6,770	Virginia	3,693
Ohio	6,432	Oklahoma	3,429
Maryland	5,784	Tennessee	3,282
Indiana	5,640	Louisiana	3,238
Michigan	5,638	West Virginia	2,906
Pennsylvania	5,582	Georgia	2,903
Florida	5,320	New Mexico	2,838
Kansas	5,227	Kentucky	2,780
Wisconsin	5,200	North Carolina	2,671
Colorado	5,109	Alabama	2,534
Missouri	5,082	Arkansas	2,498
Nebraska	5,066	South Carolina	2,363
Wyoming	5,006	Mississippi	2,018
District of Columbia	4,939		

[1] Source of income data is income payments to individuals as reported by the U. S. Bureau of Foreign and Domestic Commerce; data on children 5–17 years of age from the U. S. Bureau of the Census.

For a long period, the South has had a higher proportion of its population in the younger ages.

TABLE 3.—*Distribution of Civilian Population, Births, and School Age Children by Geographic Regions: 1945*

Region	Civilian population [1]	Births [2]	Children aged 5 through 17 [1]
	Percent	*Percent*	*Percent*
United States	100.0	100.0	100.0
Northeast	26.5	23.5	23.7
Northcentral	30.2	27.9	28.3
South	31.1	35.8	37.1
West	12.2	12.8	10.9

[1] Source: U. S. Bureau of the Census. [2] Source: National Office of Vital Statistics.

In 1945, the South had 27.0 percent of its population in the ages 5 through 17, as contrasted with a national average of 22.7 percent and with 20.2 percent in the Northeast. In that year, the South had a birth

rate of 24.7 per 1,000 civilians while the Nation averaged 21.5 and the Northeast had only 19.0 births per thousand civilians. Clearly the South is supplying new population to the Nation out of all proportion to its numbers.

Sharp and significant differences exist between the educational situations in urban and rural areas. For example, with respect to the educational attainment of youths aged 20 to 24, the median of school years completed in 1940 was 12.0 in urban areas, 10.7 in rural nonfarm areas and 8.8 in rural farm areas. The same disparity is revealed in the analysis of schooling completed by the adult population, shown in table 4.

TABLE 4.—*Proportion of Population 25 Years Old and Older Completing Selected Levels of Schooling: 1940* [1]

Schooling Completed	Urban areas	Rural nonfarm areas	Rural farm areas
	Percent	*Percent*	*Percent*
4 years or more of college	5.7	4.2	1.3
Less than 5 years of grade school	11.2	13.6	20.4

[1] Source: U. S. Bureau of the Census.

Thus, it is apparent that, just before World War II, a man or woman living on a farm had only about one-fourth the chance of having completed college as someone in the city, and almost twice as much chance of not having completed more than 4 years of grade school. In 1947, of the urban youth 20 to 24 years of age, 12.5 percent were attending school, whereas of the rural nonfarm youth 8.8 percent were in school, and of the farm youth only 6.5 percent were in school. Thus, it appears as though much of this differential is persisting.

It is all too clear that whether one considers regional variations or urban-rural differentials, the fact is that the future citizens of the Nation are being born in disproportionately large numbers in communities in which economic resources are the weakest, the plane of living the lowest, cultural conditions the poorest, and the home the least well equipped to contribute either to the physical well-being of youth or to their intellectual development.

These conditions mean that millions of youth are being denied their just right to an adequate education. The accident of being born in one place rather than another ought not to affect so profoundly a young person's chance of getting an education commensurate with his native capacities.

But the situation has even deeper meaning in its implications for society. Educational leaders must squarely face the fact that the unequal distribution of children in relation to regional and urban-rural differences in wealth is tending to cancel out the potential bene-

fits of our educational enterprise. The greater number of children being born in the families and the regions of the country that are least able to provide them with a good education at home or in school is contributing to the spread of a meager cultural heritage, and this may one day tip the balance in our struggle for a better civilization.

No one would suggest that the proper remedy for this situation is a lower birth rate in any part of the country. America's children are America's most vital resource.

The only possible solution of the problem is, as rapidly as possible, to raise economic and cultural levels in our less advanced areas, and in the meantime to provide outside assistance that will enable these areas to give their children equal educational opportunities with all others in the Nation.

Barrier of a Restricted Curriculum

We shall be denying educational opportunity to many young people as long as we maintain the present orientation of higher education toward verbal skills and intellectual interests. Many young people have abilities of a different kind, and they cannot receive "education commensurate with their native capacities" in colleges and universities that recognize only one kind of educable intelligence.

Traditionally the colleges have sifted out as their special clientele persons possessing verbal aptitudes and a capacity for grasping abstractions. But many other aptitudes—such as social sensitivity and versatility, artistic ability, motor skill and dexterity, and mechanical aptitude and ingenuity—also should be cultivated in a society depending, as ours does, on the minute division of labor and at the same time upon the orchestration of an enormous variety of talents.

If the colleges are to educate the great body of American youth, they must provide programs for the development of other abilities than those involved in academic aptitude, and they cannot continue to concentrate on students with one type of intelligence to the neglect of youth with other talents.

Racial and Religious Barriers

The outstanding example of these barriers to equal opportunity, of course, is the disadvantages suffered by our Negro citizens. The low educational attainments of Negro adults reflect the cumulative effects of a long period of unequal opportunity. In 1940 the schooling of the Negro was significantly below that of whites at every level from the first grade through college. At the college level, the difference is marked; 11 percent of the white population 20 years of age and over had completed at least 1 year of college and almost 5 percent had finished 4 years; whereas for the nonwhites (over 95 percent of whom are Negroes) only a little more than 3 percent had completed at least 1 year of college and less than 1½ percent had completed a full course.

Gains Have Been Made. Noteworthy advances have been made toward eliminating the racial inequalities which in large measure are responsible for this low level of educational achievement by the Negroes. Between 1900 and 1940 the percentage of Negroes 5 to 20 years of age attending school rose from 31.0 percent to 64.4 percent. And the percentage of Negro youth 15 to 20 years old attending school increased from 17.5 in 1900 to 33.8 in 1940. That differentials still persist, however, is shown in table 5.

TABLE 5.—*Proportion of Young Persons Attending School, by Age and Color: April 1947* [1]

Age	Attending school	
	White	Nonwhites (about 95 percent Negro)
	Percent	*Percent*
6 years of age	67. 8	63. 4
7 to 9 years of age	97. 1	89. 2
10 to 13 years of age	98. 2	93. 7
14 to 17 years of age	82. 5	71. 9
18 to 19 years of age	28. 2	24. 2
20 to 24 years of age	11. 3	6. 7

[1] Source: U. S. Bureau of the Census.

Institutions which accept both Negro and non-Negro students do not maintain separate record systems for Negroes, and so data on enrollment of Negroes are restricted to those institutions—usually located in the South—which accept only Negro students. In recent years, since 1932, these institutions have almost tripled their enrollments whereas the institutions for whites or which are unsegregated only about doubled theirs:

TABLE 6.—*Enrollment of Institutions of Higher Education and Index of Change* [1]

Year	Enrollments in institutions accepting			
	Negroes only		All other	
	Number	Index of change (1932=100)	Number	Index of change (1932=100)
1932	21, 880	100	1, 132, 237	100
1936	32, 628	149	1, 175, 599	104
1940	41, 839	191	1, 452, 364	128
1947 [2]	63, 500	290	2, 290, 500	202

[1] Source is resident enrollment as reported by U. S. Office of Education.
[2] Estimated.

Inequalities Remain. But the numbers enrolled in school do not tell the whole story. Marked as has been the progress in Negro education in recent years, it cannot obscure the very great differences which still persist in educational opportunities afforded the Negro and the non-Negro.

In 17 States and the District of Columbia, segregation of the Negroes in education is established by law.[1] In the *Gaines* decision, the U. S. Supreme Court ruled that "if a State furnishes higher education to white residents, it is bound to furnish [within the State] substantially equal advantages to Negro students". Although segregation may not legally mean discrimination as to the quality of the facilities it usually does so in fact. The schools maintained for the Negroes are commonly much inferior to those for the whites. The Negro schools are financed at a pitifully low level, they are often housed in buildings wholly inadequate for the purpose, and many of the teachers are sorely in need of more education themselves. Library facilities are generally poor or lacking altogether, and professional supervision is more a name than a reality.

These facts are supported strongly by a recent study in the District of Columbia. The District's Superintendent of Schools in his 1946–47 report to the Board of Education states that the student-teacher ratios in the schools for Negroes were significantly and consistently higher than those for non-Negroes—from the kindergartens through the teachers' colleges.

Segregation lessens the quality of education for the whites as well. To maintain two school systems side by side—duplicating even inadequately the buildings, equipment, and teaching personnel—means that neither can be of the quality that would be possible if all the available resources were devoted to one system, especially not when the States least able financially to support an adequate educational program for their youth are the very ones that are trying to carry a double load.

It must not be supposed that Negro youth living in States in which segregation is not legalized are given the same opportunities as white youth. In these areas economic and social discrimination of various sorts often operates to produce segregation in certain neighborhoods, which are frequently characterized by poorer school buildings, less equipment and less able teachers.

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[1] In the case of *Mendez* v. *Westminster School District*, the segregation of students of Mexican ancestry in the Westminster, Calif., school district, on the alleged grounds that because of their ancestry such students have language difficulties, was held illegal. The U. S. district court which heard the case held that segregation is unconstitutional under the Federal Constitution. On appeal by the Westminster school district, the U. S. circuit court of appeals limited its affirmance of the district court's decision by holding that the specific statutes involved were illegal under the California law.

Equality of educational opportunity is not achieved by the mere physical existence of schools; it involves also the quality of teaching and learning that takes place in them.

The Quota System. At the college level a different form of discrimination is commonly practiced. *Many colleges and universities, especially in their professional schools, maintain a selective quota system for admission, under which the chance to learn, and thereby to become more useful citizens, is denied to certain minorities, particularly to Negroes and Jews.*

This practice is a violation of a major American principle and is contributing to the growing tension in one of the crucial areas of our democracy.

The quota, or *numerous clausus*, is certainly un-American. It is European in origin and application, and we have lately witnessed on that continent the horrors to which, in its logical extension, it can lead. To insist that specialists in any field shall be limited by ethnic quotas is to assume that the Nation is composed of separate and self-sufficient ethnic groups and this assumption America has never made except in the case of its Negro population, where the result is one of the plainest inconsistencies with our national ideal.

The quota system denies the basic American belief that intelligence and ability are present in all ethnic groups, that men of all religious and racial origins should have equal opportunity to fit themselves for contributing to the common life.

Moreover, since the quota system is never applied to all groups in the Nation's population, but only to certain ones, we are forced to conclude that the arguments advanced to justify it are nothing more than rationalizations to cover either convenience or the disposition to discriminate. The quota system cannot be justified on any grounds compatible with democratic principles.

Consequences of Inequalities of Opportunity

These various barriers to educational opportunity involve grave consequences both for the individual and for society.

From the viewpoint of the individual they are denying to millions of young people what the democratic creed assumes to be their birthright: an equal chance with all others to make the most of their native abilities. From the viewpoint of society the barriers mean that far too few of our young people are getting enough preparation for assuming the personal, social, and civic responsibilities of adults living in a democratic society.

It is especially serious that not more of our most talented young people continue their schooling beyond high school in this day when the complexity of life and of our social problems means that we need desperately every bit of trained intelligence we can assemble. The

present state of affairs is resulting in far too great a loss of talent—our most precious natural resource in a democracy.

In a country as vast as the United States, with all its regional differences in cultural patterns and economic resources, absolute equality of educational opportunity perhaps may not be reasonably expected. But today the differences that do exist are so great as to compel immediate action.

In communities where the birth rate is low, where the burden of caring for the nurture and education of the oncoming generation is relatively light, where the level of living is high, the advantages of education are extended to youth on more nearly equal terms. But in communities where the birth rate is high, where the economic structure is weak, where the level of living is low, where community and family resources contribute least to intellectual growth, there we support education in niggardly fashion, though at great effort.

If over the years we continue to draw the population reserves of the Nation from the most underprivileged areas and families and fail to make good the deficit by adequate educational opportunities, we shall be following a course that is sure to prove disastrous to the level of our culture and to the whole fabric of our democratic institutions.

We have proclaimed our faith in education as a means of equalizing the conditions of men. But there is grave danger that our present policy will make it an instrument for creating the very inequalities it was designed to prevent. If the ladder of educational opportunity rises high at the doors of some youth and scarcely rises at all at the doors of others, while at the same time formal education is made a prerequisite to occupational and social advance, then education may become the means, not of eliminating race and class distinctions, but of deepening and solidifying them.

It is obvious, then, that free and universal access to education, in terms of the interest, ability, and need of the student, must be a major goal in American education.

TOWARD EQUALIZING OPPORTUNITY

The American people should set as their ultimate goal an educational system in which at no level—high school, college, graduate school, or professional school—will a qualified individual in any part of the country encounter an insuperable economic barrier to the attainment of the kind of education suited to his aptitudes and interests.

This means that we shall aim at making higher education equally available to all young people, as we now do education in the elementary and high schools, to the extent that their capacity warrants a further social investment in their training.

Obviously this desirable realization of our ideal of equal educational opportunity cannot be attained immediately. But if we move toward it as fast as our economic resources permit, it should not lie too far in the future. Technological advances, that are already resulting in phenomenal increases in productivity per worker, promise us a degree of economic well-being that would have seemed wholly Utopian to our fathers. With wise management of our economy, we shall almost certainly be able to support education at all levels far more adequately in the future than we could in the past.

The Commission recommends that steps be taken to reach the following objectives without delay:

1. High school education must be improved and should be provided for all normal youth.

This is a minimum essential. We cannot safely permit any of our citizens for any reason other than incapacity, to stop short of a high school education or its equivalent. To achieve the purpose of such education, however, it must be improved in facilities and in the diversity of its curriculum. Better high school education is essential, both to raise the caliber of students entering college and to provide the best training possible for those who end their formal education with the twelfth grade.

2. The time has come to make education through the fourteenth grade available in the same way that high school education is now available.

This means that tuition-free education should be available in public institutions to all youth for the traditional freshman and sophomore years or for the traditional 2-year junior college course.

To achieve this, it will be necessary to develop much more extensively than at present such opportunities as are now provided in local communities by the 2-year junior college, community institute, community college, or institute of arts and sciences. The name used does not matter, though community college seems to describe these schools best; the important thing is that the services they perform be recognized and vastly extended.

Such institutions make post-high-school education available to a much larger percentage of young people than otherwise could afford it. Indeed, as discussed in the volume of this Commission's report, "Organizing Higher Education," such community colleges probably will have to carry a large part of the responsibility for expanding opportunities in higher education.

3. The time has come to provide financial assistance to competent students in the tenth through fourteenth grades who would not be able to continue their education without such assistance.

Tuition costs are not the major economic barrier to education, especially in college. Costs of supplies, board, and room, and other living needs are great. Even many high-school students are unable to continue in school because of these costs.

Arrangements must be made, therefore, to provide additional financial assistance for worthy students who need it if they are to remain in school. Only in this way can we counteract the effect of family incomes so low that even tuition-free schooling is a financial impossibility for their children. Only in this way can we make sure that all who are to participate in democracy are adequately prepared to do so.

4. The time has come to reverse the present tendency of increasing tuition and other student fees in the senior college beyond the fourteenth year, and in both graduate and professional schools, by lowering tuition costs in publicly controlled colleges and by aiding deserving students through inaugurating a program of scholarships and fellowships.

Only in this way can we be sure that economic and social barriers will not prevent the realization of the promise that lies in our most gifted youth. Only in this way can we be certain of developing for the common good all the potential leadership our society produces, no matter in what social or economic stratum it appears.

5. The time has come to expand considerably our program of adult education, and to make more of it the responsibility of our colleges and universities.

The crisis of the time and the rapidly changing conditions under which we live make it especially necessary that we provide a continuing and effective educational program for adults as well as youth. We can in this way, perhaps, make up some of the educational deficiencies of the past, and also in a measure counteract the pressures and distractions of adult life that all too often make the end of formal schooling the end of education too.

6. The time has come to make public education at all levels equally accessible to all, without regard to race, creed, sex or national origin.

If education is to make the attainment of a more perfect democracy one of its major goals, it is imperative that it extend its benefits to all on equal terms. It must renounce the practices of discrimination and segregation in educational institutions as contrary to the spirit of democracy. Educational leaders and institutions should take positive steps to overcome the conditions which at present obstruct free and equal access to educational opportunities. Educational programs everywhere should be aimed at undermining and eventually eliminating the attitudes that are responsible for discrimination and segrega-

tion—at creating instead attitudes that will make education freely available to all.[2]

NUMBER WHO SHOULD RECEIVE HIGHER EDUCATION

Achieving these immediate objectives necessarily will require a tremendous expansion of our educational enterprise at the college level.

It will be noted that many of the Commission's projects focus upon the year 1960. There are several important reasons why the Commission has chosen to look this far ahead. First of all, in the President's letter of appointment, the Commission was asked to direct its energies toward the investigation of long-term policy issues in American higher education. The Commission itself selected the terminal date of 1960 since it was felt that manageable data could be procured for studies up to this point. The basic consideration of population data weighed heavily in the selection. Individuals who will be enrolled in colleges in 1960 through 1964 have already been born, and thus the Commission has a tangible figure with which to make its projections.

The Commission believes that in 1960 a minimum of 4,600,000 young people should be enrolled in nonprofit institutions for education beyond the traditional twelfth grade. Of this total number, 2,500,000 should be in the thirteenth and fourteenth grades (junior college level); 1,500,000 in the fifteenth and sixteenth grades (senior college level); and 600,000 in graduate and professional schools beyond the first degree.

In thus appraising future enrollment in institutions of post-high school education, this Commission has not sought to project the future on the basis of the past nor to predict annual enrollments over the period 1948 to 1960. It frankly recognizes that such a forecast would be subject to unpredictable world-wide social and economic conditions.

Appraisal of Talent

The Commission, instead, has staked out what it believes to be the desirable goal in terms of the number of young people that higher education should serve. In so doing it is expressing faith that the American people will invest in the youth of this Nation whatever full educational opportunity may cost. It is expressing, also, confidence that institutions of higher education will make whatever adjustments

[2] The following Commission members wish to record their dissent from the Commission's pronouncements on "segregation," especially as these pronouncements are related to education in the South. Arthur H. Compton, Douglas S. Freeman, Lewis W. Jones, Goodrich C. White. A fuller statement, indicating briefly the basis for this dissent, will appear in volume II of the Commission's report.

are required by the increased enrollments. These changes call for educational institutions sufficiently broad in scope and with character variable enough to serve all young people who may reasonably be expected to benefit both themselves and the Nation by further study.

In arriving at the enrollment recommended for 1960, this Commission gave consideration to the results of the Army General Classification Test: the one test of mental ability that had been given to a large and representative group. During World War II almost 10,000,000 men entering the enlisted Army through induction centers took this test.

Three groups were not included among the 10,000,000: those not inducted because of their illiteracy, those inducted as officers and those deferred because they were "engaged in an essential activity." It is assumed that those rejected for physical disabilities would have been distributed over the range of achievement in approximately the same proportions as those inducted into the Army.

Navy personnel are not included. Although data for that group were made available to the Commission, so large a proportion of the Navy were volunteers that Navy figures are less representative of the general population than those of the Army. The Navy included a higher percentage of high school graduates than either the Army or the general population. Hence, the exclusion of Navy data tends to make the conclusions drawn from Army figures conservative.

It may be assumed that the distribution of ability among women is approximately the same as among men. In fact, such AGCT scores as are available for comparison show no significant differences between the two sexes. Furthermore, although the 10,000,000 men given the AGCT were in a relatively restricted age group, there is no reason to believe that the distribution of mental ability would be significantly different between various age groups.

Study of the probable numbers in the excluded groups which would have a depressing effect on the level of the Army's test scores, together with the numbers which would tend to raise the level, indicates, that for mental ability the 10,000,000 men for whom we have AGCT results are conservatively representative of the general population.

The test data gave the distribution of AGCT scores for military personnel by the highest year of schooling each individual had completed at the time of induction; for example, twelfth grade, fourteenth grade. It was thus possible to determine the lowest typical AGCT score of those who had completed a given grade of schooling. There were many individuals with less formal schooling who scored as high or higher than the lowest typical score for a given grade. It follows that those individuals have a reasonable expectation of completing that grade. This consequence is the basis for the Commission's estimate of the proportion of the total population with reasonable ex-

pectancies of completing an education at specific levels beyond the high school.

It is true that the AGCT does not measure innate mental ability alone; all such tests, to some degree, indicate educational influences. Educational attainment is related to economic status, to the availability of schools, and to other factors which make for variation in individual educational opportunity. If, hence, there had been greater equality of educational opportunity, the proportion of individuals scoring at or above the critical or lowest typical score for, say high school or 2 or more years of college, would have been higher than the proportion estimated by the Commission.

The AGCT has been equated to various other widely used tests. The most important of these is the American Council on Education Psychological Examination—1942 College Edition. ACE psychological tests are administered to entering students by several hundred colleges. In estimating "reasonable expectation" of completing the sixteenth school year, equivalent to college graduation, this Commission took for its base an AGCT score equivalent to the twenty-first percentile of the ACE test; thus, only those who would have scored on the ACE test as high as the upper 79 percent of the group admitted to colleges in 1942 have been counted as having a "reasonable expectation" of completing college.

"Reasonable expectation" of completing the 14th school year was based on a minimum AGCT score equivalent to the seventh percentile on the same ACE test. Those who would have scored in the upper 93 percent of the group admitted to college in 1942 were thus included.

National Inventory of Talent

Upon these considerations, this Commission bases what it believes to be conservative estimates of the proportions of the population with reasonable expectations of completing higher education at specific levels. These proportions which constitute this Commission's "National Inventory of Talent" are:

1. At least 49 percent of our population has the mental ability to complete 14 years of schooling with a curriculum of general and vocational studies that should lead either to gainful employment or to further study at a more advanced level.

2. At least 32 percent of our population has the mental ability to complete an advanced liberal or specialized professional education.

If these proportions of American youth are to be admitted to institutions of higher education, we shall have to provide a much greater variety of institutions and programs than we now have to meet their needs. But the Commission has no way of estimating what effect such modifications of the existing system might have on the number of students to be expected.

The probable shift in social attitudes toward the desirability of increased education, together with economic aid, will lead more people to complete additional years of schooling. These factors would undoubtedly increase the proportions in the "inventory," making the estimates not only conservative but probably minimal.

The specific numbers in the "inventory" (see table 8) were computed on the basis of the expected number in the usual age for attendance at junior and senior college levels. These are persons 18–19 years and 20–21 years of age, respectively. The projected enrollments under the "inventory" for graduate and professional schools, above the sixteenth year of schooling, are based on appraisal of the needs of society for people with such training. Estimates of graduate and professional enrollment reflect this Commission's recommendation on making such education increasingly available. For purposes of estimation, all people in school above the sixteenth grade are considered to be at least 22 years of age.

These estimates may be compared with those of the National Resources Development Report which in 1943 suggested that 90 percent of the youth of appropriate ages should attend high school and 80 percent should graduate.

These enrollments proposed for the various levels of higher education probably do not represent the maximum number of students to be expected. There was a tremendous increase in the number and rate of births during and just after World War II. It was thought at first that this was a wartime phenomenon, but the National Office of Vital Statistics now estimates that it will continue at least through 1947. The number of persons born during the period 1943–46, who will be 14–17 years of age in 1960, is reported by the National Office of Vital Statistics to be 877,000 larger than the number born during the period 1939–42, who will be 18–21 years of age in 1960. There is, therefore, every reason to expect that the population in age group 18–21 will continue to increase after 1960 for at least 4 or 5 years, and that there will therefore be a proportionate demand on institutions of higher education.

Table 7 gives the estimates of college age population in 1952 and 1960, and here 1952 is shown only as a point of interest.

TABLE 7.—*Estimate of College Age Population: 1952, 1960* [1]

Age	Population	
	1952	1960
18–19 years of age	4, 099, 000	5, 104, 000
20–21 years of age	4, 328, 000	4, 595, 000
Total 18–21 years of age	8, 427, 000	9, 699, 000

[1] Source: Unpublished data of the U. S. Bureau of the Census.

This Commission estimates the specific numbers who should receive higher education in 1952 and 1960 in table 8.

TABLE 8.—*National Inventory of Talent Goals for College Enrollment*

	Inventory of national talent	Goals for college enrollment	
		1952	1960
13th and 14th grades	49 percent of appropriate age group.	2, 000, 000	2, 500, 000
15th and 16th grades	32 percent of appropriate age group.	1, 385, 000	1, 500, 000
Above 16th grade	Based on estimated national need.	500, 000	600, 000
Total		3, 885, 000	4, 600, 000

These numbers should be viewed in the perspective of their history. The projection of enrollment trends as they existed prior to World War II gives a possible enrollment of 2,924,000 in 1960. Of these 2,704,000 would be in the thirteenth through sixteenth grades, and 220,000 would be in the higher levels. This Commission's recommendations would increase the number of undergraduates only by about 50 percent more than the continuation of the prewar trends would produce. Obviously then what this Commission recommends is simply an acceleration of trends in higher education as they were before World War II.

This recommendation is an extension also of the constant trend in American democracy to push ever upward the level of education of our people. As the numbers completing elementary school increased until it included most of America's children, the opportunity for free public education was extended through the high school. At the present time the increase in the number of youth who complete high school provides the opportunity and creates the necessity for extending public education upward again, at least through the thirteenth and fourteenth year.

It is with respect to enrollments in graduate and professional schools that this Commission's recommendations would lead to a major increase—about 170 percent. This increase reflects the increasing need of the Nation for citizens with such graduate and professional training.

Only those who view this Commission's recommendations in terms of the situation in, say, 1900 would find them startling. In that year the colleges and universities enrolled less than 150,000 undergraduates, while the estimated potential enrollment was 2,372,000. Year by year

these historic potentials were vastly out of proportion to actual enrollments until about 1930. That year the actual enrollment was 30 percent of the potential. (See Chart 2, "The Gap in Higher Education.")

MORE THAN NUMBERS

To provide adequately for this near doubling of the student load in higher education will require a proportionate expansion and improvement of our educational plant, equipment, and personnel.

We may be sure that the private colleges and universities will, in the future as in the past, contribute immeasurably to the expansion and improvement of our facilities for higher education, and it is to be hoped that they will be able to find the necessary funds without increasing the cost to the individual. But in the nature of things, the major burden for equalizing educational opportunity must rest on publicly supported institutions.

Part of the task ahead is to arouse public opinion once more to an awareness of the transcendent importance of education, so that it will not only support but insist on the necessary increase in appropriations for higher education.

To additional community and State support must be added a very considerable measure of Federal assistance. From the Federal Government must come the funds needed to equalize opportunity between region and region, State and State, city and farm. This Federal aid cannot, to serve its purpose, be distributed equally to all; it must be given in proportion to need. The most must go to those who can provide the least for themselves.

Detailed and specific suggestions for financing this desired expansion in our educational enterprise will be made in a later volume of this Commission's report. Here it is necessary only to point out that the United States can afford what it will cost; indeed, we cannot *not* afford it. It is essential to the continued existence of our way of life.

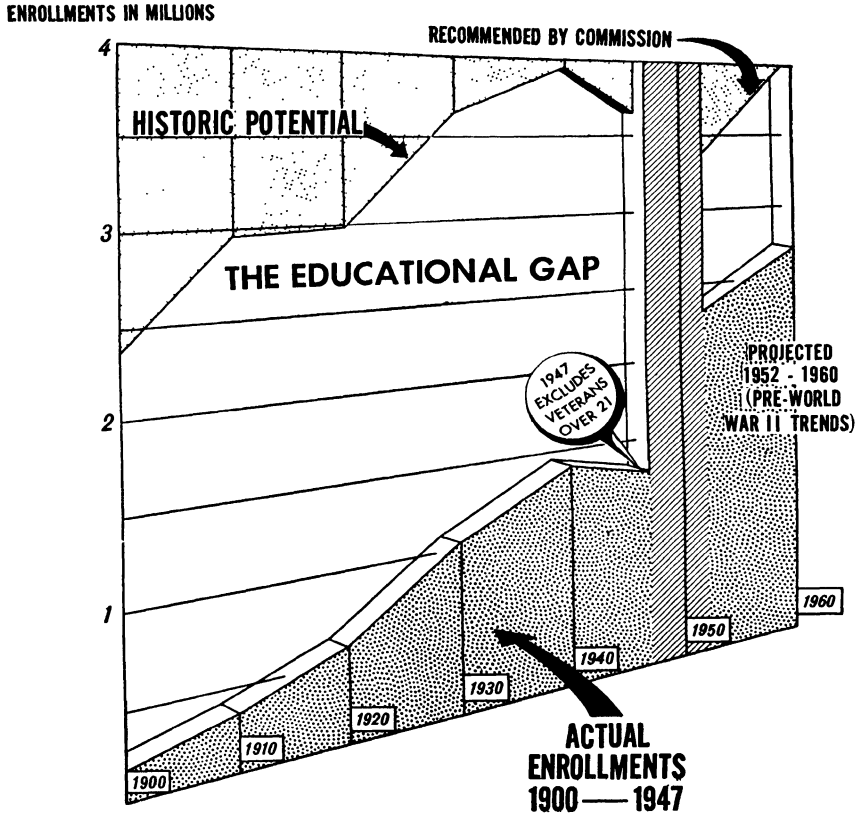
Increase in the numbers to be educated will serve to intensify the problem of devising appropriate and effective programs for higher education. Simply to keep more of our youth in school for a longer period will not of itself, of course, achieve the personal and social ends we have in mind. The measure to which extended educational opportunities accomplish our purposes will depend on the kind of education provided.

As we bring more and more students to the campus, we shall increase in proportion the tremendous variety of human and social needs the college programs must meet. We shall add to the already overwhelming diversity of aptitudes, interests, and levels of attainment that characterize the college student body. And so we shall have to

Chart 2

THE GAP IN HIGHER EDUCATION

UNDERGRADUATE ENROLLMENTS - ACTUAL AND POTENTIAL



Resident enrollments and projection of pre-World War II trends from U. S. Office of Education.

increase the diversification of curricular offerings and of teaching methods and materials to correspond.

Yet in the midst of all the necessary diversity we must somehow preserve and expand a central unity. We must make sure that the education of every student includes the kind of learning and experience that is essential to fit free men to live in a free society.

Education for Free Men

American colleges and universities have assumed a huge task in the last half century. To have opened their doors for so many of our youth was difficult enough; to have done so at a time when the complexity of society was increasing rapidly and its pattern was shifting, so that the ends of education itself were subject to continual revision, was to attempt the nearly impossible. The wonder is, not that the colleges have fallen short in some respects, but that they have achieved so considerable a degree of success.

This is no cause for complacency, however. If still greater expansion in number of students is to be undertaken in a period of still greater uncertainty, higher education must act quickly to bring its policies and programs more closely into line with the social purposes it professes to serve.

THE NEED FOR GENERAL EDUCATION

Present college programs are not contributing adequately to the quality of students' adult lives either as workers or as citizens. This is true in large part because the unity of liberal education has been splintered by overspecialization.

For half a century and more the curriculum of the liberal arts college has been expanding and disintegrating to an astounding degree. The number of courses has so multiplied that no student could take all of them, or even a majority of them, in a lifetime. In one small midwestern college, for example, the number of courses offered increased from 67 in 1900 to 296 in 1930. During the same period the liberal arts college of one of the great private universities lengthened its list of courses from 960 to 1,897.

This tendency to diversify the content of what was once an integrated liberal education is in part the consequence of the expansion of the boundaries of knowledge. New advances in every direction have

added more and more subjects to the liberal arts curriculum and have at the same time limited the area of knowledge a single course could cover. This development is at once the parent and the child of specialization.

Specialization is a hallmark of our society, and its advantages to mankind have been remarkable. But in the educational program it has become a source both of strength and of weakness. Filtering downward from the graduate and professional school levels, it has taken over the undergraduate years, too, and in the more extreme instances it has made of the liberal arts college little more than another vocational school, in which the aim of teaching is almost exclusively preparation for advanced study in one or another specialty.

This tendency has been fostered, if not produced, by the training of college teachers in the graduate school, where they are imbued with the single ideal of an ever-narrowing specialism.

The trend toward specialization has been reenforced by the movement toward democratization of higher education. The young people appearing in growing numbers on college campuses have brought with them widely diverse purposes, interests, capacities, and academic backgrounds. Some expect to enter one of the old-line professions; others want training in one of the numerous branches of agriculture, industry or commerce. Some consider college education a natural sequel to high school; others seek it as a road to higher social status.

The net result of the situation is that the college student is faced with a bewildering array of intensive courses from which to make up his individual program. To secure a reasonably comprehensive grasp of his major field, he must in some cases spend as much as half or more of his time in that one department. The other half he scatters among courses in other departments which, designed for future specialists in those fields, are so restricted in scope that the student can gain from them only a fragmentary view of the subject. He, therefore, leaves college unacquainted with some of the fundamental areas of human knowledge and without the integrated view of human experience that is essential both for personal balance and for social wisdom.

Today's college graduate may have gained technical or professional training in one field of work or another, but is only incidentally, if at all, made ready for performing his duties as a man, a parent, and a citizen. Too often he is "educated" in that he has acquired competence in some particular occupation, yet falls short of that human wholeness and civic conscience which the cooperative activities of citizenship require.

The failure to provide any core of unity in the essential diversity of higher education is a cause for grave concern. A society whose

members lack a body of common experience and common knowledge is a society without a fundamental culture; it tends to disintegrate into a mere aggregation of individuals. Some community of values, ideas, and attitudes is essential as a cohesive force in this age of minute division of labor and intense conflict of special interests.

The crucial task of higher education today, therefore, is to provide a unified general education for American youth. Colleges must find the right relationship between specialized training on the one hand, aiming at a thousand different careers, and the transmission of a common cultural heritage toward a common citizenship on the other.

There have already been many efforts to define this relationship. Attempts to reach conclusions about the ends and means of general education have been a major part of debate and experimentation in higher education for at least two decades.

"General education" is the term that has come to be accepted for those phases of nonspecialized and nonvocational learning which should be the common experience of all educated men and women.

General education should give to the student the values, attitudes, knowledge, and skills that will equip him to live rightly and well in a free society. It should enable him to identify, intrepret, select, and build into his own life those components of his cultural heritage that contribute richly to understanding and appreciation of the world in which he lives. It should therefore embrace ethical values, scientific generalizations, and aesthetic conceptions, as well as an understanding of the purposes and character of the political, economic and social institutions that men have devised.

But the knowledge and understanding which general education aims to secure whether drawn from the past or from a living present, are not to be regarded as ends in themselves. They are means to a more abundant personal life and a stronger, freer social order.

Thus conceived, general education is not sharply distinguished from liberal education; the two differ mainly in degree, not in kind. General education undertakes to redefine liberal education in terms of life's problems as men face them, to give it human orientation and social direction, to invest it with content that is directly relevant to the demands of contemporary society. General education is liberal education with its matter and method shifted from its original aristocratic intent to the service of democracy. General education seeks to extend to all men the benefits of an education that liberates.

This purpose calls for a unity in the program of studies that a uniform system of courses cannot supply. The unity must come, instead, from a consistency of aim that will infuse and harmonize all teaching and all campus activities.

OBJECTIVES OF GENERAL EDUCATION

The purposes of general education should be understood in terms of performance, of behavior, not in terms of mastering particular bodies of knowledge. It is the task of general education to provide the kinds of learning and experience that will enable the student to attain certain basic outcomes, among them the following:

1. To develop for the regulation of one's personal and civic life a code of behavior based on ethical principles consistent with democratic ideals.

Many colleges have tended in recent decades to concern themselves with the intellect alone. They have left to other agencies or to chance the student's spiritual and ethical development.

But they obviously cannot leave the whole field of individual purpose, discipline, character, and values to the accidents of environment before and after college. Students should be stimulated and aided to define their personal and social purposes in life. Personal integrity and consistent behavior are impossible where such conscious purpose is lacking.

General education can foster and quicken respect for ideals and values. Wise men, of course, have never doubted the importance of ethical considerations, but for a generation or two these matters seem to have been out of fashion among sophisticated intellectuals. If anything is clear in these troubled times, it is the urgent need of soundly based ideals to guide personal and social relationships in a world where insecurity is steadily weakening trust between man and man.

Interpersonal relations, business relations, labor relations, even international relations, depend, if they are to prosper, on good faith, decent intentions, and mutual confidence. Suspicion of the other fellow's motives and fear that he will not play the game according to the rules are far too prevalent for either individual or national health.

Such a condition is appropriate to a Fascist state, which rests on the rule that no one can trust anyone else; it has no place in a democratic society. To cooperate for common ends, we must have faith in each other.

Ethical principles that will induce this faith need not be based on any single sanction or be authoritarian in origin, nor need finality be claimed for them. Some persons will find the satisfactory basis for a moral code in the democratic creed itself, some in philosophy, some in religion. Religion is held to be a major force in creating the system of human values on which democracy is predicated, and many derive from one or another of its varieties a deepened sense of human worth and a strengthened concern for the rights of others.

2. To participate actively as an informed and responsible citizen in solving the social, economic, and political problems of one's community, State, and Nation.

3. To recognize the interdependence of the different peoples of the world and one's personal responsibility for fostering international understanding and peace.

The urgency of these two objectives and the necessity for heightening the sense of social responsibility they call for have already been pointed out in Chapter II. The extent to which present educational programs are failing to serve these ends is a measure of the importance they must assume in general education in the immediate future.

As a rule the graduates of our schools and colleges have not been adequately prepared for the tasks of citizenship and have been apathetic about performing them. Not only general observation but statistical studies of the attitudes and activities of college graduates have revealed the low level of their civic knowledge and their participation in social action. Many of them were not only uninformed about national and world problems but were markedly reluctant to take part in social enterprises at any cost to themselves. For most of them, direct political activity was limited to marking the ballot on election day, and not all of them bothered to do even that.

We dare not let this state of affairs continue. Every resource of education must be mobilized and focused on the task of establishing in students a habit of social action enlightened by insight into the responsibilities of citizenship at all levels—local, national, and international. Recognition of social planning as a new tool which advances the methods of gathering and appraising information in the hands of democratic society is one of the concepts which general education should seek to make clear to students.

To teach the meaning and the processes of democracy, the college campus itself should be employed as a laboratory of the democratic way of life. Ideas and ideals become dynamic as they are lived, and the habit of cooperation in a common enterprise can be gained most surely in practice. But this learning cannot take place in institutions of higher education that are operated on authoritarian principles.

The varied activities of the campus provide many avenues through which students could participate in making decisions and share in carrying forward their joint undertaking. If the college were conducted as a community rather than as a hotel, it would afford much greater opportunity for students to acquire the practical experience so essential to the life of democracy outside the college.

Nor should the college neglect the educational resources in that life "outside." Including "field experience"—work, travel, research, and study projects in the community off-campus—as part of the program

of general education can do much to break down the present tendency toward isolation of the college from the wider community in which the student is to live after college.

4. To understand the common phenomena in one's physical environment, to apply habits of scientific thought to both personal and civic problems, and to appreciate the implications of scientific discoveries for human welfare.

The scientific account of the natural world must, of course, hold a prominent place in the school experience of all educated persons. To simplify this account and give it relevance for the life and problems of ordinary men is one of the most important and at the same time most difficult objectives of general education.

A just criticism of most courses in natural science is that they are confined to some special field such as physics, chemistry, or zoology, and that most of the study in them is directed toward preparing future scientists and not toward educating future citizens. What is needed instead is the integration of the significant methods and findings of the natural sciences into a comprehensive synthesis that will bring to the general student understanding of the fundamental nature of the physical world in which he lives and of the skills by which this nature is discerned.

That the student grasp the processes involved in scientific thought and understand the principles of scientific method is even more important than that he should know the data of the sciences. The spirit of science—including intellectual curiosity, openness of mind, passion for truth wherever it may lead, respect for evidence, and the free communication of discoveries—should be the product of education at all levels.

General education in science must also emphasize the social significance of science and technology for our times. Failure to understand how science has transformed the conditions under which men live is failure to understand the forces that have reshaped our civilization and now threaten to destroy it. At this of all times it should be clear that understanding the social implications of the sciences is an imperative in general education.

5. To understand the ideas of others and to express one's own effectively.

Developing the skills of communication is perhaps the least debatable of the objectives of general education. Without free, clear, and distinct communication a true meeting of minds does not occur, and understanding and cooperation are retarded if not prevented. And to communicate easily and well with one's fellows one must be able to write and to read, to talk and to listen.

Experience indicates the close relationship that exists between

thought and the symbols that express thought. Clear and precise thinking requires good language habits. Few of the abilities men possess are of greater human significance than their power to order ideas clearly and to set these before their fellows by tongue or pen.

The ability to read—not merely to call words and pronounce symbols but really to grasp the meaning and follow the logic of the writer—is basic to all other human enterprises. To say that the youth in our schools and colleges should learn how to read may seem to be repeating the obvious, but scientific studies have revealed the low level of literacy attained by a large part of our adult population. The experience of college teachers affirms that many students enter the colleges, and not a few graduate, without having acquired more than an elementary degree of practical skill in reading. This skill is a primary objective of general education.

Numbers are also an important means of communication. We call mathematics into service in our daily lives much more frequently than is generally supposed. General education must provide a functional knowledge of the elements of mathematics that industrial society normally requires, and also the skill of quantitative thinking.

6. To attain a satisfactory emotional and social adjustment.

General education does not stop with the development of intellectual powers. For a satisfying and successful life a person must also be emotionally stable and mature, able to endure the conflicts and tensions, the compromises and defeats, that life is almost certain to bring. He must develop the strength of mind and heart to stand alone if necessary, when his sense of justice and good conscience compel him to an unpopular course of action.

As a rule, however, a man's happiness and his achievement will depend in considerable measure upon his capacity for association with others. And this turns more upon personality traits than upon intellectual powers. It is all too often the case that a man is unable to make the most of his abilities because he cannot get on well with people or cannot find his way around easily in the maze of social custom and organization.

American schools and colleges have hitherto paid little attention to the educational implications of this fact. They have been so preoccupied with the training of the intellect, with making sure students could pass examinations in sizable bodies of knowledge of this or that, that they have given little consideration to the problems of personality. General education should correct this deficiency. It should make growth in emotional and social adjustment one of its major aims.

To this end, the student should be taught the nature of human behavior, his own and others'; he should understand the highly important role of emotions in our lives; he should have guidance and prac-

tice in applying this knowledge in his own adjustment to men and life. Instruction in psychology and the social sciences can provide the knowledge he needs, and experience in the wide range of activities afforded by the college community can provide the field for its application and testing.

7. To maintain and improve his own health and to cooperate actively and intelligently in solving community health problems.

In any society human resources are of paramount importance, and when the physical health and vitality of any large proportion of the people are less than they might be, these resources are seriously impaired. The mental vigor and spirit of a people are conditioned by its state of physical health.

Our colleges and universities are doing far less than they might to dispel the ignorance that lies at the root of the ill health of many of our people. Almost all our colleges, it is true, offer many courses that touch in some degree on the principles and practices of healthful living. But these courses are scattered through a number of departments, and the information contained in them is never brought directly to bear on the practical problems of personal and community health.

What is needed is a course that deals specifically and explicitly with the information, attitudes, and habits the student needs to maintain and improve his own health and that of his community. An important phase of instruction to this end will be emphasis on the fact that health is more than a personal problem, that it has social implications, and that the individual owes it to society no less than to himself to keep his health and energy at their peak.

College programs of physical education should provide an opportunity for the student to put into practice his theoretical knowledge of healthful habits. But to serve this purpose, most such programs need reorientation. They should concentrate on the activities that the average person can carry on into life after college, rather than on the training of a few athletes for intercollegiate competition or on the technical preparation of those who plan to make a profession of physical education. The emotional value of participation in "spectator sports" is not to be discounted, but it needs to be balanced by more direct personal activity than is engaged in by most college graduates.

8. To understand and enjoy literature, art, music, and other cultural activities as expressions of personal and social experience, and to participate to some extent in some form of creative activity.

It can scarcely be necessary to urge the importance of literature in the program of general education. Man's consuming interest is in man, and in this interest literature can serve. By means of great novels, poems, plays, and essays one can participate vicariously in many events that one's own life does not encompass, and so can gain

as in no other way imaginative insight into the emotions, drives, and aspirations of one's fellow men.

Literature sets forth both the heights and the depths that man can reach. It is an avenue of communication with the great minds and the great souls of yesterday and of today. It can do as much as any other single form of experience to broaden and deepen the perceptions and sympathies of the individual.

This consequence does not, however, follow from the study of details of literary history, literary biography, literary techniques, or any other of the accompaniments to literature that make up specialization in the subject. The contribution of literature to insight and emotional maturity will come from one's own reading of the world's literary treasures, and from reflection upon them.

The world's literary treasures are not those of the West alone. They include the great intellectual statements of men everywhere and in all ages. There is probably no better way of promoting the intellectual and spiritual unity of mankind than through free trade in enduring literary expressions.

And in the graphic and plastic arts, too, man has recorded much of his thought and feeling about life through color, form, and sound. A signal defect in much of American education, and in American culture, is its failure to recognize that music, painting, sculpture, the dance, the drama, and others of the arts are authentic statements of experience.

One of the tasks of American democracy is to heighten and diffuse esthetic sensibility and good taste, to make our people sensitive to beauty in all its varied forms: in the commodities and services of everyday life, in private and public buildings, in community and regional planning.

The study of the arts in general education should not be directed toward the development of creative artists of exceptional gifts, though it may in some instances lead to this. It should aim at appreciation of the arts as forms of human expression, at awakening or intensifying the student's sensitivity to beauty and his desire to create beauty in his everyday surroundings, at developing bases for discrimination and interpretation, at inducing sympathy with arts and artists and active concern for their welfare. Support of the arts can no longer be left to the patronage of wealth; active encouragement of artistic expression in its various forms must become the responsibility of all citizens.

Before completing his general education, the student should acquire a measure of skill in at least one of the arts or crafts, in some form of musical expression or in dramatics. Participation in creative activity, even at a low level of proficiency, is one of the best means to understanding and appreciation of artistic expression.

9. To acquire the knowledge and attitudes basic to a satisfying family life.

In spite of the fundamental role our culture assigns to marriage and the family, in spite of their encompassing importance for a happy personal life, higher education has in the post concerned itself little with preparing students for their roles as mates and as parents. Here again, pertinent facts and materials have been scattered in bits through the curriculum but until very recently little attempt has been made to integrate them and focus them on the problem as it affects the average person in his everyday life. Courses in "The Family" have been set up for the sociologist, anthropologist, or social worker, but not to meet the needs of the general student.

Such a general course would include, as a minimum, psychological preparation for the emotional adjustments normally called for in marriage; child care and training; the planning of the home, of the physical environment of the family; consumer education in budgeting the family income, in wise buying and spending; and the principles of nutrition, for the proper feeding of the family. None of these matters are new to the college curriculum; only bringing them together in courses focused on the problems of family life is new.

That success in marriage and child rearing does not follow automatically from competence in other spheres is abundantly evident from the broken marriages, broken homes, and maladjusted children that are becoming all too common in America. Education for emotional stability, and probably for social competence and democratic living too, must begin in early childhood. Children reared in a home atmosphere of emotional insecurity, of social isolation, and of authoritarian discipline will not respond readily to education toward other ends in school and college.

General education will render a real service to our society as well as to individual students if it makes preparation for a stable, happy, all-sharing family life one of its primary concerns.

10. To choose a socially useful and personally satisfying vocation that will permit one to use to the full his particular interests and abilities.

Although direct vocational training is not a part of general education, occupational orientation should be. Few things make more difference in the quality of one's life, in one's vigor, good heart, and joy in living, than satisfaction in one's daily work. Fortunate above all others is the man whose way of earning a living is for him also an effective means of self-realization and self-expression. But this happy state seems to be the exception; more often the individual feels a sharp distinction between his earning hours and his living hours.

Satisfactory vocational adjustment might occur more often if there were less occupational snobbery among us, if all forms of useful work were accorded equal social status—manual labor as well as the white-collar job, mechanical skills as well as verbal aptitudes. Through education society should come to recognize the equal dignity of all kinds of work, and so erase distinctions based on occupational caste.

General education should acquaint the student with the interdependence among jobs that characterizes the world at work. It should also make clear the close relationship that exists between one's abilities and interests and his satisfaction in a given line of work. The student should be helped to choose his vocation on a more objective and sensible basis than the ambitions of his parents, his own wishful thinking, or incomplete occupational information.

It is experience on the job that best permits the student to measure theory against practice and to learn what abilities and skills his chosen work will require of him. Some colleges, such as Antioch and Bennington and Black Mountain, have found off-campus work, alternated with periods of study, a fruitful method of helping students to see the relevance of their college courses and to discover their own talents and occupational disposition.

11. To acquire and use the skills and habits involved in critical and constructive thinking.

Ability to think and to reason, within the limits set by one's mental capacity, should be the distinguishing mark of an educated person. The conception long prevailed in our Western tradition that Latin and Greek, mathematics, and formal logic were the most effective instruments for developing the power to think. These disciplines can be made to contribute richly to that end, but so can many others. Development of the reasoning faculty, of the habit of critical appraisal, should be the constant and pervasive aim of all education, in every field and at every level.

Higher education has sometimes seemed to proceed on the assumption that the student can acquire in college all the information about all the subjects he may need to know and use in later years. It has stressed the absorption of as many facts about as many things as possible.

More to the purpose and of much more lasting effect would be emphasis on the student's acquiring familiarity with the processes of inquiry and discovery. Insofar as education is not indoctrination it is discovery, and discovery is the product of inquiry. Arousing and stimulating intellectual curiosity, channeling this curiosity into active and comprehensive investigation, and developing skill in gathering, analyzing, and evaluating evidence—these should constitute the primary job of every teacher from the elementary grades through the

university. The open and inquiring mind and the habit of rigorous and disciplined investigation are the marks of freemen and the sinews of a free society.

General education, therefore, will concentrate, not on the mastery of specific information, but on the fullest possible development of the motives, attitudes, and habits that will enable the student to inform himself and think for himself throughout life. It will stress (1) the importance of being informed, of basing decisions, actions, and opinions on accurate facts; (2) knowledge of where and how to acquire information; and (3) ability to appraise, relate, and integrate facts in order to form valid judgments. The habit of making this approach to any situation can best be developed by leading the student to apply it at every opportunity in his life on the campus, in solving problems both inside and outside the classroom.

METHODS OF GENERAL EDUCATION

The objectives of general education are not to be achieved by prescribing any single pattern of courses for all students. Seeking to gain common goals for all, general education nonetheless approaches these goals through different avenues of subject matter and experience. These avenues must be as numerous and varied as the wide differences among students.

If all students are to attain common goals, much experimentation with new types of courses and teaching materials will be required. Only as these are developed, appraised, and modified to meet the widely varied abilities and needs of students in a democracy can all attain common objectives.

In the Classroom

Established courses in the sciences, social sciences, and humanities can contribute to the ends of general education, but if they are to do so they must be explicitly planned and taught with that purpose in mind.

This does not mean that existing courses designed for future majors and specialists are to be diluted for the general student. General education is not elementary or superficial education. It is no easier than specialized education; it should require no less of the student. The real difference between special and general education lies in orientation and purpose: the function of general education is not to develop the learned man or the professional technician but to provide the basis for intelligent living regardless of the type of life the individual may chance to have or the circumstances that surround it.

The study of English literature, for example, may be an end in itself, quite remote from the concerns of men, a pleasant retreat from the battle of life; or it can, if focused on the problems men face, con-

tribute to the development of ideals, to the understanding of human behavior, to emotional maturity. History can be a memory exercise unconcerned with human values, a mere roll call of names and events; or it can illumine the origin of the social institutions we prize and live by, and clarify the practice as well as the theory of democracy. Sociology can be taught as a matter of dots on a graph or figures in a table, or it can translate statistics into human beings and orient the student to the social world with which he must cope.

So one might continue through the roster of college subjects. Any one of them can be taught as special or as general education, depending on the choice of content and the emphasis in method. Geared to the needs of nonspecialists, general courses will be broader in scope. They will emphasize generalizations and the application of principles rather than the learning of factual minutiae. They will show the relationships between subject matters not ordinarily brought together, and they will cultivate in the student the habit of looking for and discovering broad meanings.

The activities of the classroom in general education will be more closely related to those in the world off-campus. The student and his rounded development will be at the center of instructional activities, and subject matter at the periphery—the reverse of many systematic courses in the various fields of knowledge.

New Courses Needed

But existing courses, however restyled, will not alone serve the ends of general education. New courses of a different kind are needed—courses that draw their material from wider divisions of knowledge, courses embodying unusual combinations of subject matter not closely related within the systematic, logical development of the subject, but intimately related to the psychological processes which human beings use in dealing with everyday matters. Examples would be courses in "Problems of American Life" or in "Science and Civilization."

Such courses call for an integration of content and an attitude toward the student that are lacking both in existing elementary courses and in survey courses. The latter are seldom adequate for their purpose because they have no focus, and the relationships among the various bodies of material of which they are composed are left vague.

In a survey course in the natural sciences, for example, a segment on chemistry may be followed by one on physics, then another on geology, and so on, each segment presented by a specialist as an introduction to the field of his life work rather than as preparation for understanding the place of such subject matter in an intelligent life. For the purposes of general education these interdepartmental courses need much more integration and synthesis.

Another type of general course may be organized around major human problems, drawing from all fields and divisions of knowledge whatever facts and principles are pertinent to these problems. Such a course might consider the relations between the individual and government. Other courses of this kind have been suggested in the sections dealing with healthful living and family life. Those who are able to look beyond the confines of their own subjects can readily find other topics and areas of human activity which lend themselves profitably to this type of treatment.

One of the most urgent needs for such courses is to be found in matters dealing with world understanding. Existing courses in international relations, concentrated as they are on matters of politics and diplomacy, do not serve the purpose. Nor do the standard courses in history, or even divisional courses in the humanities, since in both cases the content is drawn exclusively from the experience of the Western world.

The effectiveness of any general education program will depend on the quality and attitudes of those who administer and teach it. Its success will be commensurate with the faculty members' recognition of the importance of such instruction to society and their willingness to assume initiative and responsibility in reorganizing instruction and rearranging the life of the institution to accomplish its objectives.

Unfortunately the training of college teachers today is oriented so overwhelmingly toward research in some special field of scholarship that all too few are either competent to teach general courses or sympathetically inclined to try to do so. A quite different kind of education for college teachers and a new definition of scholarship and the purposes of higher education in America are basic necessities if general education is to move forward to its goals. Such a revised concept of the purposes of higher education has already been set forth; the reorientation of graduate education, without which little hope can be entertained for the general acceptance of some such new conception of higher education, is described later.

Campus Activities

Formal courses are not the only sources of general education, however. There are a great variety of extra classroom resources in the university community that should be used for educational purposes.

Concerts, recitals, exhibitions, lectures, plays, forums—these are some of the opportunities offered by all the large universities and in lesser number by most colleges of standing. All too often, however, these offerings are considered "extracurricular" or merely "recrea-

tional." That they should be a vital part of the educational experience of students is not recognized and many students neglect them entirely.

In this the students may be reflecting the attitude of classroom-minded faculty members. In any case, college young people should understand that the learning process is not confined to classroom, laboratory, or textbook.

The full range of student activities—in the dormitories, in student government, in clubs and organizations of all kinds, in all the varied social, recreational, and intellectual life of the college—if used constructively for educational purposes, should contribute immeasurably to the outcomes of general education. These phases of student life afford unique opportunities for testing theories of behavior in practical situations. They can provide invaluable experience in the practice of democracy and in social relationships.

But if this purpose of college life is to be realized, more students must participate. Here again, the notion that these activities are extracurricular stands in the way. Both faculty and students must come to accept them as an integral part of the educational program, as valuable components of the learning experience.

Some of the most productive teaching done in the institution can take place in these informal student groups and activities. This assumes, of course, that counselors and faculty advisers will be participants along with the students—not as representatives of the administration, not to dictate or even supervise policies and decisions, but to advise and help, to make available to youth the wider knowledge and experience that have come with special training and maturity.

Cooperative and continuing relationships should be established between faculty members, counselors, advisors of student organizations and residential groups, and student leaders, so that all the resources of student life may be used to advantage in a total program of general education.

INTERRELATIONSHIP OF GENERAL AND VOCATIONAL EDUCATION

Although general education, as the term is currently used, is concerned with the nonspecialized activities of living, it is by no means antagonistic to vocational education. Rightly conceived, the two are complementary. General education should contribute to vocational competence by providing the breadth of view and perspective that make the individual a more effective worker and a more intelligent member of a society of freemen.

It is urgently important in American education today that the age-old distinction between education for living and education for making a living be discarded.

The idea has long prevailed in our tradition, and it is still widely prevalent today, that a liberal education is one thing and professional or vocational education is another, that the two should be sharply differentiated, that one is preparation for labor, the other for leisure.

The modern college dating from the Renaissance, was originally aristocratic in tone. Its purpose was to produce the complete and well-rounded gentleman, the courtier. It sought to fit men of wealth and aristocratic birth for the art of government, to give them enough perspective and breadth to make decisions and formulate policies in administering the state.

Through the centuries it has been extremely difficult to free liberal education from the limitations of its original purpose. Liberal studies have often remained remote from practical considerations, and many educators still persist in keeping them at arm's length from preparation for sharing in the world's work.

Some go so far as to reject vocational education entirely calling it "servile" and to disclaim for liberal education any intention to be useful. Others, admitting the need for both general and special education, still seek to keep them apart in the curriculum. They hold that during a certain period of one's formal education one should pursue the ends of a liberal general education exclusively and then, if interested in a vocation or profession, pursue that with even greater singularity of purpose.

The Unity of Education

Much of present-day educational theory and practice is based on this fundamental misconception of the relationship between liberal and vocational education. The fact is that education is a unified process, developing in the student the qualities of mind and personality required of him both for making a living and for building a life.

The idea that vocational education is "servile" is certainly long since out-of-date. By broadening the basis of government to include all the people, democracy has made it necessary to give to all citizens the education formerly reserved for a privileged class. There can no longer be a distinction between inferiors trained only for practical tasks and superiors trained for government or the professions. Democratic society does not support a leisure class of gentlemen, nor does it distinguish between citizens and workers. Making a living is a function of the citizen and being a citizen is a function of the worker.

To build a richly textured and gracious life is a good and desirable purpose, but few of us can make such a life without first making a living. Cultural values soon take wing when men cannot get and hold jobs.

The ends of democratic education in the United States will not be adequately served until we achieve a unification of our educa-

tional objectives and processes. American education must be so organized and conducted that it will provide, at appropriate levels, proper combinations of general and special education for students of varying abilities and occupational objectives.

Vocational or professional training is essential in our industrial society. It is essential from the viewpoint of the individual who must support himself and his family. Special training is already highly important in the competition for good jobs and for advancement in one's chosen vocation, and the chances are that it will become more so.

Vocational education is necessary, too, from the viewpoint of the State and the Nation. Society has a great deal of work of many kinds to be done, if the social organization is to function smoothly and move forward to higher levels of good living. And society properly looks to the schools to provide the trained personnel for all its vast, complex activities. Institutions of higher education must assume their full share of responsibility for providing a sufficient number of qualified persons in all fields to satisfy the demands of society.

Our purpose, then, is to raise general education to a position of equal dignity and importance with vocational and professional education—to develop a program combining the two kinds of education in suitable proportions and making them interdependent.

Vocational Values of General Education

The complexity of modern technological society demands a high degree of social and economic intelligence on the part of workers in all fields. We have great need of mutually productive and cooperative human relationships among all the groups that share the responsibilities and benefits of economic enterprise.

General education is not alien to the needs of the worker; a review of its objectives demonstrates that clearly enough. A good general education serves to develop those traits of character and personality that are required for success in any occupation. To have some insight into the values and standards that men have found good in governing their lives, to be able to define problems and bring to their solution the habits of critical thinking, to be able to communicate ideas clearly, to possess the ability to deal with people in a friendly and considerate manner—these, more commonly than we think, perhaps, are the elements of vocational competence. And these are among the qualities of mind that general education is designed to develop.

The economic system of old rural America has undergone profound changes. As it has increased in complexity, we have come to rely less on automatic adjustment and more on human decisions and formulated policies. This requires social engineering of high quality, and

also a high degree of economic literacy among our people. The economic problems we face demand on the part of all citizens creative imagination, flexibility of mind, a democratic spirit, loyalty to the public interest, and insight into the organization and workings of our economic system. And these qualities are likely to come more fully from general than from special education.

The demands upon the industrial worker for social adjustment and understanding have greatly multiplied. In many occupations, perhaps in most, it is fully as important that the worker have a healthy and balanced personality and that he know how to play a cooperative role in a great variety of social relationships as it is that he know how to do his job well. And if he is to participate wisely in the determination of broad industrial and social policies, he must possess at least a general understanding of current social and economic problems.

One of the significant changes of our times is the new meaning the machine has given to leisure. Increased technical efficiency has made possible a drastic reduction in the hours of work; it has greatly increased the leisure time at the disposal of the worker. But the machine tends also to fractionalize the experience of the worker, to splinter his personality. Its use calls into play only a part of his total self. Highly repetitive simple operations performed day after day kill the imagination, dull the mind, and fail to give any satisfying sense of creative accomplishment.

Because of the high degree of specialization and division of labor in industry, leisure can no longer be regarded as mere cessation from work. The worker must use his hours away from the job to restore the wholeness of personality the machine tends to destroy. He needs to engage in leisure-time activities that will give him intellectual stimulation and growth, physical exercise and relaxation, emotional expression, and satisfaction of his artistic impulses.

General education can prepare the future worker in industry for this use of his leisure by introducing him to a wide variety of interests and activities that he may cultivate later on.

Another trend that may change substantially the conditions under which many industrial workers live is the movement toward what may properly be considered a new kind of industrial and economic citizenship. As management and labor develop the social skills and meetings of minds necessary to group cooperation and collaboration, the factory is becoming a new sort of community—a medium through which the worker can achieve a satisfying life.

But if workers are to meet their obligations and realize their opportunities in this new community, they will need to be well informed and socially minded, so as to cooperate on equal terms with well informed and socially minded members of management. General edu-

cation must prepare workers for this kind of intelligent participation in labor organizations and in cooperation between labor and management.

The farmer, too, has need of a general education. The sweeping technical, economic, and social changes that have taken place in agriculture in relatively recent years are making new demands upon the farmer. Nowadays he must be alert to social questions and have more than an elementary grounding in numerous matters of public policy. Most national questions have aspects of special concern to the farmer, and if he is to participate in discussing them and acting upon them, he must have something more than a technical education in agronomy, soil chemistry, and animal husbandry.

Moreover, the farmer is a consumer as well as a producer, and his consumption should extend to all the ingredients of civilized living. Observers agree that patterns of consumption in many rural areas need revision, mainly toward greater provision of education, medical and dental care, housing, recreation, and facilities for cultural improvement. Farmers need the satisfactions that come from literature, music, painting, and philosophy as well as those to be derived from material goods. But to get these the farmers must first learn to appreciate what they can add to life, and this appreciation will come from general education.

The land-grant colleges have been a potent factor in the democratization of higher education; they have brought it to the service of the practical affairs of life and of all classes, trades, and professions; they have given dignity to many occupations in both agriculture and industry. Through research and teaching, they have contributed immensely to the increased productivity of farm labor, and through their programs of home economics and their extension service they have enriched the quality of rural life. Their efforts in all these directions should be extended.

The purpose of the land-grant colleges and of higher education generally should be to prepare many young people, including some farm youth, for effective living in a new industrial and urban environment, and to give youth who will remain on the farm both the broad general education and the vocational training they will require for a better command over the physical and human resources of their environment.

THE IMPORTANCE OF COUNSELING

One of the most important instruments for accomplishing the purposes of higher education outlined in this report is an effective guidance and counseling program. In mass education, counseling provides the most likely means for adapting instruction to the individual student.

In diversifying its means and programs to meet the range of interests and abilities of an enlarging student body, the college necessarily assumes the obligation for providing the individual student with skilled and informed guidance in selecting from the variety of college offerings those best suited to his purposes and aptitudes. Unless guidance of this sort is provided, the entire point of the diversification of means will be lost.

An experienced counselor can clarify for the student the purposes of higher education in general and help him define his own educational purposes in particular. Skillful use of measures of ability, interest, aptitude, and previous educational achievement will enable the counselor to help each student to develop a program of courses and activities adapted to his personal needs. Possessing, together with knowledge of the individual, accurate and up-to-date information about the occupational requirements of society, the counselor can offer vocational guidance that may avoid costly mistakes in the student's choice of an occupation. And counseling can lead the student to see the relevance of general education to his vocational goal and to build a program that combines general and vocational education in appropriate measure.

The counseling staff should be large enough and varied enough in training, interests, and experience to provide adequate guidance also in the student's adjustment to the emotional and social problems he meets on the campus. Without this guidance the student may miss the educational value of much of his college life. Without enlightened and enlightening counsel, he may actually derive more harm than benefit from parts of his campus experience. An expanded counseling program is essential to full realization of the enlarging aims of higher education.

Education Adjusted To Needs

To make sure of its own health and strength a democratic society must provide free and equal access to education for its youth, and at the same time it must recognize their differences in capacity and purpose. Higher education in America should include a variety of institutional forms and educational programs, so that at whatever point any student leaves school, he will be fitted, within the limits of his mental capacity and educational level, for an abundant and productive life as a person, as a worker, and as a citizen.

THE COMMUNITY COLLEGE

As one means of achieving the expansion of educational opportunity and the diversification of educational offerings it considers necessary, this Commission recommends that the number of community colleges be increased and that their activities be multiplied.

Community colleges in the future may be either publicly or privately controlled and supported, but most of them, obviously, will be under public auspices. They will be mainly local or regional in scope and should be locally controlled, though they should be carefully planned to fit into a comprehensive State-wide system of higher education. They will derive much of their support from the local community, supplemented by aid from State funds.

Some community colleges may offer a full four years of college work, but most of them probably will stop at the end of the fourteenth grade, the sophomore year of the traditional college. In the latter case they should be closely articulated with the high school.

Whatever form the community college takes, its purpose is educational service to the entire community, and this purpose requires of it a variety of functions and programs. It will provide college education for the youth of the community certainly, so as to remove geographic and economic barriers to educational opportunity and discover and develop individual talents at low cost and easy access. But in addition, the community college will serve as an active

center of adult education. It will attempt to meet the total post-high school needs of its community.

Terminal and Semiprofessional Education

In the past the junior college has most commonly sought to provide within the local community the freshman and sophomore courses of the traditional college curriculum. With notable exceptions, it has concentrated on preparing students for further study in the junior and senior years of liberal arts colleges or professional schools.

But preparatory programs looking to the more advanced courses of the senior college are not complete and rounded in themselves, and they usually do not serve well the purpose of those who must terminate their schooling at the end of the fourteenth grade. Half the young people who go to college find themselves unable to complete the full 4-year course, and for a long time to come more students will end their formal education in the junior college years than will prolong it into the senior college. These 2-year graduates would gain more from a terminal program planned specifically to meet their needs than from the first half of a 4-year curriculum.

For this reason, the Commission recommends that the community college emphasize programs of terminal education.

These terminal programs should include both general education and vocational training. They should be designed both for young people who want to secure as good a general education as possible by the end of the fourteenth grade and for those who wish to fit themselves for semiprofessional occupations.

Semiprofessional training, properly conceived and organized, can make a significant contribution to education for society's occupational requirements. In not providing this sort of training anywhere in existing programs, the educational system is out of step with the demands of the twentieth century American economy.

Because of advancing technology, the occupational center of our economic system is shifting away from the major producing industries. The proportion of the working population engaged in these industries has decreased, while the proportion in the distributive and service trades has increased. In 1880, for instance, about one-half of all workers were engaged in agriculture; in 1947, less than one-seventh of the workers were so engaged.

One result of this development is a new and rapidly growing need for trained semiprofessional workers in these distributive and service occupations. To meet the needs of the economy our schools must train many more young people for employment as medical secretaries, recreational leaders, hotel and restaurant managers, aviators, salesmen in fields like life insurance and real estate, photographers, automotive

and electrical technicians, and so on through a long list of positions in the business and professional world.

Education on the technician level—that is, the training of medical technicians, dental hygienists, nurses' aides, laboratory technicians—offers one practical solution for the acute shortage of professional personnel in medicine, dentistry, and nursing. An adequate staff of well-trained assistants can substantially increase the number of patients one doctor, dentist, or nurse can handle.

For these semiprofessional occupations a full 4 years of college training is not necessary. It is estimated that in many fields of work there are *five* jobs requiring 2 years of college preparation for every *one* that requires 4 years. Training for these more numerous jobs is the kind the community college should provide.

If the semiprofessional curriculum is to accomplish its purpose, however, it must not be crowded with vocational and technical courses to the exclusion of general education. It must aim at developing a combination of social understanding and technical competence. Semiprofessional education should mix a goodly amount of general education for personal and social development with technical education that is intensive, accurate, and comprehensive enough to give the student command of marketable abilities.

Community Center of Learning

Post-high school education for youth is only one of the functions to be performed by the community college. One such college has been known to have a daytime junior college enrollment of 3,000 but an adult enrollment in the late afternoon and evening of 25,000.

The community college seeks to become a center of learning for the entire community, with or without the restrictions that surround formal course work in traditional institutions of higher education. It gears its programs and services to the needs and wishes of the people it serves, and its offerings may range from workshops in painting or singing or play writing for fun to refresher courses in journalism or child psychology.

If the health of the community can be improved by teaching restaurant managers something about the bacteriology of food, the community college sets up such a course and seeks to enroll as many of those employed in food service as it can muster. If the community happens to be a center for travelers from Latin America, the college provides classes in Spanish for salespeople, waitresses, bellboys, and taxicab drivers.

The potential effects of the community college in keeping intellectual curiosity alive in out-of-school citizens, of stimulating their zest for learning, of improving the quality of their lives as individuals and as citizens are limited only by the vision, the energy, and the

ingenuity of the college staff—and by the size of the college budget. But the people will take care of the budget if the staff provides them with vital and worthwhile educational services.

In Relation to the Liberal Arts College

The Commission does not intend to suggest that the expansion of educational opportunity at the freshman-sophomore level should be limited to the community college. Part of the needed expansion can be achieved through existing 4-year colleges, part of it through the lower divisions of the universities.

Some of the established colleges may wish to institute terminal curriculums and contribute to the development of semiprofessional training. Others will prefer to concentrate on general education for students who plan to complete a 4-year course. Still others, especially the liberal arts colleges of universities, may welcome the opportunity to focus their energies on senior college programs.

In any case, the liberal arts college is so well established in the American educational tradition that it need not fear community colleges will weaken its own appeal. It should encourage the development of the community college, not oppose it. Experience indicates that these community institutions awaken intellectual curiosity and ambition in many youth who would not otherwise seek college education at all, and in many cases these students will be stimulated to continue their college careers if the 4-year colleges will meet them halfway with liberal admission policies.

There is little danger of lowered standards in this. We know now that ability to complete successfully the work of the last 2 years of college depends more upon the quality of mind and the mental habits a student brings to his work than upon the nature of the subject matter he has already covered. There is no reason to believe that community colleges, if they are adequately staffed, cannot do as good a job as the lower divisions of 4-year colleges in preparing students for advanced work in liberal and professional education.

While it favors the growth of community colleges, the Commission emphasizes that they must be soundly established with respect to financial support and student attendance. This calls for careful planning on a State-wide basis in determining location of the colleges and the curriculums to be offered. Simply to create more small, inadequately financed institutions would only retard the development of a sound program of post-high school education.

THE SENIOR LIBERAL ARTS COLLEGE

Essential as programs of general education at high school and junior college levels are, they do not alone meet the need for education for responsible living. Many college students deserve and society

urgently needs more liberal education than these lower levels can provide.

We cannot terminate liberal education at the end of the conventional sophomore year and turn the colleges and universities over thereafter to academic specialization and professional education.

Our society is desperately in need of men and women capable of giving wise leadership—the kind of leadership that can come only from those who have read with insight the record of human experience, who know the nature, career, and consequences of human values, who sense the meaning of the social forces operating in the world today, who comprehend the complexities and intricacies of social processes, and who command the methods of rigorous critical thinking.

Advanced courses in liberal education are necessary to force the student to grapple with intellectual tasks of difficulty and complexity. He must have depth as well as breadth in his educational experience if he is to acquire the capacity for intellectual independence. He needs to cut his teeth on solid intellectual matter, reach a higher level of critical thinking, and attain some facility in the methods of scientific investigation.

Excessive Specialization

To put the case for advanced courses in liberal studies, however, is not to sanction present curricular practices in the senior college. It should be possible to provide an education in depth without losing the breadth that is the essence of liberal education. It should be possible to steer a sensible course between overgeneralization and overspecialization.

The elective system was introduced in American colleges in protest against a rigidly prescribed curriculum that, however much it made for a common background among educated men, was too inflexible to meet changing social conditions. Then, when it seemed that too many students were taking advantage of the elective system to keep their college education as elementary as possible, the principle of concentration on a "major" subject was adopted, to make sure that every student's college experience would include a measure of intellectual discipline. But today in many undergraduate colleges, particularly in the large universities, concentration has proceeded so far that it has almost destroyed the historic values of liberal education. It has led to an unwarranted degree of specialization at the undergraduate level.

In one liberal arts college, for instance, an analysis of the programs of students graduating in 1939 and 1940 revealed that some of these graduates had taken as much as half their college work in a single department. Those who majored in English literature took an average of 73 quarter hours in that department, plus an average

of 16 hours in composition. Majors in political science took an average of only 52 hours in their own department but concentrated a total of 106 hours in the social sciences. Majors in the physical sciences took on the average 95 hours in that field—more than half of the number required for baccalaureate degree.

Such a degree of specialization amounts to vocationalism in liberal education. When the liberal arts college allows its students to specialize in one field of study so early and so intensively that other areas of knowledge are ignored or barely touched upon, it gives up its liberal birthright and becomes in fact a professional school.

The influence of graduate education and the specialized scholarly interests of a graduate faculty are largely responsible for excessive and narrow specialization in the liberal arts college.

Since often there are not enough students in the graduate school to justify giving all the specialities the graduate faculty wishes to offer, these highly specialized courses, dealing intensively with small pieces of a given subject, are opened to undergraduates. The result is that many undergraduate programs are little more than a collection of unrelated fragments of knowledge or a sequence of courses in an extremely narrow field.

The imposition of the narrow specialization of the graduate school on undergraduate education is unfortunate because the purpose of the senior college is basically different. Specialization at the graduate level is organized to train a few highly selected persons for careers in research and scholarship. Programs of concentration in the senior college, however, need to be built around a much wider range of intellectual and occupational objectives to serve a much larger and less selected body of students.

Furthermore, too much concentration too early is bad even for future specialists. The competent expert should be able to view his specialty in the whole context of knowledge, within as well as without the division of studies of which it is a part. The historian should certainly know something of science and the scientist something of history. But so should the physicist be acquainted with the fundamentals of the biological sciences, and the sociologist with the fundamentals of political science.

Specialization is a great good. It has its place in any culture that has risen above the primitive level and in ours it occupies a place of primary importance. Nothing said in this report is to be interpreted as in any way discounting the tremendous gains that have grown out of the efforts of specialists to penetrate ever more deeply into the secrets of nature and the motives and processes of human and social behavior.

The point made here is twofold: that not all college students will become specialists and therefore should not be educated as such, and that the specialist himself will be more effective if he can see how the smaller problem of his special concern is related to larger issues and values.

Broader Fields of Concentration

Most colleges have long had in effect certain rules of distribution which are intended to keep concentration from getting out of hand. But distribution cannot counteract the splintering of the curriculum. Even when a student distributes a reasonable proportion of his credit hours among a number of departments, the individual courses remain fragmentary and the sequences narrow.

Today many institutions are experimenting with plans for broadening the fields of major concentration, and this trend should be encouraged and accelerated. The plans are of various kinds—topical majors, divisional majors, area studies, functional majors—but they are all interdepartmental and some of them cut across divisional boundaries as well.

The aim in all of them is to avoid both the sterility of overspecialization and the superficiality of hasty synthesis; to combine depth with breadth, the advantage of intensive study with the more inclusive view.

The divisional major that seems to have taken hold most widely is that in the humanities. The major is usually made up of a sequence of courses that are themselves divisional in scope, drawing their materials and instructors from the history, literature, philosophy, and fine arts departments. The courses are not, or should not be, surveys organized to give a hurried introduction to the subject, but instead should be integrated around some central theme.

Of the interdivisional plans the most common are the increasingly popular majors in American studies or similar programs centered on the culture of some foreign area or people: Scandinavian studies, Far Eastern studies, Russian studies, and so on.

As these area curriculums develop they should take on an increasing degree of integration. They should do more than bring together a collection of already available courses from various departments. There should be a definite attempt to present in a sound and comprehensive synthesis the geographic, historical, cultural, social, political, and economic elements of a contemporary foreign culture.

In most cases these area programs are both cultural and professional in purpose. They offer an excellent opportunity to students interested mainly in a liberal education, and they also constitute an invaluable preparation for many types of professional service abroad. They can also make an invaluable contribution to the international understanding so needed in our time.

The functional major has been described as "a sequence of courses and other educational activities leading to the attainment of a clearly defined educational or vocational goal." The student, with faculty advice and approval, draws up his own plan of study, selecting subjects that are related to each other and to a well-defined objective and arranging them in a systematic program.

This kind of major is perhaps the most far reaching of the attempts to revitalize the senior college curriculum. Not only does it permit greater flexibility than the conventional departmental major, but it emphasizes purpose and unity in the individual's educational experience. It provides the integration that the modern college has so often failed to achieve and the purpose that liberal arts programs have so often lacked.

The purposes that govern functional majors may be either broadly vocational or cultural. There is no reason to be scornful of vocational motives in liberal arts education. Historically the B. A. degree has had a vocational aim as preparation for the learned professions. It is not out of keeping with the traditional purpose of liberal education to extend it to serve other vocational interests.

However, vocational offerings in the liberal arts college should be built around and based on liberal studies. They should be broader in scope than those in the more specialized colleges and should be of a kind that requires relatively few specific skills—journalism, for example, or general business, or library science.

Liberal education can be thoroughly useful when its relevance to life is brought sharply into focus by a vocational purpose that gives point and direction to the student's program. The danger of futility lies in an unfocused, aimless study of liberal subjects. For this reason the traditional segregation of liberal education in one period of a person's college career and of professional education in another has not served the best interests of either.

The aim should be to integrate liberal and vocational education, letting them proceed simultaneously though in varying proportions throughout the student's college life, each enriching and giving meaning to the other.

General Education in the Senior College

The emphasis to be placed on more intensive study in the senior college does not mean there is no place for general education beyond the sophomore level. On the contrary, general education should be continued throughout the 4-year program.

There is no logical reason why a student majoring, say, in one of the sciences should not be able to take a general course, fitted to his level of maturity, in the humanities or the social sciences in his junior or senior year. A number of institutions are beginning to provide

such general courses at the senior college level, and this development is to be commended.

All these plans for revision and reform in the senior college curriculum are still in the trial stage, and the work of experimentation should be carried on as continuously, vigorously, and speedily as possible.

Whatever the methods developed, the purpose is clear: to provide a well-rounded education that will fit men and women to understand the broad cultural foundations, the significant accomplishments, and the unfinished business of their society; to participate intelligently in community life and public affairs; to build a set of values that will constitute a design for living; and to take a socially responsible and productive part in the world of work.

THE PROFESSIONAL SCHOOL

It may be worth while to reiterate that the pervasive emphasis in this report on the values and importance of the general and liberal phases of higher education is simply a recognition of the shade into which they have fallen and from which, for the good of society, they must be rescued. It does not mean that the Commission in any way minimizes the task the colleges and universities must perform in preparing the vast army of trained personnel required to carry on the work of the Nation.

Estimating Occupational Needs

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.

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.

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.

The Commission has been provided by the United States Bureau of Labor Statistics with a description of the population and labor force framework within which higher education probably will operate in the decade to come.

The total working population is expected to increase from the current figure of approximately 61,000,000 to 66,000,000 by 1960. The

differential trends in labor-force participation among the various groups in the population are expected to continue. Whereas the anticipated increase in the total labor force from 1946 to 1960 is 8 percent, the number of working women is expected to increase by 13 percent, the number of teen-age workers to decrease by 11 percent, the number of workers over 65 to increase by only 8 percent despite the large population gain in this age group.

Wide variations in the rate of labor-force growth are anticipated also among the different regions of the country. The working population on the Pacific coast is growing at two to three times the national rate, whereas the labor force in the Great Plains stretching from North Dakota to Oklahoma is actually beginning to decline. Between these two extremes are the South, with a rate of growth about 25 percent above the national average, and the great industrial region east of the Mississippi and north of the Ohio, where the labor force is growing at a rate about 25 percent below the national average.

It is anticipated that with full employment, the number of persons employed in professional and semiprofessional occupations will increase from 3,300,000 in 1940, to between 4,400,000 and 4,800,000 in 1950. By 1960 this number may reach 5,100,000. The administrative occupations, in which 3,700,000 were employed in 1940, are expected to require between 5,300,000 and 5,800,000 by 1960, and clerical and sales workers will increase from 7,500,000 in 1940 to between 10,500,000 and 11,000,000 in 1960.

If full employment is maintained, the number of people doing the Nation's work will be 36 percent greater in 1960 than in 1940. With advancing productivity, this means a greater increase in national income, providing an economic basis for continually rising standards of education, medical care, and social service.

All major industries except agriculture will share in the increase, but the greatest growth may be expected in manufacturing, trade, services, and possibly construction. All major occupational fields will expand, with the exception of agriculture and possibly domestic service. A considerable growth is to be expected in the professional, administrative, clerical, and sales occupations, which will give employment to half again as many workers as in 1940.

On the whole, the prospect is for a greatly expanded need for trained workers in most of the occupations that require college preparation. The vocational task of higher education has been a big one in the past; it promises to be much bigger in the future.

The estimated employment and training needs for a limited number of professional fields are reviewed on succeeding pages. Generalizations for other fields cannot be made from these data, but these at least illustrate the kind of statistical analysis that should be made

in all fields of employment for which post-high school preparation is a requisite.

The Need for Teachers. By far the largest and most urgent demand for new personnel is in elementary- and high-school teaching. According to the United States Bureau of Labor Statistics, we must recruit and train nearly 1,000,000 new teachers during the 10 years from 1950 to 1960. In sheer size alone this is a serious and challenging responsibility.

But more serious still is the responsibility of making sure that the kind of education given these persons who are to teach the young will fit them to do the job as it should be done. They must be imbued with the spirit and the methods of free inquiry and skilled in the art of communicating these to others.

To this end specialists in education and those in the liberal arts must replace their mutual skepticism with a cooperative relationship based on recognition of the fact that teachers need to know both what they are teaching and how to teach it.

The responsibility of higher education extends to those who are already teaching. Because of low certification requirements during the war, the need for in-service education of teachers is greater than ever before. If they are to be kept abreast of new teaching aids and devices, of the results of research leading to better understanding of children and teaching methods, and of current developments in the Nation and the world, the colleges and universities must provide them with facilities and materials for continuing education on the job.

The Need for Doctors. The medical profession has grown more slowly than the population in recent years, increasing 13 percent while population rose 43 percent in the three decades from 1910 to 1940. The major factor in this slow growth has been the failure of facilities for the training of doctors to keep pace with the growing demand. During World War II the medical schools increased the number of their graduates by accelerating their program, but almost without exception they have returned to a 9-month schedule and are reducing the potential graduates approximately to prewar numbers.

There is little agreement as to the adequacy of the Nation's supply of physicians. This disagreement results primarily from failure to distinguish between the effective demand for doctors' services and the potential demand.

Under current circumstances the total number of physicians may be sufficient, in urban centers at least, to meet the demand for medical service from those who can pay for it. In times of economic crisis, when purchasing power is low, an apparent surplus of doctors may even appear, as in the depression of the 1930's.

In terms of need, however, as distinguished from effective demand, the shortage is serious and will grow more pronounced in the future. With the development of programs which remove the financial and geographic barriers to medical care and which create additional facilities for the rendering of health services, the present rate of production of physicians will prove increasingly inadequate.

In fact an acute shortage of doctors is to be expected by 1960. According to the Federal Security Agency, merely on the basis of current demand, the deficit will be at least 26,000 in 1960, and if actual and urgent need for better services, such as for general practitioners in local communities, is included, then shortage is increased by an additional 30,000.

Since only about 164,000 doctors were reported in 1940 and at current rates of production and of loss to the profession only about 202,000 can be expected by 1960, the achievement of adequate medical care will require a substantial increase in the output of our medical schools over a long period of years. The production of the 56,000 doctors in addition to those 202,000 who can be anticipated to be in the profession, could be achieved by that date only with a doubling in annual output.

Needs in Dentistry. There are reports that the accumulated dental neglect in the population is so great that 800,000,000 hours of work, or the full time of 400,000 dentists working for 1 year, would be required to do the job.

Adding other factors to this backlog of need, the United States Bureau of Labor Statistics estimates that by 1960 there will be a demand for at least 110,000 dentists—some 40,000 more than were in the profession in 1940. It is estimated that there will be need for another 37,000 dentists to replace those who will be lost to the profession as a result of deaths and retirements during these two decades, and that the total number to be trained by 1960 therefore will be at least 77,000.

Graduations from accredited dental schools totaled about 15,400 from 1940 through 1946. The American Dental Association expects graduations to average at least 3,000 per year for the remainder of the decade, which will mean that new entrants to the profession during the decade will total about 24,000.

To meet the estimated need, more than 48,000 dentists will have to be graduated between 1950 and 1960, and this will be possible only if the capacity of the schools is greatly expanded.

The Shortage of Nurses. The United States Women's Bureau estimated that in 1947, there were needed 359,500 nurses and only 317,800 were available, leaving a national deficit of 41,700. This is in spite of Federal subsidy for the training of nurses during the war.

It is estimated also that the minimum demand for registered nurses in 1960 will be 554,200. Yet there has been a decrease rather than the much-needed increase in nursing school enrollment during 1947. This drop has been due less to restricted capacity in nursing schools and hospitals than to the smaller number of young women who are choosing to enter nursing as a profession.

Even if the number of graduates in nursing could be held to the wartime peak of 45,000 a year, there would still be a serious shortage of nurses in 1960. Active recruitment of students in this field is urgently necessary.

The Need for Pharmacists. According to a study of needs and training in this area made by the Pharmaceutical Survey of the American Council on Education, the experience of the past two decades indicates a fairly stable annual requirement of 2,000 trained pharmacists.

The schools of pharmacy were seriously affected by the depression of the thirties. Recovery was taking place by 1941. However, the result of the wartime Selective Service policies was detrimental to these schools and their ability to meet the country's needs.

For the academic year 1934–35 the enrollment of the accredited colleges and schools was 7,154 and the number of graduates 1,428. Ten years later but 4,144 students were enrolled and 604 graduated. During this 10-year period there was an accumulated shortage of at least 7,500 trained pharmacists for the country.

Beginning with the autumn of 1946 the enrollment increased to 16,000. This rose to approximately 18,000 in 1947. In all probability the greatly enlarged number of graduates will be readily absorbed up to 1951.

The leaders of the profession have recommended to the training institutions that, beginning in 1948 the size of the entering classes be adjusted so as to prevent an oversupply of graduates for the area normally served. These leaders have urged continued cooperation between the State boards of pharmacy of the several States and the training institutions for the purpose of preparing careful estimates of the needs for professional services.

Recommended Expansion in Health Fields. Shortages of professional personnel to take care of the health needs of the Nation must be of serious concern to institutions of higher education. The Commission recognizes the high cost of medical, dental, nursing, and pharmaceutical education, but the cost of institutional service as a result of lack of health care is even greater for the Nation. It is estimated that this amounts to $500,000,000 a year.

The expansion of physical facilities and their maximum use in medical, dental, nursing, and pharmaceutical education should not

be delayed. The training of many more medical, dental, and laboratory technicians, as recommended for the community college, will also help considerably to relieve the existing and prospective shortages in these professional fields.

The Situation in Engineering. According to the American Society for Engineering Education, this profession has grown so rapidly that whatever overcrowding has occurred in the past has been due more to an oversupply of new entrants than to a decline in the number of engineering positions.

The number of employed engineers more than trebled between 1910 and 1940, increasing by roughly 15 percent even in the decade of the thirties, when total nonagricultural employment rose only 9 percent. However, during the depression years the number of engineering graduates exceeded the number of available engineering positions, and the 1940 census found 15,000 unemployed engineers and many engineering graduates who had gone into other kinds of work.

World War II created an enormous demand for engineers, and it is estimated that 50,000 additional persons other than new college graduates were employed in engineering positions during the war. In addition there were nearly 57,000 graduates from engineering colleges from June 1940 through June 1945. However, the demands for engineers, due to the war and later to reconversion, were greater than the supply of engineering graduates, and there was still a shortage late in 1945.

One of the striking trends in industry has been the increased dependence upon engineering and the concomitant greatly increased emphasis on research and developmental work. If any such national program of basic research is developed as that contemplated for a National Science Foundation, it will create a still greater need for industrial developmental research, to implement the discoveries which will flow from the basic research sponsored by the Foundation. This developmental research will demand the services of large numbers of highly trained engineers, many at the graduate level. Furthermore, not all engineering graduates enter the profession, and many of those who do enter it transfer later to other activities, notably to executive and administrative positions.

The actual enrollment in engineering colleges in the fall of 1946 was about 222,000, or nearly 50 percent over estimates made by the Society in the spring of 1946, and a study by the United States Office of Education in the spring of 1947 found that 77,000 students in other curriculums expected to become candidates for engineering degrees at a later date.

If the ratio of engineers to total employment in the industries employing the great majority of engineers remains at the 1940 level, this

great increase in engineering enrollment indicates that the supply of engineering graduates may exceed immediately available engineering positions by June 1950, or perhaps 1949, and that if enrollments continue at their present level, this condition might continue in later years.

One other factor contributing to large engineering enrollments is that engineering education has long been recognized as having great value as general education, and as a good foundation for work in almost any profession. This realization has resulted in a decided trend toward the inclusion of more humanistic and social studies in engineering curricula, in some cases by the addition of a fifth year, in others by reducing the amount of time devoted to technical and engineering subjects.

The possible future surplus of engineering graduates over immediately available engineering positions emphasizes a continuing need for such examination and revision of curricula by the engineering colleges. It also emphasizes the imperative need of a thoroughgoing program of guidance and selection of prospective college students, especially prospective engineering students, so that they may understand the requirements of the profession, the employment opportunities in it, and the possibilities of utilizing an engineering education as general education for citizenship and a greater variety of occupational outlets.

Manpower Planning. An analysis of estimated needs and supply in teaching, medicine, dentistry, nursing, pharmacy, and engineering serves to illustrate the kind of appraisal, in terms both of national requirements and of enrollment trends, that is needed in all professional fields. Without such appraisals neither wise distribution of university funds and energies nor wise vocational counseling of students is possible. Accurate information about need and supply in the professions a student is considering is essential if he is to make a wise choice among them.

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 to 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.

Agencies of Professional Training

Various agencies share the responsibility for vocational training at the post-high-school level. Commercial business and technical schools of varying quality provide some of it. Community colleges can furnish much of the necessary training on semiprofessional levels. Senior colleges, normal schools, and teachers colleges carry a sizable part of the load, especially in the training of teachers. But the bulk of what we usually think of as professional education is the work of university professional and graduate schools.

The professional schools are really vocational colleges; their work, though highly technical, is on the undergraduate level. When colleges of education, law, medicine, and the rest offer graduate degrees, they join the loosely organized congeries of schools and faculties that make up the graduate school.

Whenever the training in any vocational field becomes too specialized in its methods and resources to be taken care of in the liberal arts college, a separate unit within the university is likely to be established to provide it. Theology, law, medicine, and engineering are old established professions; education, business administration, journalism, pharmacy, dentistry, nursing, library science, social work, and public administration are among the newer ones whose claim to special professional schools has been widely admitted.

Inadequacy of Technical Training

The danger is that professional education will permit itself to narrow into specialization too early and too exclusively.

As each new profession increases the quality of the scientific data it employs, multiplies its technical methods, and attempts to raise its standards to equality with those of the older, recognized professions, it tends almost universally to strengthen strictly technical training at the expense of more general education.

A greater degree of specialization in professional schools than in liberal arts colleges is to be expected. The vocational motive here is dominant. But the professional schools defeat their own purpose when they allow technical and special courses to crowd general education from their curriculums. Their graduates will need more than a narrow technical proficiency for success in their work. In many fields professional competence depends about as much on knowledge of the ways of men and the world as it does on technical skill.

The practicing physician should know the emotions, aspirations, and social conditions of his patients as well as how their bodies react to disease. A knowledge of ethics and the social sciences is as important in the work of a lawyer as his knowledge of legal precedent. The intricacies of human relations play quite as big a part in the work of the

business executive or the government official as the intricacies of the stock market, the monetary system, or international relations.

All the professions are urgently in need of leadership, of professional statesmanship. They need men who possess disciplined imagination, social awareness, and elasticity of judgment, men who can see beyond the details of their own jobs to recognize professional problems and obligations and take constructive and farsighted action about them.

Professional men must deal with matters of public policy; they must grapple with social issues as these affect their professional interests. But professional leaders themselves testify to the ineptitude and confusion and blunders that result when men who have had only a limited technical education attempt to cope with broad human and social problems.

Fortunately the professional schools themselves are aware of the drift toward too much specialization, and in some instances they are beginning to take steps to remedy the situation.

That general education should parallel technical training in professional schools cannot be urged too strongly. In no other way can the professional man or woman acquire the breadth of training he must have to attain full professional stature and to fulfill his obligations as a leader in society.

Social Obligations of the Professions

Professional men and women must be citizens, too, and the professions must recognize their responsibilities to the society that supports them. They must always consider the social consequences and implications of their policies and decisions. Unfortunately their practices do not always reflect recognition of this fact.

It has already been pointed out that the quota system of selective admission in effect in many professional schools is a form of racial and religious discrimination that is wholly indefensible in a democratic society.

Equally unjustifiable is the tendency in some professions to restrict numbers arbitrarily in order to maintain the 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.

To use overcrowding of the professions as an excuse, where shortage rather than overcrowding is the actual fact, to justify a planned "economy of scarcity" is to put the good of the individual or the professional group above the general welfare.

The major problem is adequate distribution of our professional personnel. Some cities and areas may have more doctors or pharmacists or lawyers than they need, while others need more than they have.

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.

Moreover, if professional training were broad rather than narrowly technical, its graduates would not be restricted to practice in one occupation or in one segment of an occupational field. They would be able to use their education in a wider variety of activities.

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.

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.

And there is no foreseeing what new opportunities, what new occupations and professions, will come with the development of atomic power and its application to industrial purposes. 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.

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.

THE GRADUATE SCHOOL

Graduate education is the least understood activity in American education. Perhaps this results from the relatively small number of persons concerned with it. Yet, the graduate school is the apex of the university, the last of the progressively selective levels of higher education, and its students are the most advanced on the campus.

Nonetheless the graduate school has paramount influence. It is a powerful factor in determining the course of American life and culture. What it does today determines in great part what the rest of education will do tomorrow. It trains our college teachers and our research personnel. To it belongs the responsibility for scholarship and research, for advancement of the frontiers of knowledge, for the

formulation of the fundamental values and standards of our intellectual life.

The policies and purposes of the graduate school, then, are of primary concern to all education and to all America. Its contributions to social and scientific progress have been far reaching. Its responsibilities today are momentous.

All the more for this reason, analysis forces the conclusion that graduate education is in need of thorough revision.

Social forces have modified, and are continuing to modify at an increasingly rapid rate, the context within which graduate schools must function, and readjustments of a fundamental nature are urgently necessary if these university units are not to block rather than advance the progress of education—and, through education, of the Nation.

The Research Tradition

By 1900 the tradition was firmly fixed in this country that graduate education should emphasize research. This emphasis was primarily the product of three influences: (1) the spectacular results of science with its well-organized mathematical and experimental approach; (2) the need for agricultural and industrial research, recognized in the rise of the land-grant colleges and State universities; and (3) the example of the exacting and meticulous methods of research employed in German universities.

During the first two decades of the twentieth century the major task the universities faced in graduate education, as they saw it, was to improve their methods in research and to standardize procedures and requirements for advanced degrees.

Various professional organizations, such as the Association of American Universities, the National Association of State Universities, the Association of Land-Grant Colleges and Universities, and the American Association of University Professors, joined forces to accomplish these ends. The great foundations, notably the Rockefeller and Carnegie groups, did the same.

These efforts at standardization were all based on the assumption that the program leading to the doctor's degree should aim to train individuals who would engage in full-time research or who would divide their time between their own investigations and the training of other research workers under university auspices.

Up to 1918 this singularity of purpose in the program for advanced degrees appears to have been justified. Phenomenal technological advancement, combined with significant social change was creating the need for many more research workers in industry, agriculture, commerce, and government. And there was need for more penetrat-

ing and fruitful research in the well-established disciplines of the older arts and sciences.

Moreover, activity in research was then confined very largely to the universities; industry and government had not yet entered the field to any marked degree. The graduate student body was comparatively small and homogeneous in both its intellectual capacity and its broad occupational objective.

Changed Concept

But even before standardization had been achieved around the concept of highly specialized research, changes were under way that were to make this concept inadequate.

When the philanthropic foundations began to insist that colleges, in order to receive gifts for themselves or pensions for their teachers, must have on their faculties at least six or eight professors with the degree of doctor of philosophy, and when the accrediting associations began to make similar requirements, forces were set in motion that eventually enlarged the market for holders of the doctor's degree. Many of these now turned from university teaching and research into college teaching at the undergraduate level.

Following World War I this trend was accelerated by the great increase in the size and diversity of the college population at both graduate and undergraduate levels. Expansion at the lower level intensified the demand for more college teachers, which in turn called for expansion at the upper level.

The total graduate student body grew from 5,800 in 1900 to 15,600 in 1920 and to 106,073 in 1940. In the almost half century between 1900 and 1947 the number of Ph. D.'s awarded annually rose from 342 in 1900, to 432 in 1920, to 3,290 in 1940 and to 3,787 in 1947—an over-all increase of about 1,000 percent.

Following World War I, too, changing social conditions brought a need for trained scholarly personnel in many new areas of activity: in a variety of agricultural pursuits, in business and public administration, in education, social work, library science, psychology, speech, geography, physical education, journalism.

The need for trained scholars in these and other fields constituted a powerful pressure on graduate schools to provide new programs of work leading to the doctorate. This pressure was strongly reinforced by the desire of the members of these new professions to raise the social prestige of their occupations by winning academic respectability for them.

The challenge which the rising new professions hurled at the old traditional professions was simply an expression of a basic philosophy in American life: "*a philosophy hostile to the supremacy of a few*

vocations . . . a philosophy moving toward the social equality of all useful labor."

But the traditional learned professions have not yielded ground without argument. How can genuine research be done, they ask, in fields without a research tradition, without any scholarly literature, and on problems of only second-rate importance? They insist that scholarship is, by definition, research scholarship and that all candidates for advanced degrees must be trained in the research tradition.

The argument still flourishes between this group and those who contend that doctoral programs must be adjusted to actual needs in contemporary American life.

Functions of Graduate Education

Those who insist that graduate education must be more functional, that it must be carried on more in terms of what the work of the Nation requires, have a powerful argument in the record of what the holders of the Ph. D. degree actually do in life.

For instance, of the 20,783 persons who had received their Ph. D. degrees during the decade from 1930–31 to 1939–40 and who were employed in September 1940, 65 percent were working in institutions of higher education, 6 percent in other agencies of education, and 29 percent in government and industry. Of those employed in higher education about three-fifths were working mostly at the undergraduate level. Of special significance is the fact that of those employed in 4-year colleges, only 7 percent were principally engaged in research. Only 2 percent of those employed in junior colleges were concentrating on research.

With more than a fourth of the doctors of philosophy going into nonacademic employment in government or industry, the work of the graduate school can no longer be defined wholly in terms of the needs of educational institutions. Since less than a third of the holders of Ph. D. degrees are primarily engaged in research—in educational institutions, industry, or government—it is unrealistic to confine graduate programs to the kinds of experience that contribute in the main to proficiency in research.

The fact is that graduate schools today are engaged primarily in training undergraduate teachers, along with a large number who enter nonacademic occupations. The training of those who will devote themselves to research and teaching others to do research is no longer the sole function of the graduate school. The old singularity of purpose and method in graduate education is gone; the graduate school must now prepare personnel for many types of employment, and no single pattern of training will solve its diverse ends.

If graduate education is to be reorganized and reoriented toward preparing the student for the work he will actually do, the graduate

school will have to assume responsibility for three major tasks: (1) it must continue basic research and the training of research personnel; (2) it must train experts for a host of services in nonacademic fields—government, industry, commerce, agriculture, and public welfare; and (3) it must train teachers for all levels of higher education.

Training in Research. Care must be taken that the research function of the graduate school is not weakened in the attempt to accommodate other purposes and programs. The quest for new knowledge, for objectively established fact, must be carried forward more vigorously and more extensively than ever before. This obligation of the universities will be considered in a later section of this chapter.

Training carefully selected students in the methods and principles of research is the peculiar duty of the graduate school, and this task has taken on transcendent importance today because of the Nation's acute shortage of research personnel. Overcoming this handicap to scientific progress as speedily as possible is an urgent task for the universities.

Those who are to prepare the scientists of the future might give thought to the fact that training in research ought to produce something more than library and laboratory technicians. Scholars should possess breadth of vision, imagination, and the ability to assimilate, integrate, and communicate their findings. In a special report to the President's Scientific Research Board a committee of the American Association for the Advancement of Science comments, ". . . *Too frequently advanced degrees are granted in a narrow field of research, thus producing technicians in a very special field of science rather than scientists.*"

The insight a research specialist may have into the problem of his own investigations is often profoundly conditioned by his knowledge in related areas, and in turn what he discovers may take on its full significance only when seen in relation to other branches of knowledge. General education and cross-fertilization between disciplines are by no means out of place on the graduate level or in the training of scientists.

Providing Experts for Nonacademic Service. For decades now the graduate schools, together with the professional schools, have been supplying highly trained experts for service in many branches of our national life, and they will continue to do so. Their conception of what is needed must be broadened, however. President Truman has publicly pointed out the deficiency in these words:

"*Our national policies must be administered by men of broad experience, mature outlook, and sound judgment. But there is a critical*

shortage of such men—men who possess the capacity to deal with great affairs of state."

The President went on to say that government has long recruited from academic institutions many members of its professional personnel—geologists, physicists, lawyers, economists, and others with specialized training. But, he added:

"*We have been much less successful in obtaining persons with broad understanding and an aptitude for management. We need men who can turn a group of specialists into a working team and who can combine imagination and practicability into a sound public program. . . . Men trained for this kind of administrative and political leadership are rare indeed.*"

Spokesmen for industry have voiced the same need, the same problem. Expert knowledge and technical proficiency are not enough. This is the problem that makes general education and revitalized liberal education a necessary accompaniment to vocational and professional education at every level of higher education, the graduate school included.

Preparing College Teachers. It is in the preparation of college teachers that the graduate-school program is seriously inadequate. Its single-minded emphasis on the research tradition and its purpose of forcing all its students into the mold of a narrow specialism do not produce college teachers of the kind we urgently need.

The more alert and thinking among college administrators have for years been asking, usually in vain, for teachers with different training and different skills. They want teachers with less-narrow interests and more intellectual curiosity and *aliveness;* teachers with more stimulating personalities and more experience of the world off the campus; teachers with more ability to synthesize and interpret facts; teachers with more ability to communicate ideas and attitudes.

Without such teachers general education and liberal education of broadened scope are impossible. Without such teachers we shall not achieve the objectives and the programs recommended in this report. The graduate schools must provide the sort of educational experience that will produce such teachers. The present requirements for the doctor's degree will not do so.

Perhaps the place to begin the process of reform is with the graduate faculties themselves. In few cases can the same man function satisfactorily on the level of intense specialization and preoccupation with research and also on the level of broad synthesis and general education. Not many men can serve two such different masters. A special effort should be made, therefore, to add to graduate teaching staffs men of broad knowledge, men of imagination and understanding, and wisdom. They can then educate others,

who will educate others and others, on through the whole educational system.

The Graduate Student Body

Graduate students are, it is true, a highly selected group, but the selection is largely by natural processes. All too often an individual becomes a graduate student because he lacks the energy or the initiative or the social know-how to do anything else. He clings to the shelter of the campus, fears the competitive struggle in the world outside, and so goes on from degree to degree as long as he can.

Yet certainly candidates for the important functions of college teaching and research should be as carefully selected as candidates in medicine, law, or business. A more careful screening of applicants for graduate education, with equal concern for qualities of personality and for potential scholastic achievement, should go far to improve the final product.

Once admitted to the graduate school, the students should not be allowed to live as close to the ragged edge of existence as many of them now do. Especially those of them who are to be teachers of youth should be expected to live balanced, well-rounded lives, acquiring social skills and experience. And if the individual cannot afford the costs of such a life for himself, the university or society should help him bear them. If he has enough promise to be worth education at this level, he is worth educating well and in all ways.

Proposals for Reform

Various proposals have been made looking toward reform. Some have suggested that the graduate school be divided into a research institute for the training of research personnel and a graduate college for the training of college teachers. Others are strongly of the opinion that such a division is unnecessary and unwise, that the several tasks of the school can be performed just as well without so sharp a separation between education and research and, in fact, that some experience in research is a significant means of intellectual development, even for those who will not make research their career.

Some have proposed the use of a new degree, doctor of arts, to mark those whose graduate program has been aimed at high general competence rather than intense specialization, reserving the doctor of philosophy degree for those students who have had rigorous training in research. Others oppose this as unnecessary, arguing that the letters of the degree do not matter, that only the transcript of a student's record and the real nature of his accomplishment can tell one anything about his preparation.

To devise new patterns of organization and programs of instruction that will perform the three functions stated above, is the current prob-

lem of graduate education. It involves difficult problems of administration and organization. The weight of a long and successful tradition and the powerful resistance of those who have vested interests in the old ways will have to be overcome. The entire task confronts higher education with one of the severest tests an institution can face: It is said that an entrenched priesthood will never reform itself; American graduate school faculties must demonstrate the falsity of this axiom.

More basic than these proposals to the achievement of reform in graduate education is the need for a new definition of scholarship. As long as scholarship is defined solely in terms of the research tradition, so that the rewards of scholarship, both in salary and in prestige and preferment, go to those who win distinction in research and the publication of research, plans for a broader orientation in graduate education will remain scraps of paper.

Our conception of scholarship must be enlarged to include interpretive ability as well as research ability, skill in synthesis as well as in analysis, achievement in teaching as well as in investigation.

These divergent capacities sometimes occur in the same individual, but not always. Universities do not hesitate to appoint an outstanding scholar or to advance him in rank even though he is a mediocre teacher; it is quite as defensible to appoint and advance a distinguished teacher even though he is not a "productive" scholar. Universities need both types of talent and the two should be given equal weight and recognition in academic circles.

The detached, perceptive scholar, is still sorely needed—in increasing numbers and in all disciplines. But if higher education is to discharge its social obligations, scholars also are needed who have a passionate concern for human betterment, for the improvement of social conditions, and of relations among men. We need men in education who can apply at the point of social action what the social scientist has discovered regarding the laws of human behavior.

THE RESEARCH PROGRAM

Advancing the frontiers of knowledge through research and the training of research men is still a supreme obligation of the university. And this function of higher education is becoming increasingly vital to the health and strength of our national life.

The importance of maintaining a proper balance between research in the physical and biological sciences and in the social sciences and humanities cannot be urged too strongly.

The case for the development of social technology as one of the imperative needs of our day is stated in Chapter II of this volume.

The present crisis in human history has come about largely because discovery in natural science has raced so far ahead of discovery in social science and in human behavior. We shall only be courting further disaster if we divert a disproportionately large measure of our financial and human resources into research in the natural sciences and continue to neglect the social sciences and the humanities.

It will be a little short of tragic if provision for social research is not included in the program of Federal support and organization planned under a National Science Foundation. Certainly the destiny of mankind today rests as much with the social sciences as with the natural sciences.

Shortage of Manpower

The report of the Chairman of the President's Scientific Research Board tells us that the ultimate obstacle to national progress in research in the natural sciences is the shortage of trained scientists. The number of competent men available, not the amount of money, is the limiting factor in research.

The United States did not safeguard its scientific manpower during the recent war as other nations did, and consequently we now do not have enough trained personnel to staff the research and development laboratories of industry, government, and the universities.

With the present increased college enrollments, this numerical shortage can be overcome in the next few years, but maintaining the quality of scientific training is a problem. The universities are finding it difficult to recruit enough competent teachers to provide the amount and quality of science instruction they are called upon to provide.

The Research Triangle

During the past 25 years the responsibility for research has moved, more than is commonly recognized, from the universities to industrial and government agencies. In 1930 university expenditures were 12 percent of the total national budget for research and technical development in the natural sciences; whereas during the period 1941–45, university expenditures averaged only 2 percent of the total excluding amounts for research in atomic energy.

Federal Government expenditures for research and development rose from $23,000,000 in 1930 to $67,000,000 in 1940; in the same period the research and development budget of industry increased from $116,000,000 to $234,000,000. University expenditures in these fields also increased during these 10 years, but at a much slower rate: from some $20,000,000 in 1930 to $31,000,000 in 1940.

Of the 137,000 persons engaged during 1947 in scientific research, development, and teaching, 57,000 are employed in industry, 30,000

in government, and 50,000 in colleges and universities. The universities' share of the manpower pool in science fell from 48 percent in 1930 to 36 percent in 1947.

Competition for personnel among the three sectors of the research triangle is not in the public interest. Because of the lower salaries paid in educational institutions, such competition tends to concentrate the manpower shortage in the universities and makes it difficult for them to get and keep the most able men—those who should be training others.

While the current shortage continues, expansion of one sector of research can take place only at the expense of the other two; growth in governmental and industrial research will necessarily curtail research in the universities. And curtailment in the university sector will imperil the Nation's future in science because (1) it will impede progress in basic research and (2) it will lower the quality of the training given future scientists.

A survey made by the President's Scientific Research Board revealed that deterioration is already evident in the quality of training in the natural sciences because of the shortage of qualified teachers and of laboratory and other facilities. And the situation is expected to grow worse as the large numbers of freshmen and sophomores reach advanced levels and require more experienced teachers.

In a matter so important to our national welfare, wisdom would suggest that a measure of cooperative planning replace competition among the various agencies engaged in research. Voluntary acceptance of necessary restrictions now would insure improved conditions a few years hence.

Importance of Basic Research

It is imperative that basic research, largely suspended during the war, be resumed and expanded. The great gains of applied research in the nature sciences were made possible during the last few years only because scientists had for decades been exploring the fundamental nature of the physical universe. Their patient pursuit of knowledge for its own sake provided the reservoir, the capital reserve, upon which the Nation could draw in time of emergency. That reserve now stands in urgent need of replenishing.

In the past, American scientists have contributed more to technical development than to fundamental science. We have depended largely on the men and the laboratories of Europe for advance in basic research. This we can no longer do, partly because conditions in Europe do not promise much strength in science for some time to come, and partly because the free exchange of ideas among scientists of all nations is, temporarily we hope, impeded by the unsettled state of the world. America is now on her own in accumulating a stock pile of

fundamental scientific knowledge as a basis for technological development.

For this reason any national program of scientific investigation—both in the natural and social sciences—must put proper emphasis upon basic research, and basic research is best committed to the care of the universities. It is what they are best equipped by function to do, and they can contribute much more to the Nation's progress in science by concentrating on this aspect of research than by turning themselves into institutes of applied science.

Financing Research

University scientists would undoubtedly prefer to devote their time to fundamental investigation, but they face a practical financial problem. Research is expensive. It takes time; it requires men of superior ability and training; it calls for adequate laboratory facilities and equipment. And money to provide these requirements comes most readily with Government and industrial contracts for applied research. The pressure to be practical, therefore, is almost more than university administrators can withstand. They are constantly tempted to accept contracts for applied research in order to augment their inadequate budgets. Nevertheless, the universities have a greater duty, as the President's Scientific Research Board pointed out: ". . . *the principal function of the colleges and universities is to promote the progress of learning and they must be the primary means through which any expanded program of basic research is carried out.*"

If university research is to be concentrated on basic investigations, financial assistance in substantial amounts must be provided. Vastly increased public appropriations, both State and Federal, are a necessity. In the past, gifts from philanthropic foundations have been of inestimable value in promoting research, but these would be entirely insufficient to meet present needs.

It is expected that in the future, at least one-half the national research budget will have to be provided by the Federal Government. This does not mean that one-half the work needs to be done in Government laboratories, where the emphasis is likely to be on technical development rather than on basic research.

This Commission recommends that a substantial part of Federal support for research be given in the form of financial assistance to undergraduate and graduate students in science through the total program of scholarships and fellowships described in the volume of this Commission's report, "Equalizing and Expanding Individual Opportunity," leaving it to the recipients to choose the areas in which they will work and the institutions, public or private, which they will attend.

This program of assistance to scientific research should not stand alone; it is recommended that it be a part of an over-all national scholarship and fellowship plan that includes all branches of higher education.

Free choice should exist in education as in all other areas of living in a democracy, and since no man can foresee the needs of the Nation in a more distant future, free choice will in the end serve society better than an attempt to direct developments. This fact, however, lays upon colleges and universities the obligation of providing students with adequate information about national occupational needs, so their free choices may be intelligent and properly based.

It would be wise also for industry to make funds available for university programs of basic research under the broadest possible terms. In the long run unconditional support of basic research would pay rich dividends to industry, because the success of applied industrial research depends on sustained advance in fundamental science.

Control of Research Results

There are no precise divisions, but research is generally considered to fall in one of two categories: basic research, or applied and developmental research. The first has as its purpose the seeking of new knowledge to push back the frontier of the unknown; applied and developmental research aims toward the extension of basic research to a specific application, generally involving the creation of a new product, process, technique, or device.

The findings of each type of research are important social resources, equal in value to the richest of our natural resources. To control or attempt to control the discoveries of the laboratory, whether these be fundamental principles or formulas for immediate application, may be to control in large measure the economic and perhaps the social destiny of a people—or indeed of many peoples.

The control of these resources has been a matter of public policy in this country. From the earliest period of our history the Government has granted patents, which are instruments of control, as a protection and incentive to individual enterprise. As a matter of public policy the duration of the control under a patent and its inviolability have been specified. Further, patents have been offered only for items which are "new and useful", thus limiting them to the results of applied and developmental research. Another example of control is that which applies to military weapons, which are in essence research results, and have been kept secret as a matter of national security. In essence, each of the research results to which control has applied has been the fruit of applied or developmental research.

But basic research should not be subject to such controls and restrictions. Control of these resources, and of the power which control offers, cannot be left to private hands or commercial interests. It is vital to society that the findings and products of such research shall be devoted to the general, not the individual, welfare.

Nor should control and direction of basic research be entrusted to military authorities. Civilian control of matters affecting the public welfare, even if high military policy, has always been the American way, and it would be disastrous to depart from it in so vital an area as scientific investigation.

To the extent that any discovery of science has possible uses for waging war, military men will have a proper concern in its development. But theirs must never be allowed to become the sole or the primary purpose in basic research.

The importance of this proscription springs in part from the necessarily divergent methods of men of science and men of arms. The nature of their profession requires military men to be secretive and cautious. The directors of the research programs of the armed forces generally have shown an admirable spirit in their understanding of the principles of freedom of inquiry. Nevertheless, they must think in terms of enemies and allies, of spies and counterspies, of weapons of attack, and methods of defense. They could not otherwise perform their duty to the country.

But this frame of mind is alien to the spirit of science. Freedom of investigation and freedom of communication have been the lifeblood of science, and scientific progress depends on full and free sharing of new knowledge—so that the success and failures of one man may further the work of all others.

Secrecy of research results in some cases is essential to national security. But secrecy of the results of fundamental research is stultifying and hampering to science.

ADULT EDUCATION

An expanded program of adult education must be added to the task of the colleges. This is a vital and immediate need, because the crucial decisions of our time may have to be made in the near future. Education for action that is to be taken, for attitudes that are to be effective, in the next few years must be mainly adult education.

Its Place in Higher Education

The continuing education of the adult population is carried on by many agencies, by some as a deliberate aim, by others as a byproduct not always recognized as education. But the colleges and universities are the best equipped of all the agencies, from the standpoint of re-

sources, to undertake the major part of the job. Education on a near adult level is their business, and they have, in some measure at least, the necessary teachers and facilities.

The present status of university extension services makes it painfully clear that the colleges and universities do not recognize adult education as their potentially greatest service to democratic society. It is pushed aside as something quite extraneous to the real business of the university.

This attitude is fostered by the necessities of adult education. It takes place outside regular college hours and usually off campus. It makes use of faculty members in other units of the university, and for these men extension or correspondence courses are usually extra chores they agree to add to their regular teaching load in order to supplement their inadequate incomes. In this frame of mind, many of them candidly get by with as little expenditure of energy as possible.

This state of affairs cannot be permitted to continue. The colleges and universities should elevate adult education to a position of equal importance with any other of their functions. The extension department should be charged with the task of channeling the resources of every teaching unit of the institution into the adult program.

Adult education, along with undergraduate and graduate education, should become the responsibility of every department or college of the university. It should be the duty of the English faculty or the physics faculty, for instance, to teach English or physics not just to those who come to the campus, but to everyone in the community or the State who wants to learn, or can be persuaded to want to learn, English or physics.

To this degree every college and university should become a "community college." Then extension teaching would be accounted a part of the regular teaching load and would receive its due share of faculty energy and interest.

Granted that this would increase the job of the institution many times over, that it would require more teachers, more manpower in administration, and a very considerable increase in the budget. The principal obstacle to acceptance of the program, nonetheless, is the limited concept that higher education still holds of its role in a free and democratic society.

It must broaden that concept. It must cease to be campus-bound. It must take the university to the people wherever they are to be found and by every available and effective means for the communication of ideas and the stimulation of intellectual curiosity. It must not hold itself above using all the arts of persuasion to attract consumers for the service it offers.

Adult education in the past has been much too inflexible, much too bound by traditional notions of proper educational procedures. Extension activities for years have been stultified by the idea that adult education consists merely of the transmission to mature people of campus courses developed to meet the needs of adolescents.

Fitting Method to Student

Adult students are not conscript classes. Already established as wage earners, most of them, they do not have to go to school; they have a wide range of activities from which to choose a way of spending their leisure. And adult education is, in most cases, a leisure time activity. The students come to the class or the correspondence lesson at the end of a full and probably tiring day. They want release from the tension of their jobs. They appreciate a much greater degree of informality in atmosphere and method than characterizes most campus classroom teaching.

The program of adult education must be fitted in content, methods, and aims to the adult student as he is, not as the college or the professor thinks he should be.

If adult students are to remain in the class, once enrolled, they must be stimulated and interested. There is nothing to prevent them from dropping a course that does not interest or benefit them, nothing to prevent them from walking out on a teacher who is dull, rambling, and irrelevant.

Adult interest in further education is not predominantly vocational. Many enroll in extension courses to fit themselves for a better job, but many others are motivated by a desire, often vague and fumbling, for self-improvement, which they think a course in literature or history or current events should give them. The majority of them will demand substance in the lecture or the discussion but they will not suffer gladly much academic or specialist jargon.

Vigorous Experimentation

Courses by extension or by correspondence may not be the best means of educating adults; they certainly are not the only ones. Vigorous experimentation with new methods, however unorthodox, is called for.

With the demonstration constantly before us of the appeal and the effectiveness of motion pictures, higher education has been inexcusably slow in the development of visual education. That documentary and educational films could become teaching instruments of great power cannot be doubted. They are becoming so in the elementary and secondary schools.

But all too often the visual education department of the university is relegated to the status of a self-supporting service enterprise, along with the cafeteria or the bookstore, instead of being recognized as a

vital educational unit worthy of a substantial budget and the encouragement of administration favor and interest. If use in the adult program brings visual education into its own, all of higher education will benefit.

The great influx of students into the universities and colleges immediately after the war has given much impetus to the development of visual education and other technical aids to learning. The considerable divergence in reading skills and achievement on the part of the students has made it necessary to find devices which make the teacher's presentation more vivid. The greater number of students per teacher and the lack of preparation on the part of many new teachers has augmented the need for effective training aids.

The experiences of the armed forces in World War II affords an excellent example for institutions of higher learning as they cope with the problems of mass education. During the war the service's training schools were faced with the necessity of evolving effective and rapid methods for mass instruction. With a practically unlimited budget they made marvelous strides in the development of motion pictures, strip films, transcriptions, mock-ups and other learning devices. The primary and successful application of these devices to wartime training purposes suggests the need for further exploration in an effort to develop similar devices for peacetime academic instruction.

There are currently certain handicaps to an extensive development of the use of technical aids at the college level. Primarily the meagerness of existing materials available for use in higher educational instruction retards this development. There is also a lack of information and centralized distribution of such materials as are presently in existence. Several institutions notably Rutgers, Pennsylvania State College, the State University of Iowa, and Vassar, have developed effective materials for their own use. Doubtless these materials would have wider application and use in other institutions if a procedure for interchange of information and actual materials were developed.

This Commission recommends the establishment of a continuing committee devoted to the study, development, and utilization of technical aids to learning in higher education.

Such a committee should deal with four major areas of responsibility. In the first place, it should provide facilities for coordinating information on existing materials and develop a plan for the interchange of these materials among interested institutions. Secondly, the Committee should arrange for continued study of the special devices developed by the Navy, Army, and Air Corps to discover possible applications these developments may have for civilian instruc-

tion. Another important activity would be the stimulation of individual institutions or groups of institutions in a program of integrated effort at developing further basic-training aids. This committee should also assume responsibility for wide publicity on the advantages and objectives of technical aids in higher education.

The Commission is of the opinion that the work of such a committee would be most effective by having it attached to some existing educational organization which has sufficient prestige to challenge the serious consideration of institutions of higher education.

University owned and operated radio stations are another agency for adult education whose possibilities are all too seldom exploited. Their influence and appeal where they exist is widespread.

Yet here again the universities are niggardly and slow. The Federal Communications Commission has set aside twenty bands on the FM spectrum for the use of educational institutions, but the colleges are not taking advantage of the opportunity thus offered them. They are repeating the mistake they made 20 years ago when they failed to take up the channels reserved for them in the AM spectrum. The FCC cannot be expected to hold out against the pressure of commercial interests that want these FM bands if the colleges and universities show no interest in making use of them.

Objectives of Adult Education

Whatever methods may prove best for reaching and instructing large numbers of the adult population, the purposes of the program are in large measure those of higher education in general. The adult program is not an additional objective of the college; it is one of the means by which the college can achieve its general objectives.

The knowledge, attitudes, and activities necessary for responsible citizenship in our free society cannot be left to the oncoming generation; they are needed now. The urgent necessities of world-wide understanding and cooperation cannot be postponed until the insight and good will upon which they depend have been developed in a new generation; they call for thought and action now.

Higher education will not play its social role in American democracy and in international affairs successfully unless it assumes the responsibility for a program of adult education reaching far beyond the campus and the classroom.

The Social Role of Higher Education

The task that President Truman assigned to this Commission was to define the responsibilities of higher education in American democracy and in international affairs, and to reexamine the objectives, methods, and facilities of higher education in the light of the social role it has to play.

In the first volume of its report, this Commission has declared its conviction that if American higher education is to fulfill its responsibilities in the second half of the twentieth century, it will have to accelerate its adjustment in purpose, scope, content, and organization to the crucial needs of our time. It will have to act quickly and boldly if it is to fit students for meeting the new problems and necessities America faces as the Nation takes on a responsibility for world leadership that is without parallel in history.

American colleges and universities must envision a much larger role for higher education in the national life. They can no longer consider themselves merely the instrument for producing an intellectual elite; they must become the means by which every citizen, youth, and adult is enabled and encouraged to carry his education, formal and informal, as far as his native capacities permit.

This conception is the inevitable consequence of the democratic faith; universal education is indispensable to the full and living realization of the democratic ideal. No society can long remain free unless its members are freemen, and men are not free where ignorance prevails. No more in mind than in body can this Nation or any endure half slave, half free. Education that liberates and ennobles must be made equally available to all. Justice to the individual demands this; the safety and progress of the Nation depend upon it. America cannot afford to let any of its potential human resources go undiscovered and undeveloped.

The wider diffusion of more education, however, will not serve the purpose unless that education is better adapted to contemporary needs. The first and most essential charge upon higher education is that at all its levels and in all its fields of specialization it shall be the carrier of democratic values, ideals, and processes.

Democracy as a way of life uses varied institutional forms and changing patterns of cooperative association as time and circumstances may require, but it holds fast to its abiding elements: Its respect for human personality, its insistence on the fullest freedom of belief and expression for all citizens, its principle that all should participate in decisions that concern themselves, its faith in reason, its deep obligation to promote human well-being. These ideals and the processes through which they are translated into individual and social behavior must permeate American education from the nursery school through the highest reaches of the graduate and professional schools.

It is imperative that American education develop a "democratic dynamic" that will inspire faith in the democratic way of life, dispel doubt and defeatism about the future, and imbue youth with the conviction that life has high purpose and that they are active and responsible participants in that purpose.

At the same time and with equal urgency higher education must prepare Americans to contribute their utmost to the achievement of world order and peace among men. To this end it should seek to inculcate in students a sympathetic understanding of the cultures and peoples that make up the world community. Higher education faces no greater challenge than that of securing, and securing in time, a widespread recognition of and adjustment to the oneness of the modern world. The task of the colleges here is to make the transition from a curriculum centered almost exclusively on the American-West European tradition to one that embodies the intellectual experience of the whole of mankind.

E Pluribus Unum—From many persons one nation, and from many peoples one world—indivisible, with liberty and justice for all. A strong and dynamic national community, intertwining in harmony and unity of purpose an infinite variety of individual talents and careers, and in time a strong and dynamic world community, embracing in brotherhood and mutual respect a rich and enriching diversity of national cultures. These are the twin goals which America, and therefore its institutions of higher education, must strive to attain.

Incessant search for new knowledge through research, unceasing effort to plumb the meaning of life and the enigma of man's behavior through interpretive scholarship, the cultivation of gifted minds, the provision of professional education to satisfy the occupational needs of society—these are the established tasks of higher education. They are vital tasks, and their performance must be constantly improved and strengthened. But to them now higher education must add a sufficient variety of organizational arrangements and curricular offerings to encompass the wide range of individual differences in capacity and purpose that increasing the number of students will bring to college.

At the same time there must be sufficient unity of purpose in this essential diversity of higher education to produce a community of values and ideas among educated men. The complexity of modern society requires a great variety of talents and many kinds of competence for its successful functioning; yet without some commonality of purpose, values, and experience we shall not achieve the reconciliation of differing opinions and interests that is the lifeblood of democracy.

FEDERAL AID

The radical character of the adjustments required in higher education, their magnitude, and the pressure of time, all mean that neither individual institutions nor national educational organizations have the resources to effect the necessary changes without outside stimulation and financial assistance. These, the Commission believes, will have to come from the Federal Government.

The particular ways in which Federal support and encouragement should be given will be discussed in later reports. Here, this Commission wishes only to point out that such aid to higher education is a proper concern of the Federal Government, because the health and strength of higher education is a matter of serious national import.

The Federal Government assumes responsibility for supplementing State and local efforts in military defense against the Nation's enemies without; surely it may as justifiably assume responsibility for supplementing State and local efforts against educational deficiencies and inequalities that are democracy's enemies within.

We may be sure our democracy will not survive unless American schools and colleges are given the means for improvement and expansion. This is a primary call upon the Nation's resources. We dare not disregard it. America's strength at home and abroad in the years ahead will be determined in large measure by the quality and the effectiveness of the education it provides for its citizens.

VOLUME TWO

Equalizing and Expanding Individual Opportunity

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PREFACE

This is the second volume in the Report of the President's Commission on Higher Education. It is concerned with the barriers to equal opportunity for higher education and the means of removing them.

America has long boasted of its educational system and too many of our citizens have tacitly assumed that the ladder of opportunity for education was equally accessible to all children and youth. Even those who, for financial or other reasons, found that they could not continue in school or college tended to feel that it was their own lack rather than the failure of our educational system.

The swift movement of events and the growing complexity of our national life and of world affairs make it imperative, at the earliest possible time, to translate our democratic ideal into a living reality; to eliminate the barriers to equality of educational opportunity; and to expand our colleges and universities to assure that the only factors which limit enrollment are the ability and interest of the prospective students.

A total of six volumes will be issued by the Commission under the general title, "Higher Education for American Democracy."

Volume 1, "Establishing the Goals," was published on December 14.

Volume 3, "Organizing Higher Education," presents an appraisal of organizational problems at the national, State, and local levels.

Volume 4, "Staffing Higher Education," is the Commission's recommendation for a greatly expanded and improved program for the preparation and in-service education of faculty personnel.

Volume 5, "Financing Higher Education," is an appraisal of fiscal needs and policies necessary for the program of higher education recommended by the Commission.

Volume 6, "Resource Data," is a compilation of some of the basic information used by the Commission in preparing its reports.

The Goal—Equal Opportunity

Equal educational opportunity for all persons, to the maximum of their individual abilities and without regard to economic status, race, creed, color, sex, national origin, or ancestry is a major goal of American democracy. Only an informed, thoughtful, tolerant people can maintain and develop a free society.

Equal opportunity for education does not mean equal or identical education for all individuals. It means, rather, that education at all levels shall be available equally to every qualified person.

The availability of higher education is determined in part by the extent and proximity of educational facilities. It is affected also by wide variations in the quality of elementary and secondary education provided locally. But the greatest barriers to equality of educational opportunity are the inadequacies of family income, the inability or unwillingness of some States to provide sufficient support for adequate schools and colleges, and the indifference of the American people to inadequate educational facilities in certain areas.

In principle, the demand for equal educational opportunity has had a long history in America. The growth of free elementary and secondary schools is well known. Our colleges and universities have been developed in response to the demands of those who aspired to higher learning. Privately controlled colleges and universities began early. In 1636 a college was founded in the Massachusetts Colony, partly by colony action, but even more of the credit is due John Harvard whose gift provided that "the tongues and arts" might be taught and learning and piety maintained. In 1701 the Connecticut Assembly founded Yale. Education was largely a private matter and generally church-controlled. During the first half-century after the American Revolution, interest in higher education was manifested in the establishment and endowment of academies and colleges for the selected few rather than in the creation of public schools for the many.

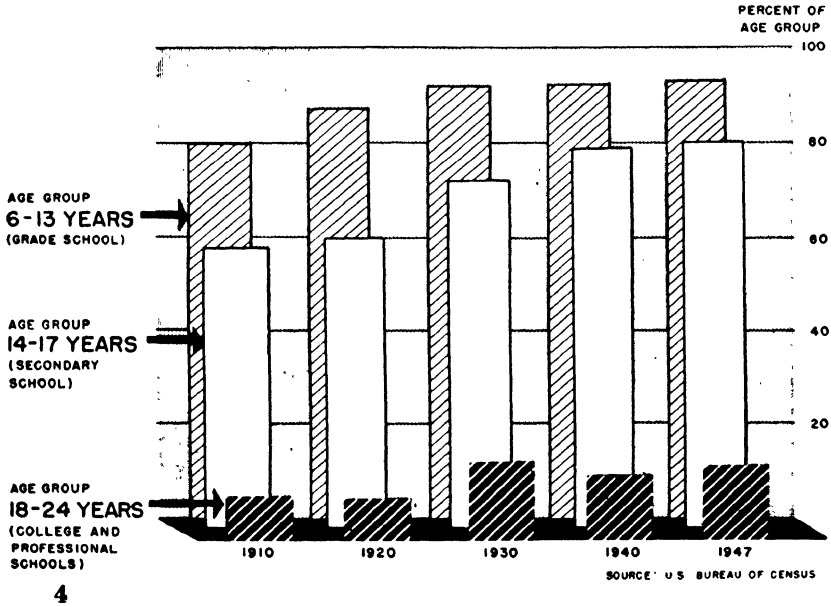
The State university movement started with the organization of the University of North Carolina in 1789. The land-grant colleges began their amazing growth with the passage of the Morrill Act by Congress in 1862. This act made grants of land to establish colleges, and subsequent acts in 1890 and 1907 made continuing commitments for appropriations of Federal funds for the further endowment and support of such colleges "to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

The American concept of equal opportunity has been a foundation upon which our systems of public, tax-supported schools have since been built. This country has come far toward making universal the opportunity for education at the elementary and secondary school levels. In 1910, 80 percent of all children of elementary school age (6–13) were attending school; in 1940, more than 90 percent were attending. In 1910, 59 percent of those of high-school age (14–17) were attending school; by 1940 the percentage had risen to 79. In 1910, 9 percent of those 18–24 years of age were in school and college; and in 1940 this percentage had risen to 13. (See chart 1.)

Chart 1

HOW MANY GO TO SCHOOL

PERCENT OF EACH AGE GROUP ATTENDING SCHOOL, 1910-1947



CURRENT RESTRICTIONS OF OPPORTUNITY

Yet it would be false to the American faith and the American hope to allow ourselves to be lulled into complacency by this achievement. Our goal is still far from realized. For this goal is to enable each young person to have access to education to the extent that he can profit from it and of a character best designed to assure maximum development of his personal and social self.

At the secondary level a picture at once challenging and sobering is suggested by the fact that out of every thousand children in the 5th grade in the school year 1929 (September 1928–June 1929) only 736 entered high school, 378 graduated, 137 entered college, and 69 graduated from college by June 1940. The number of persons enrolled in institutions of higher education increased from 238,000 in 1900 to 1,494,000 in 1940. During the same period the population of the United States increased from 76 million to 132 million. Even so, in 1940, only 10.0 percent of the population 25 years of age and over had completed one or more years of college, and only 4.6 percent had completed four or more years. While there has been a gradual and consistent increase in the percentage of young people attending college, there has never been a year in which more than 16 percent of those between 18 and 21 were in institutions of higher education. The sharp increase in college enrollment beginning in the school year 1946 was due largely to veteran enrollments. The percentage of 18–21 year olds enrolled in 1947 was actually no more than in the prewar year 1940.

A variety of factors combine to account for this low level of enrollment, the most important being the inequality of educational facilities provided by different States. In 1940, the percentage of persons 25 to 29 years of age who had attended college ranged from 7.5 in the State of Alabama to 21.6 in the State of Utah. Throughout the country, proportionately only about half as many rural youth had attended college as those from urban communities.

The number of students attending colleges prior to World War II represents less than one-third of those who demonstrably can profit from higher education. Moreover, the need today both for wise leadership and for a higher level of competent and informed citizenship in our society is on such a scale of magnitude that the contrast between college accomplishments and community requirements is grave indeed. Never before has this country been presented with so evident a demand for informed and truly mature citizens. This is a demand imposed by our country's wish for the best developed individuals as persons; it is a necessity for this country's functioning as a nation—as a leading nation among nations—in the wise handling

of world affairs with the active support of the general electorate. We can readily afford to draw upon our wealth of material resources to narrow greatly and rapidly this gap between the presently available educational opportunities and those needed to realize the national potential.

It must always be remembered that at least as many young people who have the same or greater intellectual ability than those now in college do not enroll because of low family income. This is the single, most outstanding factor in the whole situation. It results primarily from the fact that the money incomes of more than one-half of American families in 1946 were at or below $2,600 a year. The index of the cost of living in December 1946 was more than 50 percent higher than that of December 1940. Tuition costs have increased approximately 30 percent from the fall of 1938 to the fall of 1946 and are still increasing.

Even without stressing other influences—such as discrimination in race, religion, sex, and national origin—the economic factors alone combine to make the problem of going to college progessively more difficult unless some new methods of defraying these costs are provided.

DEMOCRACY DEMANDS AN INFORMED CITIZENRY

Before further documenting the extent and seriousness of the several influences which help to perpetuate existing inequalities, it will be well to answer certain questions about the extension of opportunity to attend college.

This Commission, in volume I of its report, "Establishing the Goals," affirms the need of each individual for a broad educational experience. One which is not only general and liberal, not only sufficiently vocational, not only for broad competence in citizenship and in the wise use of leisure, but also an integrated and meaningful combination of all these aims at successive levels of education in accordance with the potentialities of each.

This Commission does not subscribe to the belief that higher education should be confined to an intellectual elite, much less a small elite drawn largely from families in the higher income brackets. Nor does it believe that a broadening of opportunity means a dilution of standards either of admission or of scholarly attainment in college work. Again, it dissents from the view that a substantially larger fraction of young people going to college would yield a large body of frustrated and disappointed persons because the discrepancy between their interests and their economic opportunity would be too great. It is true that this might happen under certain unfortunate conditions. But two points should be made. First, college education should be conducted with objectives more inclusive than the economic advancement of the graduate. Second there is a large array of semiprofessional

and nonprofessional callings in which a college education can be of marked advantage. To assume that only those looking to professional careers can profit from college experience is to misread and underestimate the broad personal and social benefits to be gained.

The danger is not that individuals may have too much education. It is rather that it may be either the wrong kinds for the particular individual, or education dominated by inadequate purposes.

Certainly any assumption that the number of young people now enrolled in institutions of higher learning comes anywhere near approximating the total of those who have the capacity to learn and profit by suitably focused education is mistaken and misleading. Studies recently made at the secondary school level show that, as enrollments have increased, there has been no lowering of the average intellectual achievement of students. This indicates a more general distribution of those with scholarship capacity than is usually assumed.

Present standards of scholarship and academic achievement should not, and need not, be lowered as provision is made for more students. If anything, the standards should be raised in order to make sure that hard work and real mastery result. This is not to say, however, that the same kind and content of higher education are desirable for all. There is already a wide variety of purposes and programs in American colleges; but there is need for even greater diversification and experimentation to take account of different kinds and degrees of intellectual capacity, talent, and interest. Indeed, an extension of community colleges (now usually referred to as *junior colleges*), as recommended by this Commission, inevitably will involve a shaping of new curricula in which the concept of *scholarship* may change even while standards of acceptable competence are maintained.

This Commission has concluded, after consideration of the results of the Army General Classification Test, the most inclusive testing program ever conducted, that even with the present inflexibility of college curricula, a minimum of 49 percent of the college-age population of this country has the ability to complete at least the first 2 years of college work, and at least 32 percent has the ability to complete additional years of higher education. With the greater adaptation and flexibility of the programs recommended by this Commission, these percentage figures supply conservative yet conclusive evidence of the social advisability of increased numbers attending college. To deprive qualified persons of the values thus to be gained is to restrict their potential development, narrow their outlook, and limit their appreciations. America cannot afford to be niggardly in its investment in individual well-being.

Denial of educational opportunity restricts the preparation of the individual for effective living. It is a limiting factor also in our national welfare. Never has our country been faced with so many and so significant problems which require the highest quality of leadership. The importance of a larger supply of intellectual eminence has been demonstrated abundantly in the physical and biological sciences. Equally well-educated leadership is necessary in our economic, social, and political life. Issues related to conservation and development of natural resources, to labor-management relations, to trade and commerce, must all be resolved in terms of the public interest.

Solutions to these and other problems of far-reaching consequence to national welfare require a greater number of persons with high quality of statesmanly ability. They demand also a broad understanding of the basic issues and a deep sense of awareness of the public good on the part of an ever-increasing proportion of our population.

EDUCATION AND WORLD CITIZENSHIP

The persistence of educational barriers also has its repercussions upon world problems. In the changing role of the United States as a world power, it becomes essential that a substantially larger proportion of our citizenry be equipped to assist in leadership in a world brought closer together by rapid communication and swift transportation. Changes in attitudes must attend this virtual elimination of time and space. Yet too few persons know or appreciate fully the significance of the present economic and cultural interdependence of the entire world.

As the preamble to UNESCO states, wars are made in the minds of men; there too must the instruments of peace and world organization be forged. A major responsibility of higher education is to qualify youth and adults, at the highest level of their capacities, for participation in a truly global society.

Provision of equality of educational opportunity requires an attack on present quantitative limitations. It is also a qualitative concern because there must be assurance that the education offered is actually equipping the next generation for its responsibilities—individual, national, and world-wide. Present qualitative inadequacies need appraisal equally as much as do those of a quantitative character.

FRONTIERS OF THE FUTURE

The climate of public sentiment has already begun to change regarding the opportunity of more young people to have a college education. The experience of veterans, of their parents, and of educators themselves has undoubtedly led to a raising of our national sights concern-

ing the number of those who profitably might attend college. The expectation of, no less than the desire for, a longer educational period is today far more widespread in our college-age population than ever before. This has been demonstrated by the wide acceptance by the veterans of the generous educational program; indeed, here is a desire which promises to grow as it is satisfied. If the country can do this for the veteran, why cannot such a national policy be extended in the future to all who demonstrate sufficient mental capacity and drive?

There is general acceptance of the view that free education should be universally granted through the high school years—even though performance still falls short of this standard. It is not surprising, therefore, that there is increasing public pressure for free provision for at least two years beyond the secondary level. Indeed, the whole development of our state universities and land-grant colleges had contributed to advancing this outlook, despite the fact that these two types of institutions have in many instances found it necessary to require tuition and other fees.

The stage is set for a complete re-examination of the adequacy of our national post-high-school educational provisions. Important new pressures will undoubtedly disturb many existing conceptions about the place of the college and university in our society. Hence, it is imperative to survey the scene afresh. The assignment has to be approached not merely in the frame of accepted administrative and educational premises. It has become today rather a problem of public policy, of national interest, of social and democratic concern, requiring the informed attention of citizens generally. For in the last analysis, the amount, the quality, and the cost of education for the public weal are matters settled by all of us as taxpayers and by our legislators in implementing our intentions.

The Economic Barrier

Inadequacy of family income with all its attendant consequences is one of the primary factors limiting the opportunity of American youth to attend college. In studying the documentation of this fact, the shortcomings of education must be considered. The bare statistics must also be considered with two qualifying factors well in mind.

First, present distribution of family income reveals sobering inequalities. This problem must be faced realistically and any remedial measures offered must be capable of accomplishment. It is recognized that this pattern can and no doubt will change in the direction of a lessened maldistribution. Indeed, an ideally adequate program of higher education undoubtedly would result in a more even distribution of income as well as greater national productivity. All measures which will contribute to increasing the total national productivity thus become essential as indirect means toward lessening economic barriers to education. The problem of the removal of economic handicaps is one of devoting a larger percentage of our national annual income to education, and, equally, of enabling each family to earn a higher annual income.

Second, it should be remembered that such an analysis as this necessarily has to deal with broad average levels of income and their consequences. It is true, however, that individual families may set so high a value upon a college education that they will make the necessary sacrifices for their children to obtain it. Further, many individual young people offset their economic handicaps with cultural aspirations, ambition, and a driving thirst for knowledge that lead them to attempt to work their way through college if such a path is opened up to them. Yet such individual efforts will necessarily be the exception and are not palliatives to adverse conditions.

BARRIERS AFFECTING INDIVIDUAL FAMILIES

Table 1 presents the most salient facts about current family income distribution. In examining the facts it sets forth, it should be realized

that the inflationary living costs of 1947 have not been compensated for in many parts of our economy by equivalent wage and salary increases. Consequently the table is an understatement of the present condition.

TABLE 1.—*Percent distribution of family units* [1] *by 1945 and 1946 money income* [2]

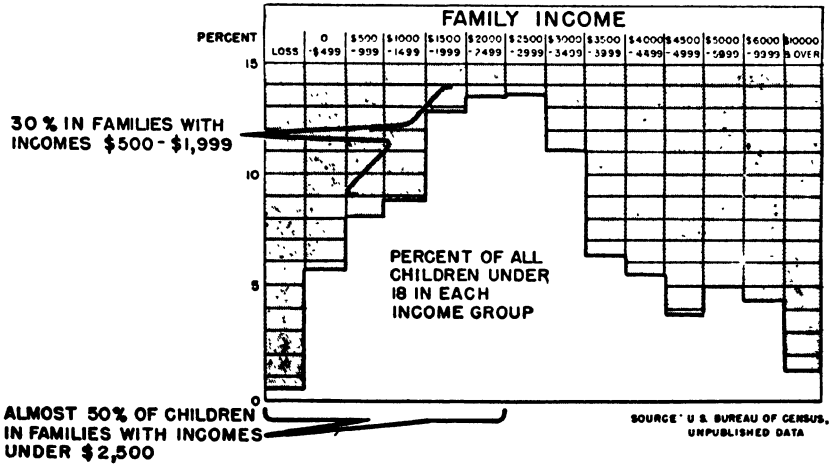
Money income before taxes	Distribution of families	
	1945	1946
	Percent	*Percent*
Under $1,000	18	15
$1,000 to $1,999	22	20
$2,000 to $2,999	22	22
$3,000 to $3,999	17	18
$4,000 to $4,999	9	10
$5,000 to $7,499	8	9
$7,500 and over	4	6
Median income	$2,400	$2,600

[1] A "family unit" is defined as a spending unit of all persons living in the same dwelling, who are related by blood, marriage, or adoption, and who pooled their income to meet major expenses.
[2] Source: Board of Governors of the Federal Reserve System.

In 1945, nearly 75 percent of all the children under 18 in this country were living in families whose total money incomes were less than $3,500 a year. Nearly 50 percent of the children under 18 were in families whose incomes were at or under $2,500 in that year, and 36 percent were in families with income of less than $2,000 a year.

Chart 2

CONCENTRATION OF SCHOOL - AGE CHILDREN IN LOW INCOME FAMILIES, 1945



The concentration of large numbers of children in low income families is particularly marked in certain regions of the country. These regional differences have resulted in striking disparities in the distribution of the financial ability of the regions to carry their educational loads. For example, the South traditionally has had the highest birth rate, yet economically the region is the least able to finance education. This region in 1945 faced the responsibility of educating no less than 37.1 percent of the Nation's children (5 to 17 years of age), but its share of total income payments was only 22.6 percent. In 1940 the South was educating 36.6 percent of the Nation's children with 19.6 percent of the income payments. The disparity between educational load and income is most striking in the farm population of the South. On southern farmers, in 1940, fell the task of supporting and educating 17.1 percent of all children of school age (5–17) although the income received from farming in this region was only 2.6 percent of the national total of income payments.

Family Income and Educational Attainment of Children

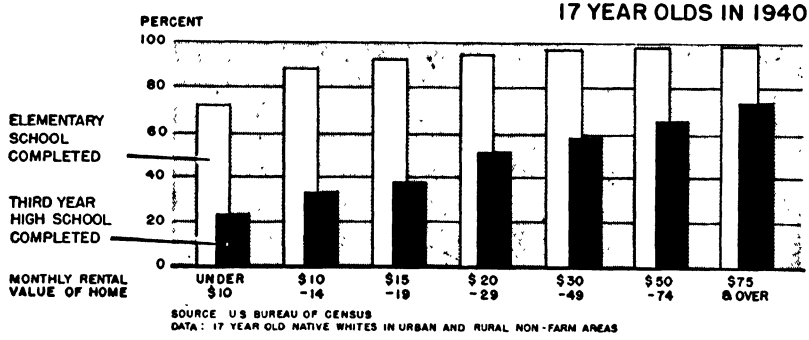
The education of each individual to the fullest extent of his ability encounters economic obstacles at every stage of the educational process. This point is illustrated in a study of boys who were in the sixth grade of Pennsylvania schools in 1926. Mr. Elbridge Sibley, reporting a follow-up study of their later education, found a close correlation between the highest grade of school completed, Intelligence Quotient, and the father's occupational classification. Regardless of his Intelligence Quotient, a boy whose father was in the higher occupational and generally higher income groups had a considerably greater probability of going to school beyond the twelfth grade. Statistics for the brightest boys, with Intelligence Quotients of 124 and above, show that a boy from the highest occupational income groups had a 4 to 1 advantage over boys in the lower groups insofar as college attendance was concerned. Statistics for all boys, regardless of their individual Intelligence Quotients, show that a boy from the higher occupational groups had a 10 to 1 prospect of attending college over the chances of those from the lower occupational groups. To a lesser degree, the same situation prevailed with regard to their prospects of completing either the eighth or the twelfth grades.

The 1938 report of the American Youth Commission of the American Council on Education, *Youth Tell Their Story*, likewise shows a high correlation between paternal occupation and the educational progress of the children. In families where the father's occupation was "professional-technical," only 1 out of 13 children failed to advance beyond the eighth grade. In the families of "farm laborers," 7 out of 8 children did not go beyond the eighth grade; and in the "unskilled" category, 2 out of 3 failed to advance beyond this grade.

Another analysis of the 1940 census data, summarized in chart 3, showed the relation between educational attainment and the monthly rental value of the home. A study was made of a fairly homogeneous group of about 1.5 million 17-year-old native whites living in urban or rural non-farm areas. Rental value of the home, except in time of extreme housing shortage, is recognized as a sensitive index of the economic status of the family. In the lowest rental value group—under $10 per month—the most frequent level of school completion was less than 8 years of schooling, and almost 60 percent of the children had not gone beyond the first year of high school (ninth grade). In the highest rental value group—$75 per month and over—almost 75 percent of the children had completed three or more years of high school. The completion of 3 years of high school is considered normal for 17 year olds.

Chart 3

SCHOOL ATTAINMENTS RELATED TO FAMILY ECONOMIC STATUS



Volume I of the reports of this Commission, "Establishing the Goals," stresses the vast gap between the number of students enrolled and the number who have the ability to benefit from higher education.

In a University of Minnesota study made in the early 1940s, it was found that:

> Many able graduates * * * were not attending college. Considerably less than half of the high-school graduates who ranked in the upper 30 percent of their high-school classes were enrolled in college. More than 15 percent of these able graduates who did not continue their training were unemployed. High marks in school are doubtless desirable, but they are not the open sesame to college halls or employment for those graduates.
>
> For every [high school] graduate who ranked in the upper 10 percent of his high-school class and entered college, another graduate who also ranked in the upper 10 percent did not enter college.

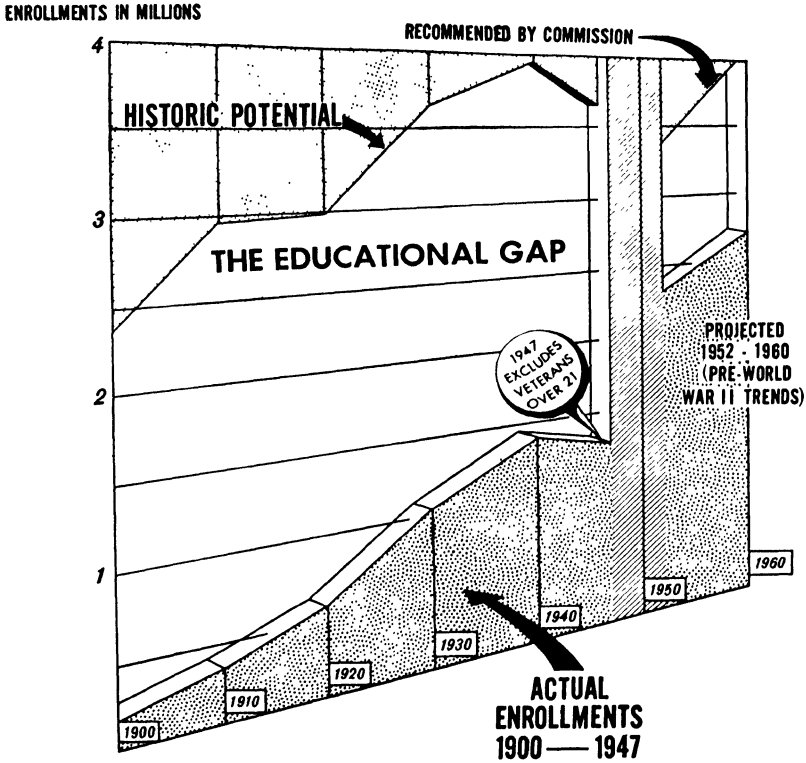
For every graduate who ranked in the upper 30 percent of his class and entered college, two graduates who ranked in the upper 30 percent did not enter college.

* * * Many able high-school graduates were not enrolled for further education. It is no longer safe to assume—if it ever was—that the most intelligent high-school graduates go to college. It is of fundamental importance for all the people of the State to know how generally young people who would make the best teachers, lawyers, accountants, doctors, engineers, and statesmen are not able to attend colleges and universities. It has been assumed traditionally that the most capable high-school graduates go to college. It is suggested by this study, however, that geography and the economic resources of the family are perhaps as closely related to college attendance as intellectual fitness.

Chart 4

THE GAP IN HIGHER EDUCATION

UNDERGRADUATE ENROLLMENTS · ACTUAL AND POTENTIAL



SOURCE: RESIDENT ENROLLMENTS AND PROJECTION OF PRE-WORLD WAR II TRENDS FROM U. S. OFFICE OF EDUCATION

This Commission concludes that the decision as to who shall go to college is at present influenced far too much by economic considerations. These include inadequacy of family income; the opportunity today afforded young people out of high school to earn relatively high wages; and the increasingly high living costs for students forced to live away from home while in college. These factors combine to keep out of college many who have the abilities which would enable them to profit substantially by a college course of study.

The Upward Trend in College Fees

The prospective student from a low income family faces two successive hurdles as he tries to enter college. One is the economic status of his family which works against his initial decision to attempt to enroll; the other is the fact that, once on the campus, he finds an ever-increasing scale of assorted fees which imperil his ability to remain. It is assumed generally that State and municipally supported colleges and universities are essentially free of fees. But this is true only in a few areas and in a comparatively few fields of study. Many State and municipally supported institutions of higher education have low fees. But even low fees are not low enough to prevent their being an obstacle to many students, and the tendency is for these charges to spiral upward. The amount of $98.78 per academic year could certainly not be regarded as low by the 36 percent of American children in families whose 1945 money incomes were less than $2,000. Yet $98.78 was the estimated average of tuition and other required fees during the academic year 1947 of the liberal arts schools of publicly controlled institutions. This average fee was for legal residents of the State or other political subdivision controlling the institution. Fees for out-of-area students during that year averaged $224.72. The average fees of privately controlled liberal arts colleges amounted to $296.99. The average fees for other types of education varied, but there was one element common to all—the marked rise of college fees above the pre-World War II level which materially increased the cost of higher education to the student.

The rise in college fees has been steady. In the fall of 1946 fees showed an average increase of 28 percent over those in effect in the fall of 1938. Volume V of this Commission's report, "Financing Higher Education," points out that student fees play only a part in meeting the costs of educating students and that other sources of revenue are declining in relative importance. Administrators are faced with the hard fact that their institutions must be kept solvent and that operating expenses must be met. Table 2 affords a view of the extent to which fees in certain fields have risen.

But tuition and other fees are only a part of the student's expenses. Physical accessibility plays an important role in college attendance.

TABLE 2.—*Estimated average tuition and other required fees for higher education in 1947, compared with average for 1939* [1]

Kind of school [2]	Average fee,[3] 1946-47					
	Privately controlled institutions		Publicly controlled institutions			
			For residents		For nonresidents	
	Amount	As of 1938-39	Amount	As of 1938-39	Amount	As of 1938-39
		Percent		*Percent*		*Percent*
Agriculture			$83.87	133	$249.95	116
Arts and sciences	$296.99	129	98.78	122	224.72	128
Business administration	373.84	112	121.76	131	237.74	125
Dentistry	529.25	156	297.33	117	460.67	120
Education	316.04	124	88.78	136	192.41	149
Engineering	443.61	133	124.29	128	293.09	179
Junior college	265.54	132	93.82	141	183.46	180
Law	371.24	133	163.30	156	295.17	146
Medicine	562.10	124	331.04	150	505.45	107
Graduate	322.06	123	117.22	145	236.96	111

[1] Source: Unpublished data of U. S. Office of Education for academic years ending June 30, 1939, and 1940.
[2] Amounts for agriculture, arts and sciences, business administration, education and engineering are restricted to those for undergraduate courses. By "graduate" is meant the liberal arts graduate school. Amounts shown are for attendance in institutions devoted primarily to the teaching of the subject matter specified, whether the institution be independent or a separate administrative unit of a larger institution.
[3] Amounts shown are for a 2-semester session or a 3-quarter or 3-term session, generally September-June. They are restricted to required fees and payments, exclusive of living expenses; fees paid once for a period of more than 1 year (e. g.: a matriculation fee) and are included on an allocated basis. Unless laboratory is a required part of the course of study, laboratory fees are not included.

Many young people in this country are not fortunate enough to live within 10 to 20 miles of a college. Yet, it has been shown in New York State that if there is a college with low or medium fees within commuting distance, a higher proportion of youth in the area will go to college. The California experience with a large number of local tuition-free junior colleges indicates that under these favorable conditions, where living at home is possible, as many as 65 percent of the high-school graduates continue for at least two more years of education.

Room and board constitute the greatest single cost in college attendance away from home. These charges vary widely, and there is usually a considerable range of costs within a single institution. In land-grant and State institutions the average room and board charges in 1947 amounted to $348.40 per student, as contrasted with a minimum average of about $500 a year for room and board at privately controlled universities.

At a State institution, where education away from home generally costs the least, a minimum outlay for a resident of the State would have required about $700 for the 9 months school year ending June 1947. The State of New York—a high-cost educational area—estimates that in 1941 the average student in the State spent about $1,000 for tuition and other academic fees, board, room, recreation, books, supplies, and laundry, but not including clothes or transportation. Using estimates of the increase in prices for these goods and services, the 1947 expenditures would not have averaged less than $1,500.

This great increase in costs has produced another important barrier to college attendance. Families with low incomes frequently feel the need for wages contributed by their younger members, who, hence, may be pressed to go to work instead of to college. Furthermore, in the large number of families at marginal levels of money income, it is clear that even if there were free tuition, excessive family sacrifices would be necessary were their children to attend college.

The financial difficulties already noted at the undergraduate level become greater for graduate and professional education because of the fact that at these levels the total cost of education is substantially higher. The greater difficulties involved in making opportunities available for talented students to pursue graduate or professional training give this problem a special status. The Commission's specific proposals for meeting this problem will be detailed in chapter IV of this volume.

BARRIERS AFFECTING ENTIRE COMMUNITIES

Certain limitations of educational opportunity confront entire communities, and affect all those within these disadvantaged areas who seek to attend college. Such barriers arise primarily from regional and area variations in money income. The community is but the family writ large, and economic weakness of the community cannot but affect the quality of its educational provisions.

All data emphasize the impact of economic disadvantage upon the educational life of the people. Throughout the Nation, young people in rural-farm areas have completed less school grades than the rural nonfarm and urban population of the same age. According to the 1940 census, the 14-year-old children in rural farm areas had completed 7.4 years of school, whereas the figures show 7.8 for rural nonfarm and 8.3 for urban areas. The disparity for 18-year-olds is even greater: 9.2 years in the rural-farm areas, 11.1 in rural nonfarm, and 12.0 in urban. Nor is this differential a reflection of retarded school careers in rural areas, since the median age in each school grade is about the same in the various areas.

Where resources are limited, local communities alone are unable to break the vicious cycle of poverty and low educational attainment. The community concept must be expanded so that citizens think of the United States as one great community having to share this financial responsibility. The economic resources of the entire Nation have to be drawn upon to assure a common denominator of extended educational benefits commensurate with the abilities and aspirations of the American people. The great need is for improved education at every level and in every community. The ultimate responsibility for this betterment has to be acknowledged by the entire Nation.

As shown in table 3, wide variation occurs in the ability of different areas to support higher education, and the lowest point is reached in agricultural areas, especially where cash crops prevail.

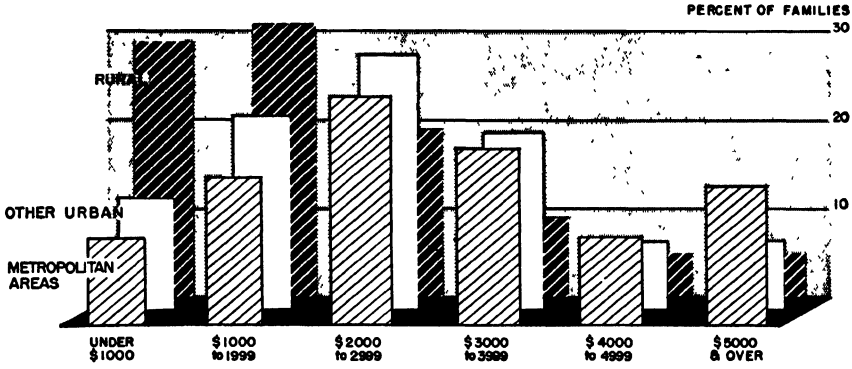
Chart 5 offers a dramatic confirmation of the disadvantaged income status of rural-farm areas. In 1940, 29 percent of the Nation's children (5–17 years of age) were in rural-farm areas, but the income from agriculture for the United States as a whole was only 7 percent of the total income payments in the United States.

Chart 5

DIFFERENCES IN FAMILY INCOME

METROPOLITAN, OTHER URBAN, RURAL

DISTRIBUTION - 1946



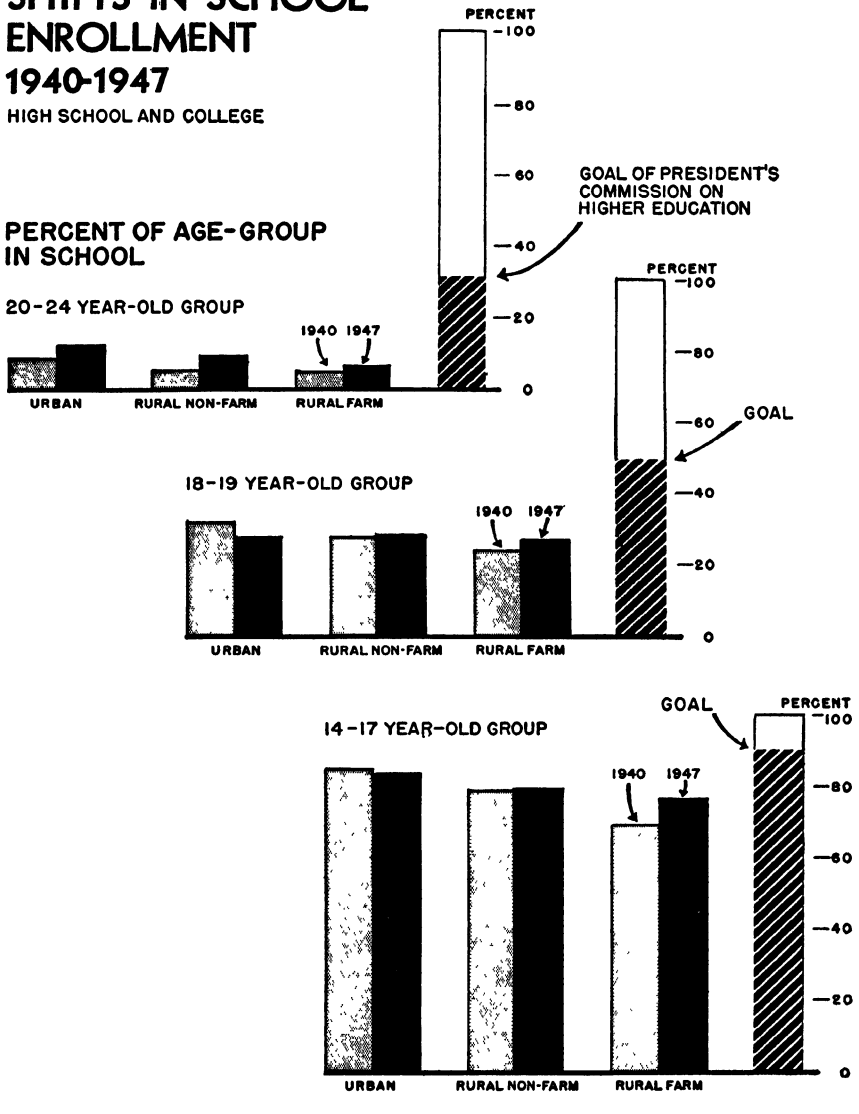
SOURCE BOARD OF GOVERNORS OF FEDERAL RESERVE SYSTEM
NOTE: FAMILY MEANS SPENDING UNIT OF ALL PERSONS IN SAME DWELLING UNIT, BELONGING TO ONE FAMILY, AND WHO POOL THEIR INCOMES TO MEET MAJOR EXPENSES "METROPOLITAN" REFERS TO 12 LARGEST CITIES AND THEIR SUBURBS

The differences in income are so great, especially between urban and rural areas, that even though some predominantly rural States allocate unusually high portions of their budgets for education, this budgetary provision is not enough to develop quality institutions of higher education.

A marked discrepancy in the relative rate of school and college enrollment of children in the urban and rural areas is revealed in chart 6. The increase in the attendance of the 20–24 year-old age group is due largely to the influx of veterans. In all areas, the proportionate number of persons in attendance has been far below the goals established by this Commission.

Charts 5 and 6 tell only part of the story. The quality of education is intimately associated with the amount of money expended for it. Table 3 reveals the variations in educational expenditures between regions in the United States.

Chart 6



SOURCE : U.S. BUREAU OF CENSUS

TABLE 3.—*Percentage distribution of institutions and current educational expenditures for higher education: 1940* [1]

Region	Percent of all institutions	Percent of total educational expenditure
Northeast	21	32
North central	34	32
South	33	24
West	12	12

[1] Source: U. S. Office of Education.

The loss in educational quality in the colleges and universities of the economically handicapped region adversely affects all individuals alike. Ineffective libraries or deficient laboratories drag heavily upon scholarly effort. Children who have completed their elementary and secondary schooling in a substandard system usually fare poorly when thrown into competition with the graduates from better schools. The same truth holds when the graduates of substandard colleges enter upon advanced study.

Inadequate schools are not, of course, the exclusive property of any one region or area. Economic conditions in certain areas predispose one to expect schools of inferior quality. But even in these areas, teachers and administrators have overcome great obstacles and created institutions which achieve marked success. On the other hand, within more wealthy regions one may find institutions which are educationally of poor quality.

No general raising of the level of educational effectiveness within the poorer States is possible without additional expenditures. Higher education, as now financed in the economically weak areas, does not and cannot offer the monetary inducements necessary to attract and hold adequate faculties. Without such faculties there can be no removal of a handicap which strikes indiscriminately at all who attend the colleges of the area. This is true even though instances of devoted and effective educational efforts by underpaid teachers are fortunately common.

This Commission is concerned with assuring a better education for students who succeed in enrolling. Mere access to the campus in no way guarantees equality of educational opportunity. The quality of instruction must be raised. In volume IV of its report, "Staffing Higher Education," this Commission has emphasized the need for additional funds to raise and equalize faculty salaries and thus the quality of education.

The mobility of college students, both in their selection of institutions and in their selection of places of residence after graduation, further supports the view that higher education is a national concern.

Educational inferiority in any area is a weakness of the whole Nation. The sharing of national resources is essential to remove the educational limitations faced by the less fortunate communities.

EXPANDING EDUCATIONAL OPPORTUNITIES

There are several well-defined areas within which immediate and constructive steps might be taken. Of major importance is the establishment of a national system of scholarships (or individual grants-in-aid) and fellowships which will guarantee that a greatly increased number of qualified young persons have a chance for full educational development. This issue is so important that the whole of chapter IV will be devoted to it.

Of equal urgency as a step toward the massive broadening of opportunities for college attendance, this Commission urges the extension of free public education through the fourteenth year, whether attendance during the thirteenth and fourteenth year is in a 2- or a 4-year college.

A collateral activity should be a concerted drive to reduce all fees for public colleges and universities.

Tuition-Free Community Colleges

The volume of this report, "Establishing the Goals," defines the local publicly controlled community college as the next great area of expansion in higher education. The establishment of these tuition-free institutions will give many individuals the opportunity to study during the thirteenth and fourteenth school years in their own communities.

Reduction of Fees

It has been shown above that there has been a constantly increasing trend among all institutions of higher education to impose tuition fees and to increase tuition and supplementary fees for such other purposes as laboratory work, library use, and health care. It is necessary to reduce the barriers raised by these fees.

To that end, this Commission recommends that in publicly controlled institutions there be no tuition or other required fees for the thirteenth and fourteenth school years, irrespective of whether they are offered by a 2-year or a 4-year collge; and that fees above the fourteenth school year be reduced at the earliest possible moment to the level prevailing in 1939.

It is recognized that with respect to tuition and other fees the privately controlled colleges are confronted with serious financial difficulties. But it is to be hoped that such colleges will do all in their power to keep the costs to students as low as is economically possible. The high level of fees in such institutions represents a danger to the

institution: the danger of restricting their student body largely to students from families of high income.

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.

There have to be facilities for assuring to our people an understanding of the world about them, and for developing mature skills to control the forces at work in the world. For a virile democratic society there must be a substantial majority of people who understand and will assume the responsibilities for seslf-government. Eternal vigilance cannot be maintained by an inadequately educated people. When this truth is clearly understood by the American public, it will strive unrelentingly through education to give substance and actuality to the equality of opportunity which it professes.

Discrimination in Higher Education

A discussion of discrimination involves controversial problems which have a long history in the United States and which acutely reflect regional differences of experience and attitude. Complete correction of the difficulties cannot take place immediately or suddenly. Such deep-seated problems require time and education for their eradication. They require patience and mutual forbearance. They require also a steady, determined, and consistent effort by all to effect the changes needed. It is in this spirit of evolutionary yet courageous and persistent will to improve the situation that the following discussion is presented.

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.

Discriminatory practices deprive the Nation of a great variety of talent, create and perpetuate serious inequalities, and generate dangerous tensions. The impact of these social attitudes and behavior patterns adversely affects our entire society—group relationships, the individuals who discriminate, and the individuals who are discriminated against. This spiritual damage is not measurable; indeed it has never been recognized with complete honesty. To the extent that intolerant attitudes against members of minority groups are given support by our educational institutions, the fabric of our democratic life is endangered.

A quantitative measure of discrimination at the undergraduate level is impossible to obtain. Educational institutions are reluctant to be explicit about their selection criteria as these apply to minority groups. Discriminatory practices are denied, ignored, or rationalized. *But it requires no parade of statistics to know that the situation for young people of minority groups is today unsatisfactory, both in their opportunity to enter college and in the happiness of their*

college life. Enrollment data unmistakably indicate the prevalence of quota systems and policies of exclusion. The nature of discrimination varies with respect to different minority groups and in different sections of the country. But discrimination on grounds of an individual's race, creed, color, sex, national origin, or ancestry is undoubtedly a fact in many institutions of higher education.

The problem is not limited to the individuals who are denied admission. Even for such of the minority group students as are admitted, the unhappy consequences of intolerance can be and often are profound and lifelong. The frustrations of social discrimination—in the dormitories, in honorary societies, in fraternities and sororities, on athletic teams, and at social functions—strike at the personal dignity of the affected students from minority groups. There are even some college communities in which a nonwhite student cannot get a haircut or be served in the local restaurants.

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.

There is need of deep searching of soul on the part of all to face this problem honestly; to work courageously and persistently for a program of correction which will supply a guide and an example of equality and justice for the national community.

In a world striving for international understanding and permanent peace it is essential that this Nation achieve unity and intergroup cooperation within its own borders. Our statesmen are sometimes embarrassed in their international dealings by racial discrimination within the United States. Its existence weakens our position in international affairs at the same time that its impact exacts grievous economic, moral, and political costs at home.

Other international repercussions result from these discriminatory practices. As our educational institutions enroll an increasing number of foreign students, the inconsistency between profession and practice becomes even more apparent. Many foreign students now coming to American colleges are from groups which we tend to regard as minority. If our domestic house is not in order, these visitors will be subjected to the same embarrassments, exclusions, and social separations in our colleges and local communities as our domestic minorities now experience. The broadening of student outlook and a free and tolerant exchange of knowledge is thus injured, and failure to accept these students fully, without discrimination, will interfere with amicable international relations.

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.

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 practices, but also by educating its students to seek the abolition of discriminatory practices in all their manifestations.

This Commission is fully aware of the practical difficulties confronting such a program. It is realistic about the legalities, regional attitudes, and other conditions which complicate the problem. But realism has also to admit that elimination of discrimination is the goal, and that American institutions of higher education should be committed to working progressively in specific terms to remove present inequities.

The urgency of this issue in our national life, in education, and in the growing sense of grievance in the minds of all minority group members does not promise, however, to let a satisfactory democratic outcome wait upon statements of pious intention or upon tardy voluntary action. State legislation which places explicit and uniform obligation upon all institutions of higher learning to abandon discriminatory practices is currently being urged in New York State, Pennsylvania, Massachusetts, and New Jersey; and there is every reason to suppose that the enactment of such measures will come in the reasonably near future. Where assurance of good conduct in other fields of public concern has not been forthcoming from citizen groups, the passage of laws to enforce good conduct has been the corrective method of a democratic society. Extension of this method into the educational field with respect to discriminatory practices is, therefore, not only a defensible measure; it is also in the light of the resistances, timidities, and varying practices of today the logical next step.

Fundamentally, adherence to discriminatory procedures in privately controlled colleges has been based upon an assumption by such institutions that they had solely a private responsibility. But this view is now rapidly giving place to one of public accountability on the part of all colleges and universities. It is becoming generally acknowledged that despite a large measure of private control and private support, these institutions are vitally affected with a public interest. Not only is this reflected in the privilege of tax exemption which they are ac-

corded, but also in the process of State accreditation in certain States, and in the recognition that they constitute part of a program of higher education dedicated to the Nation's welfare. They are thus genuinely vested with a public interest and as such are morally obligated to abandon restrictive policies. As the President's Committee on Civil Rights has stated "* * * the public cannot long tolerate practices by private educational institutions which are in serious conflict with patterns of democratic life * * *."

In order that this mandate of public obligation shall have equal force everywhere, and not lead merely to pronouncements by individual colleges, the invoking of legislation along lines of the proposed legislation against discrimination in New York seems the logical way of advance. The Commission concludes that to assure a universal and equal regard for a policy of nondiscrimination the legal method becomes both fair and practical.

Moreover, a universal legal mandate can be a helpful defense for admission officers against undue pressure of alumni groups and of professional associations which may attempt to influence admissions policies in order to maintain the character of an institution in accord with an established tradition. There is good ground for belief that a required removal of discriminatory criteria for the selection of students would result in a more diversified distribution of students from minority groups among all institutions, with a minimum of concentration in a certain few colleges and universities.

Admissions policies of those public universities where a high school diploma qualifies students for entrance differ from the admissions policies of independent institutions which set up a variety of criteria. Such diversity is no doubt part of the strength of the American educational system. The distinctive character of American colleges and universities, under their separate charters and leaders, assures that each institution will define for itself specific educational objectives, and this implies some differential policy of student selection. Privately controlled colleges and universities have thus far been free legally to limit and choose their students according to criteria beyond those based on specified standards of intelligence and scholarship. Among these criteria now in use for which there may be some justification are the giving of preference to children of alumni, to applicants from specific geographic areas, to students who rank above a given level in the graduating class in high school. Institutions operating under sectarian auspices may appropriately give priority to students affiliated with those denominations.

Also, many privately controlled colleges wisely find it necessary to stipulate a maximum size for their student bodies. This stipulated enrollment is being exceeded in most institutions in the present emer-

gency years. But it is almost certain that some colleges will reduce their maximum enrollments again when the veteran demand is past. Taken together, these policies reduce the opportunity for qualified young people to attend private colleges; furthermore, they restrict equality of opportunity based upon ability.

A valid distinction thus exists between justifiable selection standards and selection criteria which include discriminatory practices. Selection in accordance with the stated objectives of the institution, based on scholarship, other worthy qualities of the student and other justified, publicized, and consistent standards is defensible. But it is possible to use such standards as a cover for unjustified discrimination. It is admittedly difficult either to discover or to rectify such a situation if the institution is reluctant to abandon discriminatory practices.

It is vital to stress that discrimination in one or another form and against one or another minority group is a national phenomenon, and is not confined to one or two minorities nor any one area in the Nation. Its consequences are felt throughout the land by such diverse religious and racial groups as Negroes, Jews, Catholics, Puerto Ricans, Mexicans, Latin Americans, Italians, and Orientals.

The documentation in this report of these consequences cannot be and need not be exhaustive. It is sufficient if it is illustrative in terms of the adverse results which follow in its wake. And this Commission is therefore presenting the evidence most readily available without claiming that the documentation and examples here offered embrace the entire problem.

RACIAL DISCRIMINATION[1]

The Negro is the most frequent victim of racial discrimination because prejudice on the basis of color is dominant in the American community. This is virtually as true in other parts of the country as in

[1] Statement of dissent:

The undersigned wish to record their dissent from the Commission's pronouncements on "segregation," especially as these pronouncements are related to education in the South. We recognize that many conditions affect adversely the lives of our Negro citizens, and that gross inequality of opportunity, economic and educational, is a fact. We are concerned that as rapidly as possible conditions should be improved, inequalities removed, and greater opportunity provided for all our people. But we believe that efforts toward these ends must, in the South, be made within the established patterns of social relationships, which require separate educational institutions for whites and Negroes. We believe that pronouncements such as those of the Commission on the question of segregation jeopardize these efforts, impede progress, and threaten tragedy to the people of the South, both white and Negro. We recognize the high purpose and the theoretical idealism of the Commission's recommendations. But a doctrinaire position which ignores the facts of history and the realities of the present is not one that will contribute constructively to the solution of difficult problems of human relationships.

ARTHUR H. COMPTON,
DOUGLAS S. FREEMAN,
LEWIS W. JONES,
GOODRICH C. WHITE.

the South. The Negro must endure discriminatory practices in almost every aspect of his life. That such practices and attitudes are rooted in the history of our country does not make it easier for him to bear them.

The Educational Status of the Negro

The following recital of the educational opportunities of the Negro is an unadorned statement of fact. It presents a sobering indictment. This picture would appear much less grim were we to contrast present conditions with those of 1900. From this point of view, there has been notable progress and an extraordinary disposition to confront the inadequacies with an eagerness for improvement. This rapid rate of improvement since 1900, however, stems from the excessively low educational level of the Negro at the turn of the century. What is necessary at this point in our history is an objective examination of the present situation in order that we may accelerate the advances of the past.

According to the U. S. Bureau of the Census, data for 1940 revealed that Negro adults 25 years and over completed on the average only 5.7 years of schooling while the average for native white adults was 8.8 years and for foreign-born white adults was 7.3 years. While 92.5 percent of the native whites and 71.0 percent of the foreign-born whites had completed at least 5 years of grade school, only 58.0 percent of the Negroes had done so. While 82.7 percent of the native whites and 56.3 percent of the foreign-born whites had completed seventh grade, only 36.1 percent of the Negroes had accomplished as much. High school data are even more significant: 7.3 percent of the Negroes completed 4 years of high school; this contrasts with 28.8 percent of the native whites and 11.6 percent of the foreign-born whites. In higher education only 1.3 percent of the Negroes in contrast to the 5.4 percent of the native whites and 2.4 percent of the foreign-born whites completed a 4-year college course.

There are still those who deny the equal educability of the Negro and the whites, who allege an inherent lower intellectual capacity. But such stereotypes have been repeatedly disproved by authoritative scientific study both in the fields of anthropology and physiology, and in the records of educational achievement itself. Whatever differentials are observable in progress and attainment are clearly attributable to discrepancies in family, neighborhood, and total cultural background and experience. Wherever educational opportunity, along with more equitable economic and social conditions, has had even an approximate chance, the record of the Negro has shown no material difference from that of any other group.

However, the case for the extension of equal education for the Negro rests only in part upon his equal educability. The basic social

fact is that in a democracy his status as a citizen should assure him equal access to educational opportunity.

The Impact of Segregation on Higher Education for Negroes

The problem of discrimination is intensified and complicated in the 17 Southern States and the District of Columbia where legalized segregation limits educational opportunities for the Negro. Customs and attitudes, as well as statutes, in the South, have required that Negroes be denied admission to the institutions of higher learning for whites. The legal provision is that there shall be facilities supplied for "separate and equal" education of white and Negro students. But the separate and equal principle has nowhere been fully honored. Educational facilities for Negroes in segregated areas are inferior to those provided for whites. Whether one considers enrollment, over-all costs per student, teachers' salaries, transportation facilities, availability of secondary schools, or opportunities for undergraduate and graduate study, the consequences of segregation are always the same, and always adverse to the Negro citizen.

The President's Committee on Civil Rights in considering segregation came to the conclusion that "The separate but equal doctrine stands convicted on three grounds. It contravenes the equalitarian spirit of the American heritage. It has failed to operate, for history shows that inequality of service has been the omnipresent consequence of separation. It has institutionalized segregation and kept groups apart despite indisputable evidence that normal contacts among these groups tend to promote social harmony."

Negroes represent approximately 10 percent of the total population of the United States. Yet enrollments of Negroes in institutions of higher education during the school year 1947 accounted for only 3.1 percent of the total. An estimated 75,000 students of Negro descent were enrolled; of these, approximately 85 percent were enrolled in 105 segregated institutions.

The disparity is striking between expenditures for current education purposes by Negro and by other institutions of higher education in the District of Columbia and the 17 Southern States which require the segregation of Negroes. This is shown in an unpublished report by Mordecai W. Johnson, President of Howard University. For all types of institutions, whether publicly or privately controlled, the ratio of expenditures of institutions for whites to those of institutions for Negroes ranged from 3 to 1 in the District of Columbia to 42 to 1 in Kentucky. And nowhere in the area, except in the District of Columbia, did there appear a single institution that approximated the undergraduate, graduate, and professional offerings characteristic of a first-class State university.

Segregation of the races in educational institutions legally requires the maintenance of a double school system. In most States this greatly increases the total cost and difficulty in making equivalent education accessible to all. A double system thus means an almost certain lessening of educational opportunity and a lowering for all of the quality of education. The more advanced the field of endeavor, the more wasteful and futile become attempts to justify a double system.

It is a tragic paradox that the communities and the States which are generally least able to afford this dual system of education strive to maintain it by virtue of their laws and traditions. *The National Survey of the Higher Education of Negroes*, published in 1942 by the U. S. Office of Education, disclosed that "whereas very few southern Negroes were attending . . . eight [selected and nationally known] northern universities in 1939–40, in the year preceding 4,000 northern Negroes attended Negro colleges. Almost 3,000 of this number attended colleges in Southern States. Thus it appears that institutions located in those States which have the least wealth are providing educational facilities for Negro residents from more economically favored regions."

Discrimination by Graduate and Professional Schools

Not only is a small proportion of the Negro population enrolled in colleges and universities, but in addition Negro students receive a much smaller proportion of advanced degrees. In 1940 institutions for Negroes only (henceforth called Negro institutions) granted 2.4 percent of all earned degrees for that year. Moreover, of the 5,201 degrees granted by the Negro institutions, 97 percent were bachelors degrees, 3 percent were masters and none were doctorates. In the same year, of the degrees granted by all other institutions, 86 percent were bachelors, 12 percent were masters, and 2 percent were doctorates.

TABLE 4.—*Enrollment and degrees earned in the United States: 1940* [1]

1940	Negro institutions		All other institutions	
	Number	Distribution	Number	Distribution
		Percent		*Percent*
Enrollment in continental United States	41,839		1,452,364	
Earned degrees granted	5,201	100	211,320	100
Bachelors or 1st Professional	5,056	97	181,444	86
Masters or 2nd Professional	145	3	26,586	12
Doctorates or 3rd Professional			3,290	2

[1] Source: U. S. Office of Education.

In the academic year 1947, some 40,000 advanced degrees were granted in the United States. Negro institutions accounted for 481 of these degrees, all of which were masters and none of which were

doctorates. In unsegregated institutions, 8 doctorates (Ph. D.'s) were granted to Negroes, more than 3,775 to non-Negro students.

This Commission, therefore, is concerned not only with increasing opportunity of Negroes to enroll in college, but also with enhancing the resources for Negroes to be trained for an increased number of advanced professional degrees.

Denial of professional education to Negroes affects our already scarce resources for research. Present constrictions upon professional education minimizes scholarly research into regional, social, and national problems (especially those of the Negro people), which research should be an invaluable addition to the scholarly contribution of Negro students. It also lessens research in all fields which would qualify the Negro scholar for college teaching and advanced research positions.

The extent of discrimination in professional education is further illustrated by the situation in medical schools. There are 77 medical schools in the country which graduated an average of 5,000 doctors per year between 1930 and 1939. Because of increased enrollment in medical schools during the war, 5,826 physicians were graduated in 1946. Of thees only 154 were Negroes and all but 20 of these were graduated from the 2 Negro schools, Howard University and Meharry Medical College.

Of the 77 medical schools in the Nation, 20 are located in the South and do not admit Negroes; the remaining 55 are presumably open to Negroes. Actually, only one-third of the presumably nonsegregated schools are admitting Negro students. In 1938, the last year when the American Medical Association separately reported Negro and white medical students, only 372 Negroes were enrolled in all medical schools; 40 of these were enrolled in 17 of the 55 nonsegregated schools. In 1946, of the estimated 592 Negro medical students, 85 were enrolled in 20 nonsegregated schools; the remainder were enrolled in Meharry Medical College and Howard University.

Because of staff and plant limitations, the two Negro medical collegs cannot begin to train the Negroes who desire and who are qualified for careers in medicine. Howard University Medical School reports that its freshman class in prewar years was necessarily restricted to 60 students. Through further overtaxing of facilities the number has now been extended to 75 students.

Yet, in each of the years from 1935 to 1945 the school had from 600 to 700 applicants, and in 1946–47, this number increased to 1,350. The major factor limiting the training of Negro doctors is the practice of barring Negro students from clinical facilities, even in tax-supported hospitals. Internship and residency in a hospital are educational requirements for a career in medicine and they constitute additional areas where discrimination exists. Thus Negro students

must train only in Negro hospitals, and there are only about 112 such hospitals in the United States. Of these schools, 25 are accredited, and only 14 are approved for the training of interns.

Obviously the present production of Negro physicians cannot keep pace even with the growth of the Negro population, much less contribute to the general need. This shortage of doctors, serious for the white population, is a near catastrophe for the health of the Negro population, and discrimination by educational institutions is a contributing factor to it. Even when account is taken of the difficulties of obtaining a wise distribution of physicians throughout the country in relation to population, these figures still suggest an inadequacy of supply of Negro doctors which is indefensible.

The situation regarding Negro dentists is even more striking. Again, discrimination places the responsibility upon Howard University and Meharry Medical College to train the great bulk of the Negro dentists. Howard University Dental School reported in 1947 that its freshman dental class is limited to 50, although approximately 600 applications have been received annually for many years and nearly 1,000 applicants sought admission to the freshman class in the fall of 1947.

Of a total of 1,280 nursing schoools in the country in 1947, 28 admit Negroes only, 38 admit Negro and white students, and the remaining 1,214 are for whites only. In 1945 the U. S. Public Health Service reported that the percentage of Negro nurses in the public health field is roughly 5 percent, whereas the Negro population in the United States is over 10 percent. Although there has been an encouraging increase in the number of Negro public health nurses as well as in the extent and quality of their preparation, nevertheless, as of January 1, 1945, only 6 percent had one or more college degrees, 86 percent had completed high school, and 8 percent had less than high school training.

Table 5 well summarizes the situation in several important professional fields. But let it be noted that ratios as here cited are merely metric devices. ***The use of ratios is never to be construed as an***

TABLE 5.—*Comparison of number of Negroes and whites in selected professions in comparison to Negro population and white population in segregated areas* [1]

Profession	Ratio of practitioners to population		Ratio of Negroes per Negro practitioner to Whites per White practitioner
	Negro	White	
Doctors	1:4,409	1:843	5
Dentists	1:12,101	1:2,795	4
Pharmacists	1:22,815	1:1,714	13
Lawyers	1:24,997	1:702	36
Social workers	1:11,537	1:2,654	4
Engineers	1:130,700	1:1644	203

[1] Source: "The Availability of Education in the Negro Separate School." *The Journal of Negro Education*, Summer, 1947, pp. 264-265.

endorsement of a racially determined percentage of those to be educated for either a general or a specific purpose.

To End Racial Discrimination

This Commission concludes that there will be no fundamental correction of the total condition until segregation legislation is repealed.

Deep-seated, long-standing forces of opinion and sentiment are obviously involved. Segregation laws cannot be wished away or eradicated by executive order. But influences looking to their repeal are at work; time and more vigorous effort will change public sentiment. White and Negro citizens will have to continue to work together to secure the necessary legislation and then implement it adequately so that the educational opportunity for white and Negro students will become equal. Until such action is taken, the opportunities for Negroes to qualify as leaders in education, law, medicine, the church, and other areas will be limited seriously. Our national life is made poorer by the lack of such leadership.

Since legalized segregation still exists, this Commission urges that the separate educational institutions for Negroes be made truly equal in facilities and quality to those for white students. The Fourteenth Amendment to the United States Constitution states that "No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws." The Maryland Court of Appeals, and the U. S. Supreme Court in a recent Missouri case, have both held that the fourteenth amendment, guaranteeing equal protection of the law, obligates every State to make available within its borders, to qualified Negro applicants, facilities for graduate and professional instruction equal to those offered to white students. Chief Justice Hughes' opinion declared that the practice of offering to pay the tuition fees of qualified Negro residents who must go outside the State to obtain such instruction does not meet the requirements of the Constitution.

A tremendous program for strengthening all of the southern Negro institutions is required if educational opportunities are to be equal. Until Negro young people have available the opportunity to attend elementary and secondary schools which properly prepare their graduates for college, segregation works as a virtual nullification of the opportunity for higher education everywhere.

The seriousness of the limitations upon Negro education makes it necessary to strengthen the private Negro colleges of the South which are now serving Negro youth in large numbers. Despite the fact that this recommendation is apparently inconsistent with the Commission's

position that segregation should be eliminated, the immediate practical fact is that with such meager opportunity of Negro youth for education, every current program to alleviate this situation should be encouraged.

Another expedient which has received consideration is the establishment of regional centers of study, attached to strong colleges and open to both white and Negro students, with broad curricular offerings and high standards of scholarship and research. This fails to meet the legal issue of providing equality of educational opportunity within each State, but it has the immediate practical merit that it would be economically feasible and be conducive to a more nonsegregated approach to regional educational problems.

If, as this Commission recommends, steps are taken to make Federal funds available to equalize higher educational opportunities among the States and otherwise to supplement inadequate State financial resources, all such legislation should clearly specify that there may be no discrimination in the channeling of such funds, either as regards possible individual beneficiaries under student grants-in-aid and fellowships, or as to institutions for white students as compared to institutions for Negroes only. Such provisions have not always been made in Federal legislation, the Smith-Hughes Act being a case in point. The Negro institutions should by law receive their full proportionate share of all Federal and State funds destined for the support of college instruction.

RELIGIOUS DISCRIMINATION

A second significant body of illustrative evidence regarding discrimination is most readily available in terms of the experience of students of Jewish heritage.

But before advancing this second illustrative body of evidence, it is well to repeat the warning that in determining opportunities for education, it is not sound democratic doctrine to invoke the argument of maintaining the same ratios of minority group numbers enrolled in colleges to total population numbers. The only defensible basis is that total ability and interest—rather than quotas or ratios, however determined—be the criterion of admission to institutions of higher learning.

Jewish students represented 9 percent of the fall 1946 total enrollments in colleges and universities of the United States, according to findings of a decennial study conducted by the Vocational Service Bureau of B'nai B'rith, a national Jewish service organization. Enrollment figures were obtained from 1,504 out of 1,598 institutions, or 94 percent of those included in the study. The fact that the Jewish proportion of the college population is greater than the Jewish proportion of the total population of the country is largely explained by

the fact that the Jews in the United States are an urban people, and proportionately more than twice as many urban whites go to college as rural whites.

Techniques of Discrimination

Jewish students, however, do not have equal opportunity with non-Jewish students in the choice of institutions and in certain fields of advanced study. This situation has been aggravated in recent years. The obstacles created by private institutions of higher education are manifested in tacit or overt quota systems.

Efforts have been made by official and nonofficial groups to determine the exact extent of discrimination against Jewish students. An investigation of admission practices and policies of "nonsectarian institutions" in New York City was authorized by the Council of the City of New York in September, 1946. A special investigating committee was appointed, with full authority to attend and examine and take testimony under oath.

During the hearings it was conceded that the best method of disproving these charges would have been to produce the applications and records of accepted applicants in order to make a comparison with the stated qualifications of those rejected. The committee report states: " * * * it is fair to assume that the colleges or institutions claiming that the accusations of discrimination were unjust would assiduously guard the records which would result in their exculpation." Nevertheless, witnesses under oath testified that, in accordance with general practice, records for preceding years had been destroyed.

The committee also studied changes in the application forms prepared by the professional schools in New York City. Prior to 1920, an applicant was required merely to set forth the following information: name, address, age, place of birth, name of secondary school or college, scholastic record, and recommendations. Subsequently, many institutions requested data concerning his religion and places of birth of his father and mother. Then he was asked to furnish a photograph. Some of the schools, apparently because of criticism, substituted for a question on religion a question concerning "racial origin." This latter was dropped in some areas and applicants were required to state their "mother's maiden name." Every witness before the committee conceded that answers to such questions were of no value in determining the applicant's qualifications. The committee drew the "inescapable conclusion" that the institutions were "extremely anxious * * * to ascertain the racial origins, religion, and color of the various applicants for a purpose other than judging their qualifications for admission."

Indeed, it can almost be said that the request for certain information on application forms constitutes an all but prima facie case that such information is likely to be used for discriminatory purposes. A recent study of the questions asked on the admissions blanks of a large sampling of colleges leads to the conclusion that a substantial proportion include several questions which are readily susceptible for use in carrying through a tacit policy of discrimination. It is unquestionably true that many facts about ancestry, religious affiliation, and the like are legitimately useful to the college or university. But it is clear that all such information needed for educational purposes can readily be obtained *after* the student has been admitted rather than before.

This Commission, therefore, recommends the removal from application forms of all questions pertaining to religion, color, and national or racial origin. And it points out that the proposed State legislation against discrimination above referred to would automatically lead to the elimination of all questions of this kind.

Discrimination by Professional Schools

Turning now to the situation as to the attendance of students of Jewish families in professional schools, a sharp decline is to be noted in the percentage of Jewish law students. In 77 out of 160 law schools reporting to the B'nai B'rith in two surveys, one for the fall of 1935 and the other for the fall of 1946, the proportion of Jewish students dropped from 25.8 percent to 11.1 percent. While total enrollment in the 77 schools went up from 22,809 to 25,796, Jewish enrollment was reduced by more than half—from 5,884 to 2,862. Forty-six of the 77 schools are private; their total enrollment dropped 600, but they have 2,800 fewer Jewish students.

It is true, of course, for all the figures of professional school enrollments here set forth, that they include data for the recent years when rejections of all types of candidates have tended to be far higher than acceptances. Hence, it is as indicative, rather than as absolutely conclusive testimony that these figures have to be interpreted.

Sixty-two out of 181 engineering schools reporting in both surveys showed the proportion of Jewish students to have declined from 6.5 percent to 5.6 percent. This decline has taken place only in the privately controlled schools.

The Jewish proportion dropped from 8.5 percent to 4.4 percent in architecture; from 13.6 percent to 11.1 percent in social work; from 16.7 percent to 10.7 percent in commerce; from 15.5 percent to 8.4 percent in fine arts. The Jewish percentage in journalism stayed at 10.4. It rose from 0.8 to 2.6 in nursing; from 3.1 to 4.7 in education. The proportion of Jewish students in osteopathy shot up from 9.1 percent to 20.3 percent; this sharp rise stems mainly from the blocking of opportunity in medicine.

The distribution of Jewish students in medical schools requires particular consideration. The B'nai B'rith received data from the same 57 of the 79 medical schools for the falls of 1935 and 1946. Over the 11-year period there was an absolute loss of 408 Jewish students, even though the enrollment in these 57 schools rose by 557. This constitutes a relative decline in the proportion of Jewish students to total students from 16.1 percent in the fall of 1935, to 13.3 percent in the fall of 1946.

In the field of dentistry, where keen interest is displayed by Jewish youth, comparison of the data received in 1935 and 1946 from the same 28 out of 40 dental schools showed an increase of 175 in total enrollment, but a decrease of 486 in the Jewish enrollment. This constitutes a percentage decrease of Jewish enrollment of from 28.5 to 19.7.

A substantial part of the blame for discriminating practices on the part of the medical and dental schools belongs to the professional associations which tremendously influence the admissions policy of individual institutions.

With respect to the teaching profession, the situation regarding discrimination is also unfortunate. Here, although accurate quantitative data are almost impossible to obtain, there is reason to believe that qualified teachers from minority groups confront a difficult situation in pursuing their profession, both at the lower levels and in college instruction. Indeed, many otherwise qualified individuals do not embark upon the necessary training to become teachers because the difficulties of placement are so well known. Whether it be at the level of training, of admission to employment, of equality of treatment, or of possibility of advancement, teachers from minority groups suffer a serious disadvantage in many localities and institutions.

OTHER ARBITRARY EXCLUSIONS

Antifeminism in Higher Education

Opportunity for the higher education of women is relatively recent. Of the 61 colleges established in the United States by 1834, not one "was dedicated" to the cause of women's education. A number of female seminaries had been established giving instruction in literature, art, music, and conduct, but not including curricula paralleling those of institutions for men. In the third quarter of the last century a number of female seminaries became women's colleges, and State universities began to open their doors to women students. Many, however, believed that such developments were a mistake, and as late as 1871 one authority stated, "If females persist in attempting to endure the rigor of hard study, hospitals and asylums must need be

erected alongside of colleges for women * * * higher education of females is a mistake full of unreason and fruitful of sorrow."

This attitude of denial of opportunity has largely disappeared in the present century except at the professional school level. In 1940, women comprised 40 percent of the total enrollment in institutions of higher education. During the war years, the proportion of women increased to 65 percent, but in 1947 it dropped to about 32 percent.

This differential is even more significant with respect to the number of graduate and professional degrees awarded and of the enrollment in professional schools. Masters or second professional degrees were awarded to 8,317 men and 3,840 women and doctorates or third professional degrees were granted to 1,244 men and 123 women in 1939–40. In 1946–47, there were 2,093 women medical students or 10 percent of the total students enrolled. This is the highest absolute as well as relative number on record of women medical students in the United States.

Geographic Barriers

Still another arbitrary limitation, hopefully of a temporary character, is the restriction now placed by many publicly controlled institutions on students from outside the State. In some instances this has meant a complete prohibition of out-of-State students. In other States, the tuition differential in favor of resident students has been substantially increased. In the interest of a desirable mobility and regional interchange of college students, it is earnestly to be hoped that these institutions will remove barriers as rapidly as possible to out-of-State enrollments.

The Plight of the Nonveteran

Although it is a limitation of a different character, the pressure of veteran enrollments has temporarily reduced the opportunities for other younger students to enter college. The pre-World War II trend would have led to an expected enrollment of about 1.8 million college students in the school year 1947. Actually, about 2.4 million students were in college, about a million of whom were veterans above the normal college age. The statistics indicate that the number of youth of college age in college in 1947 is 500,000 less than the anticipated number based on the prewar trends. The conclusion is that a wise national policy of veteran education did, nevertheless, place serious difficulties in the way of about half a million of their younger brothers and sisters attending college in 1947. And this situation on a somewhat reduced scale may well continue into the next academic year. This situation only argues, of course, for the most rapid possible provision of more facilities so that there will be no question that both veterans and nonveterans and both men and women students can be accepted to the full extent of their qualifications.

Academic Requirements for Admission

In any enumeration of the factors of arbitrary exclusion or limitation it is necessary to mention the special nature of the typical current academic requirements for college entrance. The students usually considered by admissions officers most eligible to enter college are those who have taken the so-called *academic* course and been graduated from an accredited high school. Yet, out of a total of about 25,000 senior high schools, there are still some 3,000 which are unaccredited; this means that they fail to satisfy the standards of their State boards of education or a voluntary accrediting association with respect to their resources, equipment, curriculum, and quality of teaching.

Further, about 60 percent of the young people of high-school age were actually attending high school immediately before World War II, and of these less than half were taking the academic course designed to prepare them for college. Of this number, only one in three actually entered college.

The academic entrance requirements relating to secondary school courses and grades still constitute in too many cases an arbitrary hurdle to college admission. In respect to admissions there are three different procedures: that of some State universities where the high-school diploma is the sole basis for admission; that of independent colleges where special criteria are set up; and that of the church related colleges where admission requirements may on occasion be narrowed to affiliates of the particular church.

The high-school diploma as the sole criterion of admission to the State universities is increasingly recognized as inadequate. A partial indication of this is the high mortality of students who "drop out" of State universities in the first 2 years. General tests of intellectual capacity and aptitude for a college education are available; these can take adequate account of the wide disparities in high-school education even within individual States. Greater reliance on such tests, in addition to the highly reliable evidence of the ranking of the individual student in his high-school class, might well lead to a wiser selection of students by the institutions, which should mean more opportunity for more college work by more young people.

The desirability of a broadened selection base is discussed in the *Eight Year Study*, prepared for the Progressive Education Association. It showed that the actual subjects studied in high school were of less importance as an index of competence for college work than over-all intellectual capacity. It further showed that colleges can secure all the information they need for selective admission without prescribing the curriculum of the secondary school.

This Commission agrees with the conclusions reached in that study: first, "no college can be justified in setting up requirements for ad-

mission which have been shown to be unnecessary in preparing students to do college work * * *; second, the knowledge, skills, habits, and qualities of mind and character essential as preparation for college work should be ascertained by colleges and schools cooperatively; and third, a plan for admission should be adopted which provides the college with needed information concerning candidates, but which does not prescribe the content or organization of the secondary school curriculum."

Emphasis upon a more flexible set of criteria for selection of college students implies no lowering of intellectual standards; quite the contrary. But colleges do need more realistically to confront the great variations in high-school curricula. Furthermore, they must be able to offset the handicaps of secondary school instruction which is of poor quality.

The important supplementary value of testing programs lies in the flexibility which they permit, both for the admission and for the advancement of the student. Adherence to rigid admission requirements and prescribed secondary school studies has worked a considerable hardship on individuals who, through inadequate counseling or inferior secondary school facilities, have come to the campus without the approved grouping of courses. Moreover, holding each college student to uniform course requirements too often enforces a dreary repetition of subject matter in the first two college years. Present bases of admission to graduate and professional schools are also admittedly unsatisfactory and not truly selective of superior talent.

The program for accrediting the educational experience of men in the armed forces has abundantly demonstrated that objective tests of mastery of knowledge and skill are adequate measures of potential success in college. More than a million former service personnel have taken the General Educational Development Test and other examinations. In many instances, their showing on these tests has served as a basis for the award of a high school diploma, or appropriate college credit.

The newly devised tests and related devices afford valuable means for recognizing individual differences at both undergraduate and graduate levels, and for adjusting individual study programs in terms of ability and achievement.

Special mention should be given to a further phase of the restrictive admissions policies of certain professional schools. Some professional associations, which have assumed heavy responsibilities for accrediting professional schools, have become too restrictive in the number of students they allow to be admitted. Such arbitrary limitations create a monopoly and do not provide sufficient practitioners to meet the national demand. An insistence on high

qualitative standards may thus be made the means of too drastic quantitative curtailment.

The Impact of Limited Guidance

The inadequacy of skilled educational and personal guidance services, both at the secondary school level and within the colleges, has imposed an arbitrary and unfortunate handicap upon many qualified students.

Half of our cities of over 10,000 have no provision for guidance in their local high schools. Efficient high school guidance would mean the salvaging of thousands of boys and girls for a longer educational experience.

Similarly, a well planned guidance program in college—including educational, vocational, and personal counseling—would help greatly to extend the college careers of many students who now do not become adjusted and who withdraw from college for reasons which could be corrected.

The importance of this guidance work in keeping open the channels of education for more people is indicated when note is taken of the great diversity in college admissions requirements, in varying tuition and scholarship provisions, to say nothing of the variety in curricular objectives and programs both in colleges with 2-year and in colleges with 4-year offerings. All of these various options and possibilities point conclusively to the need for a wide extension of competent precollege counseling in order to encourage and facilitate a wise channeling of secondary school students into the most suitable college Moreover, with the present sharp distinctions in many high schools between the *academic* and the *general* or *commercial* courses, unless the student has been guided to take the academic course, he is virtually precluded from qualifying for college entrance. All these factors combine to place young people from certain schools and regions at a serious disadvantage. Such a program would also have the additional social value of facilitating a better adjustment of individual talents to employment opportunities.

DEMOCRACY IN HIGHER EDUCATION

If we are to realize the democratic principle of equality of opportunity in education, new ways must be found to translate this principle into practice.

Fundamental to this effort must be a greatly increased will on the part of all American citizens to see that justice is done in educational institutions. There has been too much tardiness and timidity. It now seems clear that many institutions will change their policies only under legal compulsion.

Considerable thought and study should be given to the establishment of "Fair Educational Practices" laws, paralleling the so-called fair employment practices measures enacted or considered by several states. Such laws would give those believed to be the victims of discrimination recourse to an administrative procedure which might investigate and establish the facts of each individual case. That there have been benefits from the existence of legal remedies in the realm of industrial employment is now clear. Nor have the fears of the opponents of such legislation been substantiated in practice. Laws which place equal obligation upon every institution of higher learning to admit applicants only on the basis of publicly justifiable criteria would not resolve every problem of discrimination which exists within colleges and universities. If carefully devised, however, such measures should go far to equalizing educational opportunity.

Many believe that voluntary action, if vigorously and universally pursued, would be more desirable than compulsory action. But the assumption that early and general voluntary action will be adequate to meet the need does not appear to be warranted.

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.

A National Program of Scholarships and Fellowships

In appraising the availability of educational opportunity in the United States, this report has stressed the grave inequalities in family income throughout the Nation, the increasing tuition and other fees, both of publicly and privately controlled colleges, the increasing living costs of students, and the difficulties confronted where high-school graduates live at a distance from a college.

This Commission recognizes the continuing importance of these economic barriers. Lowering of tuition fees and the establishment of a system of tuition-free community colleges have already been recommended. But these measures are not sufficient.

Each American family clearly has an obligation to do everything it can to provide for its children the highest educational level of which those children are capable. The obligation is first that of the family. The problem is complicated by the fact that, unhappily, circumstances so often prevent the family from redeeming its obligation.

The need for an informed, enlightened citizenry in a democracy is so great that educational opportunities must be provided for all. It is essential, therefore, to consider the practicability of a Federal program of scholarships or grants-in-aid, and fellowships. This program should supplement inadequate student-aid programs now provided through private grants, institutional scholarship funds, and State and Federal appropriations. The national program must be so conceived that it will encourage the further provision of funds from private, local, and State sources. Also, the program must be so administered that it will foster the initiative and intellectual development of the student himself. Individuals receiving aid should be fully conscious of their obligation to return to society the investment which society is making in them.

PRESENT MEANS OF FINANCIAL AID

There are various means through which financial assistance is now given to college students. Among these are opportunities for employ-

ment, loans, grants-in-aid, scholarships, and fellowships. At the graduate level, there may also be part-time teaching and research work. *No program of student aid should diminish the responsibility of individual American families to help their children obtain a college education; neither should it detract from the initiative and resourcefulness of the student who has both the opportunity and ability to carry on a modest amount of part-time employment.* But, as has been shown, many families cannot afford to send their children to college, and the proportion of young people who can secure self-help opportunity decreases as the number of college students in any one institution increases.

Loans to college students constitute a traditional, though unpopular, source of aid. In 1946–47, $23,600,000 was available in loan funds and only $3,700,000 was borrowed. Even though the loan may have a low interest rate or none at all, and even though the institution allows 3 to 5 years after graduation before initial repayment, the student hesitates to assume the financial obligation. He often anticipates that during the period in which the loan must be repaid, he will incur the added responsibilities of marriage and a family. Furthermore, a prior mortgage on his earnings may be a handicap in procuring a further loan to meet postgraduation needs for starting a business or profession. A program of student loans, wisely administered, can be of assistance to students, but this Commission concludes that even a more generous loan program cannot represent an effective measure for equalizing educational opportunity to the extent which the total need makes mandatory.

Colleges and universities in 1940–41 paid approximately $5,000,000 in outright individual grants to students, to assist them in meeting their immediate financial needs. Such assistance has enabled students to remain in college, but the inadequacy of this amount to meet the total need is indicated by the fact that there were only 50,000 recipients and the average grant amounted to about $100. Hundreds of thousands of others might have entered college if funds had been available. It is apparent that the assurance of expanded opportunities for higher education must be sought elsewhere.

The need for a large-scale Federal program of grants-in-aid and fellowships is more apparent when existing resources are examined in the light of the recommendations for an enlarged student enrollment. The inadequacy of present funds for student aid is at once suggested by the U. S. Office of Education report for the academic year 1941. For that typical year, in the 967 colleges and universities which reported, a total of 61,290 students received scholarships with a cash value of $10,210,611; and 11,390 graduate students received fellowships with a value of $4,513,564. Thus, only 5 percent of the enrolled

students received such aid; the average scholarship was $165, the average fellowship was $400.

Data available from the same source for the year 1946–47 combine scholarships and fellowships. Total disbursements for all types of institutions of higher education, including public and private, were $21,229,000; the number of recipients was 113,425, or 5.5 percent of the students enrolled; the average grant was $187.16.

Grants-in-aid, scholarships, and loans provided by institutions have been supplemented by State-administered scholarships provided by direct legislative appropriation. New York State, for example, each year awards a specified number of scholarships to high-school graduates who qualify on the basis of the State-wide Regents examinations. Residence within the State is a prerequisite. The individual is free to select any institution in New York State, and there are no restrictions upon his choice of subject matter. At present, such scholarships are for $350 a year and are granted to 750 students each year for a 4-year period. This is an encouraging extension of a previous State program in New York. There is also a temporary State provision of $350 a year for 4 years, to benefit a total of 12,000 veterans.

Similar programs which would include more and larger scholarships offered by all the States would constitute a step toward equal opportunity. Irrespective of, and in addition to whatever program of grants-in-aid the Federal Government may decide to adopt, this Commission urges generous extension of State scholarship provisions. Nevertheless, it is realistic to concede that in the immediate future many States will not feel that they can afford to embark upon such a program. And this may be especially true if they will decide to embark upon a policy of substantial reduction of tuition and other fees in their publicly controlled institutions. In other words, however intrinsically desirable it is to extend such a program within the States, this Commission believes that such scholarships would not represent a sufficiently comprehensive or adequate attack upon the problem; and especially would this be true in the less prosperous States.

Fellowship awards at the graduate level divide into three main types: cash awards, frequently restricted by specifications regarding fields of study and other limiting factors; teaching fellowships, entailing part-time employment in the institution; and research fellowships, requiring work of a specific nature. Of these three types, the research fellowship is becoming more important because corporations are showing an increasing interest in the development of research ability, especially in natural sciences. The National Research Council in 1946 reported that 302 industrial companies are supporting about 1,800 scholarships and fellowships or grants for research in colleges

and universities. The total of such fellowships, however, remains far short of national needs.

FEDERAL ASSISTANCE TO STUDENTS

Federal aid to students is not an untried expedient. The most comprehensive program prior to the war was the federally supported National Youth Administration, which in 1935 took over a Federal Emergency Relief Administration program. The final report of the NYA shows that approximately 620,000 college students received help through the college work program during the period 1935–43. The average number of undergraduate students employed per month, in the peak year 1936–37, was 133,850. The largest number of graduate students employed per month was 5,760 in 1935–36. Total payment by the Federal Government was approximately $93,860,000, of which $89,000,000 was for the undergraduate program and $4,860,000 for the graduate program.

Assistance was based upon the individual's financial need. The institution selected the students and their work assignments. Compensation varied, but averaged approximately $12 per month at the undergraduate level, and $20 per month for graduate students.

A total of 1,651 institutions of higher education participated in the NYA program during the academic year 1937–38. All nonprofit institutions were eligible upon certification by the principal State education officer. The value of the program to the participants may be inferred not only by the number who were employed in student work but also by their scholastic achievement. During the academic year 1938–39, 83 percent of 696 reporting institutions declared that NYA students as a group made higher grades than the general student body; 15 percent of the institutions reported lower average grades; 2 percent stated there was no significant difference.

There have been other Federal programs of financial aid to college and university students. Through the Reserve Officers Training Corps and the Naval Reserve Officers Training Corps, students have received substantial compensations. Under the provisions of the Holloway Plan, which was authorized by legislation (Public Law 729) enacted in 1946, NROTC students receive tuition, fees, books, uniforms, and retainer pay of $50 per month, in return for which they are obligated to serve a stated period of time in the Navy.

The United States Public Health Service is authorized to make research grants to institutions and to offer fellowships to individuals for work in fields "related to the ailments of man." The usual fellowships range from $1,200 annually for an unmarried candidate for the master's degree, up to $3,600 annually for a married candidate for the

doctorate. These fellowships are renewable and carry a $300 increase during the second year. The Public Health Service is also authorized to set up special fellowships above the $3,600 ceiling for persons of proved ability. In 1946, the passage of the Mental Health Act gave specific authorization for a system of graduate fellowships ranging up to $3,600 per year in value. These grants are available only to students working in the fields of mental health.

The bill to establish a National Science Foundation included provision for Federal scholarships and fellowships in the scientific fields, other than social science.

These programs and proposals indicate that the Federal Government recognizes the desirability of providing financial aid to students because of the public benefits which accrue. This Commission believes, however, that a general program of national grants-in-aid and graduate fellowships, equally available within the limits of the Federal appropriation to all eligible students, will make specialized and piecemeal programs unnecessary and unwise. By having all general grants and fellowship programs administered within a single program, the competition among the various programs can be eliminated. This is imperative to meet total national needs.

The Federal Government provides certain indirect forms of student assistance. The armed forces are authorized to assign a proportion of their personnel to study at civilian educational institutions. The Office of Vocational Rehabilitation provides financial assistance to the States in order that they may aid disabled civilians to undertake training and educational programs. During the fiscal year 1947, a total of 29,817 students were receiving such assistance; of these approximately 22 percent were enrolled in colleges and universities. Special programs at a college level are offered by the Graduate School of the Department of Agriculture and by the Graduate School of the National Bureau of Standards. The Tennessee Valley Authority has a broad program of cooperation with institutions of higher education. More recently, the Atomic Energy Commission has developed similar cooperative relationships. These are only a few of the many Federal agencies which have important joint programs with the colleges and universities.

The most significant Federal program of educational assistance ever provided by any nation is that made available for veterans of World War II through Public Laws 16 and 346, commonly known as the *Rehabilitation Act* and the *GI Bill.* The Veterans Administration reported on June 30, 1947, that 6,597,000 veterans had applied for benefits under these two laws, and that 3,835,000 had already entered upon training and education at one time or another. Up to

June 30, 1947, the total expenditure of the Federal Government for benefits under these two laws was nearly $2.8 billion. During the fiscal year July 1, 1946, to June 30, 1947, 2.3 billion was paid out, of which about 1.2 billion was for subsistence, tuition, and other fees for veterans in college.

The number of veterans in training at any one time reached a peak of 2,675,000 in April 1947. Of these 1,209,000, or 45 percent, were enrolled in educational institutions of higher learning and the remainder were enrolled in other schools or engaged in on-the-job training. By June 30, 1947, the number of veterans in training had dropped to 2,074,000, because of the summer vacation period.

The GI Bill and the Rehabilitation Act make provisions for education and training benefits for a potential group of 16,000,000 World War II veterans. Each grant has a minimum cash value of approximately $1,000 per school year: the veteran with no dependents receives $65 per month for 9 months and the institution receives up to $500 for his tuition and essential supplies. Veterans with one or more dependents receive subsistence of $90 per month. Disabled veterans receive more. The maximum period of benefits under the GI Bill is 48 months, depending on length of active service during World War II. The average entitlement of trainees is about 42 months, 6 months more than the four academic years usually required to complete a college course. Training under the Rehabilitation Act is for a period necessary to rehabilitate the veteran and may continue beyond 4 years, if approved by the Administrator of the Veterans Administration.

Even with these legislative provisions, it must be repeated that the number actually enrolled in colleges is smaller than the accumulative number who would have attended college had there been no interruption as a result of war. In other words, the heavy registration of veterans only partially represents the backlog of college enrollments and does not represent a temporary bulge.

While aid to the veterans has undoubtedly enabled many families to free funds to help pay for the higher education of the veterans' younger brothers and sisters, this is only a temporary situation unless steps are taken to assure for nonveterans the same kind of assistance that is being given to veterans.

SOURCES OF FUNDS

Funds for financial assistance of individual students are available from four major sources: the current resources of the institutions, private gifts, State and municipal appropriations, and Federal appropriations. Financial demands upon the institutions of higher education, however, make it increasingly difficult for them to set aside larger funds for student aid. The increased number of faculty members and

their salaries, the expansion of physical facilities to care for the permanent pressure of rising enrollment, and the higher prices—these are but a few of the factors which make it impossible for institutions to increase or even, in some cases, to maintain the funds available for student aid.

The amount of grants and fellowship funds available through private sources has declined. It will continue to be less, if the income from endowment continues to decrease and the value of the dollar to decline. Research grants for industrial fellowships constitute an exception, but do not affect the over-all situation since they are largely limited to the specific areas of interest to the donor, and tend to be concentrated in a relatively few institutions.

The Commission strongly recommends that all institutions of higher learning seek increased private donations for scholarships and fellowships; that such gifts be free from encumbrances designating specific qualifications as to the recipients, fields of study, and the like; and that donors of large amounts be encouraged to distribute student aid more widely among the colleges and universities.

State appropriations for scholarships and fellowships, if expanded and extended, might provide for a large proportion of needy students. The volume of this Commission's report entitled "Financing Higher Education," demonstrates that such aid will be unequally available among the states and, therefore, cannot be considered a universally effective measure for expanding educational opportunity.

A NATIONAL SCHOLARSHIP PROGRAM

The inadequacy of existing funds for scholarships and fellowships makes a national program imperative if higher education is to fulfill its responsibility to the individual, to the Nation, and to the world. In view of the imperative need for highly trained personnel and in the light of the vast expenditure now being made by the Federal Government for the education and training only of veterans, this is a reasonable proposal. The program for veterans has already justified itself as a splendid contribution to postwar progress for the individual and for society. Surely the continuance and extension of such a program to the youth of the future is equally justified.

Unless present legislation is amended, all veterans discharged prior to July 1, 1947, must have completed their education under the GI bill by July 1, 1956. The diminishing of the number of new veteran enrollees will gradually enable the normal flow of secondary school graduates into college to be resumed at a rate higher than the prewar level. This increased flow of high school graduates will result from many factors, including population increases. It is thus advisable that new provisions to equalize opportunities be initiated in 1948–49.

Confronted by this larger demand and recognizing the economic difficulties which will preclude many qualified students from entering college, this Commission recommends that a national program of Federal scholarships in the form of grants-in-aid be provided for at least 20 percent of all undergraduate, nonveteran students. The Commission is convinced that the basis of 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.

In the following elaboration of this recommendation, the Commission emphasizes that it is more concerned with the establishment of a broad approach to method than with rigid insistence on the wisdom of all details, many of which would necessarily evolve at the administrative stage of operation.

In point of timing, this Commission makes its recommendation in two parts—one specifying a progressively increasing 5-year program of Federal appropriations for scholarship grants, and the other suggesting alternative possibilities for the period from 1953 through 1960.

The fiscal recommendations are of this dual character, not because it might not be justifiable to propose a program of Federal appropriations on a scale which would eventually equal the amounts required in the GI Bill. *It seems obvious that, in the national interest, we as a nation can well afford to invest in the education of needy nonveterans amounts approaching those which we are now investing in the education and training of qualified veterans.* But this Commission prefers to take account of a number of qualifying, if incalculable, factors in offering recommendations of total amounts for grants-in-aid for the immediate future. Among these factors are, for example, the possibility of State universities substantially lowering their fees in the near future; the likelihood of the general level of wages and salaries remaining at a level as high as at present; the possibility of an increasing number who may be able to go to community colleges and live at home; the possibility of the States themselves adding or extending programs of substantial State grants-in-aid to many more high school graduates; and finally, the size of the gross national product in the years ahead.

The primary purpose of a Federal scholarship program is to equalize educational opportunity by eliminating, at least in part, the economic factor in determining college attendance. The amount of the scholarship would vary with the financial need of the individual, depending on the actual amount required to make it possible for him to attend and continue in college. The amount of the scholarship might reach a proposed maximum of $800 for an academic year. For

purposes of estimating the first year's cost, an average scholarship of $400 may be assumed. This leads to an initial recommendation for 1948–49 of approximately $120,000,000 for Federal scholarships which would give assistance to some 300,000 students. This is, in the Commission's view, a conservative and wholly defensible recommendation, especially in the light of the extent of economic handicaps set forth earlier in this volume. And it constitutes a beginning which will enable administrative and selective procedures to be set up and be tested prior to the possible expansion of the program.

Since the Commission recommends that scholarships be available to a minimum of 20 percent of all non-veteran students, this program in dollar amounts should be augmented each year, as the GI appropriation needs recede. It is therefore recommended that in each fiscal year after 1948–49 and continuing through 1952–53, an amount be appropriated over and above $120,000,000.

The computation and the total amount suggested here, are not necessarily regarded by this Commission as either ideally desirable or adequate to meet what our analysis reveals to be the known inadequacies. But, at this level of expenditure a start can be made. The continuing needs will demonstrate themselves, and will result in a more informed and adequate authorization of Federal expenditure in the years after 1953.

In these years, several options may be suggested as to the amounts of Federal appropriation to be wisely advocated. At the present time the veterans' tuition and subsistence requirements for post high school education cost over $1,000,000,000 per year of Federal money. There are those who would say that to equal this amount for annual nonveteran grants-in-aid by the year 1960 would not represent an extravagant or unjustifiable outlay for this important educational purpose. If the figure of $1,000,000,000 is taken as the amount to earmark out of Federal funds for this purpose by 1960, it becomes readily possible to construct a program of progressively increasing numbers of grants from 1953 to 1960, which would build up to this figure or to any agreed fractional part of it. Obviously, Federal funds are voted on the basis of public conviction of public need and value. And this Commission is convinced that with a preliminary trial period of a few years, the Congress will appropriate funds on a scale commensurate with what an informed public opinion will by that time come to identify as an urgent national need.

In general terms, the procedure recommended in connection with this grant-in-aid program is as follows:

Each applicant would select the college or university which he or she desired to attend and would assure his or her admission to it in the regular way.

Each State would establish a representative scholarship commission to administer funds granted to it for this purpose by the Federal Government.[1]

In suitable State legislation it should be provided that this scholarship commission would include representatives of public and private secondary schools where appropriate, or public and private colleges and universities where appropriate, of the chief State school officer and of public-spirited citizens at large within each State. This Commission would be charged to act upon requests for individual grants-in-aid made to it by those secondary school students who are residents of the State and who had been accepted for admission by an approved college or university of their own choice in any State. The commission would also be responsible for the annual renewal of such grants on the basis of an established procedure of renewal certificates as issued by the college or university for satisfactory completion of the previous year's work.

A maximum of seven annual grants to one student should be specified. This will permit the use of such grants for graduate or professional study. The maximum amount allowed for any one grant would be $800 per year.

This grant-in-aid provision would be available to students in approved 2-year and 4-year colleges, public and private, and for graduate study including professional schools for a maximum of 3 years. Individual exceptions might be made in professional fields requiring more than 7 years of preparation.

The primary basis for determining the award of the scholarship to an individual student should be his financial need. The award would further depend upon the applicant's ability, character, sense of responsibility, and such other factors as may be adjudged pertinent within the announced purposes of the appropriation.

The broad basis for determining those applicants who would give definite promise of profiting from a college education should be set forth in regulations by the Federal agency responsible for the administration of the total fund, which should be the one primarily concerned with higher education. The conduct of any examinations, interviews and the like would be left to suitable provision to be made by each State's scholarship commission in harmony with the basic Federal regulations.

[1] Statement of dissent:

I dissent from the proposal for State administration of scholarships. Since the purpose of such scholarships is exclusively to enable more students to obtain a higher education, and not to influence the distribution of students as between regions or between private and public institutions, I believe that Federal scholarships should be prorated among colleges and universities and administered by them on the basis of individual student need and ability. Under the National Youth Administration program our colleges and universities proved their capacity to redeem such a responsibility.

MILTON S. EISENHOWER.

The proportion of the total Federal appropriation which would be available annually to each State's scholarship commission should be determined by taking equal account of two factors:

(1) 50 percent of the weight would be given to the number of high-school graduates in each State, each year, in relation to the total number of high-school graduates in the United States; and

(2) 50 percent of the weight would be determined on the proportion of young people in the 18–21 year age group, resident within the State, to the total 18–21 year old youth in the total population.

The following example illustrates the application of the principles. If 5 percent of the high-school graduates of the country are in one State and 3 percent of the 18–21 year old age group in the United States reside in that same State, 4 percent of the total Federal appropriation would be available to assist youth of college age who are residents of that State.

This Commission recognizes the complex problems involved in any national program of grants-in-aid, but believes that the difficulties can be resolved through careful and continuing appraisal of the effectiveness of its operation.

The scholarship commission in each State, acting in close conjunction with the agency in that State responsible for higher education, should be the instrumentality for channeling the funds from the Federal Government to the individual students from each State.

If there should be any unused balance of the total amount allocated to any State, this would revert to the Federal Treasury at the end of each fiscal year.

This Commission recognizes also that at present this proposal would, to some extent, work against those States in which secondary school education is inadequate. But the availability of grants, plus the use of the suggested formula, should provide a stimulus to the improvement of secondary education. In certain States where this improvement is dependent clearly upon access to Federal equalizing funds, consideration might well be given to the establishment of provisions for drawing upon part of these resources for a grant-in-aid program to secondary school students, at least during their last 2 years in high school.

A NATIONAL FELLOWSHIP PLAN

In order to provide appropriate and adequate encouragement of graduate study beyond the baccalaureate degree and to assure the nation of an adequate supply of highly trained personnel, this Commission recommends a program of fellowships for graduate study.

The genuine need for an expanded program of advanced and professional study is emphasized by the fact that in the academic year

1946–47, approximately 40,000 graduate degrees were granted in all the colleges and universities of the country, of which number only 3,787 represented the learned doctoral degrees.

There has been clear and widespread recognition of the importance of such a program in terms of research developments; new contributions to knowledge; and as pointed out in the volume of this Commission's report entitled "Staffing Higher Education," of attracting able young people into study which would eventually qualify them for college teaching and administration.

This Commission, therefore, recommends that Federal funds be appropriated to provide for the establishment of a program of Federal fellowships. The amount of each fellowship should be $1,500 a year and the number of such fellowships be 10,000 in the year 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 3 years if the student maintains 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 for 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.

GENERAL CONSIDERATIONS

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

This program of Federal grants-in-aid and fellowships is recommended, as already stated, on a highly conservative basis of numbers for a limited period, in order to enable the program to become initiated in an experimental way. But the Commission is confident that this initial program will soon demonstrate both its value and its inadequacy to cope with the needs of the national situation.

The Commission further recommends that before the expiration of the appropriations as above recommended, the Congress, through

its appropriate committees, review the program looking to its extension and considerable enlargement in subsequent years.

Reference has already been made to a variety of existing and proposed Federal provisions for scholarships and fellowships operating under a number of national agencies. Ideally and eventually, it would be desirable that all programs for the allocation of Federal funds for these purposes at the undergraduate and graduate level be administered under one agency. And this goal should be kept clearly in mind by the responsible congressional and administrative authorities as the aims, procedures, and amounts of these allocations become established into a defined pattern.

Whether or not each detail of the procedures here proposed for operating the scholarship and fellowship programs is found to be the most practicable, the basic principles seem to this Commission to supply a helpful initial guide to the drafting of a plan.

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.

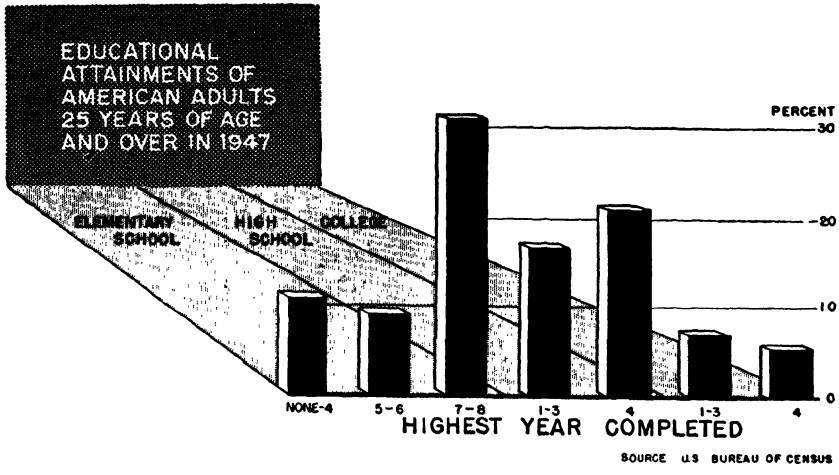
Equalizing Opportunity Through Adult Education

The responsibility of institutions of higher education is not to youth of college age alone. It extends to all adults. The college can enrich the life of the individual and the community. It can help to round out the education provided by elementary and secondary schools and by other types of institutions; advance the individual in essential knowledge and skills; provide facilities for self-expression and appreciation in the arts; disseminate information regarding recent developments in fields such as government, economics, the physical and natural sciences; provide opportunities for discussion, at the adult level, of issues vital to national life and to international relations; and give to both the older and younger generations a more adequate basis for understanding their mutual problems.

It is also now increasingly recognized that many important interests arise only with maturity and that a sense of need for wider educational horizons grows directly out of adult experience. To afford ready opportunity to satisfy the educational needs which adult life brings is essential to the best use of individual talents. Yet adult education is also more than a service to individuals. Rightly conceived and promoted it would help to bring order into the spiritual chaos of today and to create a democracy with enhanced material, moral and intellectual strength.

The 1940 Census provided an eloquent testimonial to the need for adult education. At that time less than 40 percent of the voters—people over 20 years of age—had completed more than an eighth-grade education. By 1947, the percentage had risen to 53. Yet, most of the broadening studies such as civics, economics, sociology, problems of democracy, and international relations usually are taught only above the elementary school. In 1947 there were nearly twice as many *functional illiterates* (fourth grade or less) as there were college graduates. Chart 7 shows the level of education attained by American adults of an age at which formal education has usually been completed.

Chart 7



FACTORS INCREASING THE NEED FOR ADULT EDUCATION

Many factors make a broad program of adult education essential for our national well-being. Some of these arise out of a new concept of world community and others out of the problems of the domestic environment. The population of the United States is becoming increasingly an adult one. In 1790 for approximately every 1,000 children under 16 years of age there were 1,042 adults over 16; in 1900 for every 1,000 children under 16 there were 1,748 adults; in 1947 for every 1,000 children there were 2,621 adults. Today through man's conquest of disease, a drop in infant mortality rate, and changes in modes of living, the life expectancy of the individual at his birth has increased from an estimated 35 years in Massachusetts and New Hampshire in 1790 to a national expectancy of about 67 years in 1945.

The increasing tempo of change in our technology is another factor which is increasing the demand for adult education. The human significance of social change is dramatically reflected in shifting occupational patterns. Our economic system has been transformed from one in which the majority of persons were engaged in the conversion of raw materials to useful goods into one in which a constantly growing proportion are engaged in managerial, professional, and service functions.

Increased technical efficiency has also made possible a drastic reduction in hours of work. In 1914 the average workweek in manufacturing was 49.4 hours and by 1947 it had dropped to 40 hours or less. With further decline in the workweek, it will become increasingly important to learn how to make wiser use of leisure time.

The increasingly specialized nature of work has done more than increase the leisure time at the disposal of the worker; it has changed the kinds of activities in which individuals need to engage during their leisure hours. The very nature of the work frequently tends to fractionalize the experience of the worker and to draw on only a part of his personality. Repetitive and simple operations too frequently fail to give any satisfying sense of creativeness. Adult education may assist in offsetting these factors and in giving meaning to work experience as well.

The study of industrial relations has become a vital part of adult education, carried on by extension divisions, special schools, and by trade union and civic groups. The complex interrelationships of labor and management require trained leadership and understanding. Many representatives of labor and management have recognized this need; by September 1947 several universities had introduced intensive adult study of industrial relations in addition to undergraduate courses.

All sections of the trade union movement have united behind a proposal to ask for Federal funds to make available information, education, and research services. Agriculture has received such assistance over many years with beneficial results. The study, through adult education agencies, of industrial relations would help to reduce the ignorance and misunderstanding which are increasingly dangerous in our interdependent life.

A further element in the need for expanding adult education is that adults desire to learn. The Gallup Poll for December 16, 1944, reported that 34 percent of the adults desired to enroll in adult education classes after the war. The greatest interest was shown by the age group from 20 to 29. The percentage of those interested in adult education was even higher when the poll was again reported on July 6, 1947; 41 percent, or more than two of every five adults in the voting population, expressed the desire to engage in some kind of study. The survey revealed: (1) the desire for adult education was greater among women than men; (2) the more education a person has, the more he wants; and (3) the greatest demand for adult schooling was still in the younger age group 21–29 years of age. This poll found the largest percentage wished to study subjects in the social sciences, and the next highest percentage wished to study in professional fields.

PRESENT ADULT EDUCATION PROGRAMS IN INSTITUTIONS OF HIGHER EDUCATION

Although many public and private agencies have some responsibil ity for adult education, only those aspects which might wisely become the responsibility of higher education are here considered.

In Community Colleges

The community or junior college has found itself admirably adapted to provide adult education. In 1944–45, 65 percent of the total number enrolled in all community colleges were special students who sought instruction in fields commonly recognized as "adult education." During the period 1937–41 there was a general increase in enrollments in community colleges, but the increase of enrollments in adult education programs was disproportionately large. In Connecticut, for example, there was an increase of 125 percent in total enrollment, whereas the adult education enrollment increased 225 percent. California now serves nearly a million adults a year in approximately 120 evening high schools and junior colleges designated entirely for adults.

Through Extension Services

Every State has institutions of higher education which offer formal classroom courses through their extension divisions. Of the courses offered in 1947, 40 percent were of junior college level, 52 percent senior college, 1 percent graduate level, and the remaining 7 percent not of college grade. Some students take extension courses to earn credit toward degrees, but a significant proportion enroll for the satisfaction of gaining additional knowledge and understanding.

In Resident Centers

One of the significant and relatively recent developments in higher education is the establishment of resident extension centers in key locations off the campus where courses may be taken. According to a study made for this Commission by the Association of Land-Grant Colleges and Universities, approximately 115,000 persons were enrolled in 195 resident centers in 1946–47. The increase in these resident centers is shown by the following percentages:

	Increases of fall semester or term 1946–47 over that of 1945–46 (percent)
Number of resident centers in operation	240
Total number of part-time credit students enrolled in all centers	113
Total number noncredit students enrolled in all centers	120

Many of these centers have become an integral part of the system of higher education by making provision for enrollment of full-time-credit students as evidenced by the fact that the increase in full-time students was 600 percent in 1946–47 over 1945–46. The institutions reported that approximately 180 out of the 195 centers in operation during 1946–47 are planned on a permanent basis. The remainder were established primarily to meet the now current needs of veterans.

By Technical Institutes

There is no single pattern or design for the adult education activities of "technical institutes." They vary from private schools offering training in only one specialized vocational field such as radio repair or commercial art to publicly controlled institutions offering a variety of courses in related fields. The basic differentiating features are their high specialization in preparation for specific vocations with limited inclusion of general education, and their emphasis upon programs of subprofessional or semiprofessional nature. They frequently are not separate units but are parts of other educational institutions, including secondary schools, community colleges, and extension divisions of universities and colleges. They may also be organized as proprietary schools operating for profit, as independent agencies of Government, or as nonprofit public or private institutions. In some States they must be licensed or chartered; in others, in spite of their educational importance there is no control of these institutions.

The programs of courses vary from those that are intensive for a period of only a few weeks to those that are 1, 2, or 3 years in length. Frequently they are adapted specifically to the needs of a given industry or occupation.

The service of the technical institute is largely directed to those who have recently left high school and hence represent the younger adults. The need for such subprofessional training is attested to by the estimate of the U. S. Office of Education that the national economy can absorb 5.2 persons trained on the technical level in engineering to one on the professional level. Many other areas of employment can utilize an increasing number of technicians in such fields as nursing, laboratory services, and many more.

The present chaotic situation in the field of technical training represents a great waste in adult education. *This Commission recommends that technical institutes be integrated into the total educational system, be more adequately supervised, include more general education in their required courses, and as far as possible, become a part of the community college system.*

EXPANDING ADULT EDUCATION

Current developments in adult education, significant though they are, fail to meet the pressing needs and demands of the adults of the United States. Colleges and universities have done far less than they might. Too often adult education has been a stepchild of higher education. In terms of policy, planning, administration, counseling, provision for decentralization, utilization of newly adapted media of instruction, and training specialists as teachers and discussion

leaders, higher education has been backward in recognizing this added responsibility.

Here and there throughout the country individual experiments, tested projects and novel applications, remind us of the backwardness and tardiness of a national program, and thus suggest what its elements and directions can be.

There is, for example, the whole problem of the use of mass media. These present an almost unlimited opportunity for expansion of educational service at the college level. The radio, notably, is a significant channel for introducing facts, ideas, information—even personalities—into 36 million American homes. Some 60 million persons are estimated to constitute the radio audience. On the average, they are believed by some authorities to listen to their radios about 4 hours a day, divided almost evenly between day and evening hours.

Of the technical developments in radio, the use of FM has the most far-reaching implications for adult education. The Federal Communications Commission has set aside channels for the exclusive use of noncommercial, educational institutions, which would provide spacebands for FM stations all over the country.

The far-ranging development which occurred in the use of visual aids during World War II has again underscored the use of these devices in the educational process. In the first volume of this report, "Establishing the Goals," this Commission recommends the establishment of a permanent national group to do research on and to further expand the use of technical aids to education. The proven effectiveness of the motion picture as an instrument for reaching vast numbers of people offers the resourceful educator a virtually untapped means of expanding the processes for adult education in all fields. A modern, effective program of adult education should lean heavily upon motion pictures, not only for their power to arouse and to sustain interest, but also for their demonstrated achievements in improving and accelerating the learning process.

Equalizing educational opportunity for youth of college age, while it will go far to equip a new generation to cope better with its problems, will not yield its fullest and its rightful fruits, however, if today's adults are educationally slighted.

The very magnitude of the task elevates it to a problem of top priority in national educational policy. It is, of course, a problem that is operationally a local and State one; but the coverage has to be nationwide even while the programs derive from and are adapted to local conditions. There is thus the need that on the level of policy we view the requirements under the guidance and counsel of the U. S. Office of Education. There will thus be focused a picture of present performance, of future needs and of the material ways and means required to meet them.

But at the same time individual institutions can spearhead the local planning and budgeting in relation to need and demand, in order that the progress of adult education may not be thwarted by failures of financial support or of local educational vision.

We need, and need quickly, to have millions of our fellow citizens become literate and competent in matters political, economic, and cultural. Colleges and universities cannot sidestep their share of the responsibility for advancing that literacy and competence. Their further acknowledgment of it, together with the provision of the financial sinews, becomes the capstone of a policy and program to supply a higher education that is no longer dependent on ability to pay but only on ability to profit by learning.

This Commission recommends: the assumption of greater responsibility for adult education by colleges and universities; leadership in developing and utilizing the new techniques and methods which are now available; adequate appropriations by the institution and by State and Federal governments to provide for essential developments in adult education; and systematic preparation of teachers and discussion leaders.

Summary of This Commission's Recommendations

This volume of the Commission's report concludes with a recapitulation of the several recommendations which have been interspersed throughout the previous discussion.

1. The first condition toward equality of opportunity for a college education can only be satisfied when every qualified young person, irrespective of race, creed, color, sex, national origin, or economic status is assured of the opportunity for a good high school education in an accredited institution.

Further to provide for a desirable flexibility on determining fitness for college entrance, there should be a general broadening of college entrance requirements over and beyond the present customary unit course credits in academic subjects, through suitable supplementary tests of intellectual ability.

Also, in order that the high school experience in terms of both educational and employment opportunities may become most effective, there should be available adequate counseling and guidance throughout the high school period. Only in this way will American young people be aided effectively to select further opportunities for an education or for work in line with their individual talents and potentialities.

Because economic inequalities at this level are so acute, some provision, presumably with Federal support, should be considered for grants-in-aid to individual needy students in their last 2 years of high school.

2. Following broadly the precedent set by the GI Bill, we recommend a Federal program of scholarships in the form of grants-in-aid at the undergraduate level based primarily on individual need, available in all types of higher educational institutions. The individual student should have a free choice nationally among approved institutions. The maximum amount of money available per undergraduate student per year should be $800. Methods of allocating

this sum within the several States should be on a basis which takes account of the number of each State's high school graduates and its total college age population.

The Commission recommends that the amount federally appropriated for these grant-in-aid in 1948–49 should be a minimum of $120,000,000; increasing in the following years to provide scholarships for 20 percent of all nonveteran students.

3. A Federally administered plan of fellowships for graduate study is recommended in the amount of $1,500 per student per year, with 10,000 fellowship holders being appointed in 1948–49, 20,000 in 1949–50, and 30,000 in 1950–51 to 1952–53 with a maximum of 4 years to any individual student. The candidates should be selected on the basis of a national competitive examination and the student should be free to make his own choice of the institution he would attend.

4. This Commission recommends the elimination of tuition and other required student fees in all publicly controlled colleges and universities for the thirteenth and fourteenth year; and a reduction beyond the fourteenth year, at least back to the level of 1938–39 tuition and fees, in institutions in which they have been raised.

It voices the hope that other means besides further increases in tuitions can be found to meet the operating expenses of privately controlled colleges.

5. This Commission is opposed to the continuance of college admissions policies which result in discrimination against students on grounds of race, religion, color, sex, or national origin. And we urge an immediate and voluntary abandonment of discriminatory practices.

We recommend further, because of the slowness of voluntary action, that educators support in their respective States the passage of carefully drawn legislation designed to make equally applicable in all institutions of higher learning the removal of arbitrary discriminatory practices in the carrying out of admissions policies.

Curtailment of admission of woman college students, due to inadequacy of facilities and against their entrance on an equal footing into professional schools, must be coped with.

It is further desirable that State universities at the earliest possible moment remove all prohibitions against the acceptance of out-of-State students.

6. Legislation in those States which now require segregation of white and Negro students should be repealed at the earliest practicable moment. And as far as graduate and professional education for the Negro is concerned, provision should be made by the States

which still require segregation to provide truly equal opportunity for qualified Negro students.

7. With respect to any and all provisions which are hereafter made to give effect to the several recommendations for Federal aid in the States, it should be an explicit requirement in the legislation appropriating Federal funds that they only be accorded to those institutions where discriminatory practices do not exist. Further, that, in States where legal segregation still prevails, provisions be made for the use of Federal monies equitably for all eligible individuals regardless of color, and for all institutions whether for Negroes or for whites.

8. It is important that curricular improvements assure that the first 2 college years shall be as stimulating and challenging as possible as one means of cutting down the high degree of student mortality which now prevails.

A further important feature of such a program will be adequate student counseling throughout the college experience on educational, vocational, and personal adjustments.

9. This Commission recommends, as an important element in equalization, the establishment of free, public, community colleges which would offer courses in general education both terminal and having transfer value, vocational courses suitably related to local needs, and adult education programs of varied character.

Such a development of State systems of community colleges will create a need for far more community college teachers, the training of whom will require added and special facilities.

10. The Commission urges that institutions of higher education undertake the development of a more comprehensive program of adult education as one important way of helping to remove present inadequacies in education among adults.

VOLUME THREE

Organizing Higher Education

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PREFACE

In this, the third volume of its report "*Higher Education for American Democracy*," the President's Commission on Higher Education analyzes the organization of higher education and recommends changes essential to achieve the educational goals established by the Commission.

Colleges and universities have developed in the United States without pattern or design. There is no Federal system of higher education and even within the State each institution is almost totally independent. Freedom from external direction has been one of the major elements of strength in the development of our colleges and universities. But if the Nation's needs are to be met through the expanded program recommended by this Commission, the time has come when more coordinated planning among all of the institutions on a State as well as on a national basis, is imperative. In many respects, the improvement of the organization for higher education is among the most critical problems facing education today.

The increase in the number of community colleges, the influence of this development upon established institutions, the role of Government, both State and Federal, and the function of voluntary organizations all call for careful appraisal in the organizational development of higher education over the years ahead.

A total of six volumes will be issued by the Commission under the general title, "Higher Education for American Democracy."

Volume I. "Establishing the Goals," was published on December 15.

Volume II, "Equalizing and Expanding Individual Opportunity" was published on December 22.

Volume IV, "Staffing Higher Education," is the Commission's recommendation for a greatly expanded and improved program for the preparation and in-service education of faculty personnel.

Volume V, "Financing Higher Education," is an appraisal of fiscal needs and policies necessary for the program of higher education recommended by the Commission.

Volume VI, "Resource Data," is a compilation of some of the basic information used by the Commission in preparing its reports.

CHAPTER I

The Role of Organization

In the other volumes of its report this Commission has set forth the issues of policy facing higher education. These issues have dealt with higher education's responsibilities with respect to national and international affairs and with means of broadening educational opportunities, of providing personnel and facilities, and of financing the programs necessary to achieve its expanding purposes. This volume is concerned with *organization*—the structural machinery which higher education utilizes to accomplish its purposes. Since organization is but a name given to the machinery whereby higher education operates, there are no valid principles of organization except those growing out of its objectives. Every question of organization must be answered in terms of how well it accomplishes predetermined purposes.

When organizational machinery becomes established, it tends to persist even after the objectives of higher education change. In fact, organizational machinery sometimes becomes so static as to retard the accomplishment of new or changed purposes. It is necessary, therefore, to look critically at the present organization of higher education in this country, not only because its static nature tends to slow down the normal processes of change, but also because our institutions have come down to us loaded with traditions many of which hark back to the practices of higher education in Europe. For decades Continental European universities, particularly German universities, were the seed beds for the nurture of leadership in American universities. But European universities were organized to serve an aristocratic, not a democratic, society.

In a democractic society, government strives to foster the maximum of freedom for the individual citizen consistent with the general welfare. This has a meaning for educational organization. *Just as there is no single mold into which children and youth should be fitted, so there is no mold into which schools, colleges, and systems of education should be fitted. Therefore, no single form of organization*

is presumed to be best for all educational institutions or States. The dominant chanacter of educational organization in a democracy is flexibility, not rigidity. Uniformity, the fetish of totalitarianism, has no place in a democracy. Variation is our accepted pattern.

The fact that the President of the United States created this Commission to study problems in the field of higher education does not imply that there is a national system of colleges and universities. In its legal framework higher education in this country is nearly devoid of system. From a legal point of view, each institution, college, or university is almost a law unto itself, subject only to the general limitations and specifications found in its charter. The United States Office of Education listed 1,700 of these practically independently operated institutions of higher education in its 1946–47 *Educational Directory*. Of these, 45 percent fall in the category called colleges and universities, 16 percent are separately maintained professional schools, 14 percent are teachers' colleges and normal schools, and 25 percent are junior colleges.

Of these 1,700 institutions, 364 are controlled directly by the state, 199 are controlled by a district or city board, 445 are private corporations controlled by their own self-perpetuating boards, 480 are controlled by, or at least related to, Protestant denominations, and 212 are controlled by the Roman Catholic Church. There are 223 institutions maintained for men only, 275 for women only, and 1,202 are coeducational.

With the exception of institutions for the training of military and other Government personnel, of a few institutions mainly in the District of Columbia chartered by the Congress, and of the land-grant colleges and universities established under the Morrill Act of 1862, the Federal Government has had little to do with creating, and less with supervising, any of these institutions. *There is no legally established Federal system of higher education in the United States.*

Primary responsibility for education in this country rests with the states. Each state has developed a system of elementary and secondary schools over which the State assumes major control. It has established also one or more public colleges and universities and provided machinery for their control in the form of boards of trustees or regents appointed by public officials or elected by the people. Further, each State has chartered nonpublic colleges and universities and authorized their administration by self-perpetuating boards or by some organization such as a church.

Thus all of these 1,700 colleges and universities look to the State as the ultimate potential source of their control. Except for those professions requiring State licenses such as medicine, law, and teaching, the States prescribe only very general program requirements.

It has done even less in following up its limited requirements with systematic supervision. Institutions both public and private have been left essentially free to develop such programs as they chose. The States have followed the wise practice of setting up machinery under which educational programs operate under the direction, largely, of educators or of those professional groups to which the educators look for leadership. *In most States, therefore, there is no effective legally constituted system of higher education under State supervision.*

This description of the organization of higher education might lead to the inference that it is quite without system. But such is not the case. With a maximum of freedom to do as they please, these 1,700 institutions in the United States have voluntarily created their own devices by which a reasonably effective system has been developed. These devices, a multitude of voluntary agencies, are one of the unique contributions to organization made by and for American higher education. Many if not most of these agencies publish periodicals for distribution to their members. Most of them have annual or more frequent meetings. There is every opportunity, therefore, for each educational worker to be informed about what others in his field are doing. Ease of communication alone is enough to assure a considerable measure of coordination among the programs of colleges and universities. With such wide distribution of common knowledge, it is inevitable that common practice should spread widely also.

This ease of communication helps to explain the great influence of any forceful leader with a new idea. The compulsions of leadership rather than of authority are responsible for most developments in higher education in this country. Voluntary agencies have been chiefly responsible for bringing about the system, the coordination, and the cooperation under which higher education operates. These agencies exemplify democracy in one of its most effective forms. They have made unnecessary the building up of governmental controls, either National or State. The discussion of organization in this report must not be interpreted as minimizing the work of these agencies even though this discussion will be concerned largely with governmental procedures.

The principal function of government in the field of higher education is to facilitate the free exercise of initiative and self-direction by educational leaders and institutions under their own devices. Government, both Federal and State, can best safeguard the vast stake it has in the development and maintenance of the strongest possible system of higher education by exercising leadership rather than by authority.

Developing Adequate Facilities

While no sharp line separates the several types of institutions, it will be helpful to classify them for purposes of this discussion into the following: (1) community colleges; (2) colleges of arts and sciences; (3) teachers colleges; (4) universities and professional schools; and (5) proprietary institutions.

COMMUNITY COLLEGES

Only a few decades ago, high school education in this country was for the few. Now, most of our young people take at least some high school work, and more than half of them graduate from the high school.

Until recently college education was for the *very* few. Now a fifth of our young people continue their education beyond the high school.

Many young people want less than a full four-year college course. The two-year college—that is the thirteenth and fourteenth years of our educational system—is about as widely needed today as the 4-year high school was a few decades ago. Such a college must fit into the community life as the high school has done.

Hence the President's Commission suggests the name "community college" to be applied to the institution designed to serve chiefly local community education needs. It may have various forms of organization and may have curricula of various lengths. Its dominant feature is its intimate relations to the life of the community it serves.

Volume I of the report of this Commission, entitled "Establishing the Goals," should leave no doubt about the urgent need for expanding and improving the program of the thirteenth and fourteenth years of our educational system. The complex demands of social, civic, and family life call for a lengthened period of general education for a much larger number of young people. The postponement of vocational choices until after high school graduation is wise in the case of increasing proportions of young people, thus calling for post-high-school vocational education for many. Adults in increasing numbers

are desiring to continue their education through evening classes and hope to find the opportunities for such education near their homes.

Essential Characteristics of the Community College

Volume I of the report of this Commission, "Establishing the Goals," describes the functions and the needed program of education at the community college level. Volume II, "Equalizing and Expanding Individual Opportunity," presents the expanded program of education at this level as one of the main developments required to make available an educational opportunity for all qualified young people. To achieve these purposes, the organization must provide for at least the following:

First, the community college must make frequent surveys of its community so that it can adapt its program to the educational needs of its full-time students. These needs are both general and vocational. To this end it should have effective relationships not only with the parents of the students, but with cultural, civic, industrial, and labor groups as well. These contacts should often take the form of consultative committees which work with faculty personnel. On the basis of such surveys and consultations its program should constantly evolve and never be allowed to become static.

Second, since the program is expected to serve a cross section of the youth population, it is essential that consideration be given not only to apprentice training but also to cooperative procedures which provide for the older students alternate periods of attendance at college and remunerative work. The limited experience which colleges have had over the past three decades with this cooperative method has tended to confirm the belief that there is much educational value in a student's holding a job during his college days, particularly if that job is related to the courses being studied in college.

Third, the community college must prepare its students to live a rich and satisfying life, part of which involves earning a living. To this end, the total educational effort, general and vocational, of any student must be a well-integrated single program, not two programs. The sharp distinction which certain educators tend to make between general or liberal or cultural education on the one hand and vocational or semiprofessional or professional education on the other hand is not valid. Problems which industrial, agricultural, or commercial workers face today are only in part connected with the skills they use in their jobs. Their attitudes and their relationships with others are also important. Certainly the worker's effectiveness in dealing with family, community, national, and international problems, and his interests in maintaining and participating in wholesome recreation programs are important factors in a satisfying life. Many workers

should be prepared for membership on municipal government councils, on school boards, on recreation commissions, and the like. The vocational aspect of one's education must not, therefore, tend to segregate "workers" from "citizens."

Fourth, the community college must meet the needs also of those of its students who will go on to a more extended general education or to specialized and professional study at some other college or university. Without doubt, higher education has given a disproportionate amount of attention to this group in the past, and it is well that a more balanced program to serve the needs of larger numbers is in prospect. On the other hand, it must always be kept in mind that one of its primary functions is to lay a firm foundation in general education.

Fifth, the community college must be the center for the administration of a comprehensive adult education program. This is discussed at some length in "Equalizing and Expanding Individual Opportunity", and a statement on organization in connection with adult education is made in Chapter VI of the present volume. It is of utmost importance that the community college recognize its obligation to develop such a program.

Organization of the Community College

Three essential factors condition the type of program needed in the thirteenth and fourteenth years and hence determine the major aspects of organization:

1. Since a large proportion of young people will be expected to continue their education through the thirteenth and fourteenth years, it should be possible for many of them to live at home, as they now do to attend high school. Hence there must be a large increase in the number of institutions serving essentially their local communities.

2. The senior high school and the first two years of college, particularly the liberal arts college, are similar in purpose, and there is much duplication of content in their courses. The program of the community college must dovetail closely therefore with the work of the senior high school.

3. In most States there are many communities of a size too small to warrant their maintaining community colleges. It is essential, therefore, that the community colleges—including technical institutes, university branches, and the like—be planned on a State-wide basis and administered in such a way as to avoid expensive duplication and to provide training for each vocation somewhere. Such training should be made available to qualified students regardless of their place of residence within the State.

The Special Role of the Junior College

In meeting these three major conditions, several problems of organization are involved. The first is the relation of the community college to the present junior college.

While the regular 4-year colleges and universities include the thirteenth and fourteenth years of our educational system, the institution which has been developed especially to meet the needs of this age group is the institution now commonly called the "junior college." Its development has occurred almost wholly in the last 25 years.

The directory published in 1947 by the American Association of Junior Colleges shows that the enrollment in these institutions has grown from less than 51,000 in 1927–28 to more than 400,000 in 1946–47. The junior colleges listed number 648, including 12 located outside the continental United States and 14 which are lower divisions of 4-year colleges. Of this total, 315 are publicly controlled, and 333 privately controlled. The publicly controlled ones, while fewer in number, enroll about 75 percent of the students. The average enrollment per junior college in 1945–46 was, public, 687 and private, 235, but there were still 140 public junior colleges enrolling fewer than 200 students each. As an indication of the extent to which the junior colleges serve the adults of their several communities, it may be noted that in 1944–45 of the total enrollment about 65 percent were special students, generally adults, enrolled for the most part in evening classes.

The methods of control of the junior colleges vary. Sixty-three are controlled directly by a State or by a State institution; 180 by a local school district; 72 by a district organized especially for the control of the junior college; 191 by a religious denomination; 96 by a nonprofit board; 39 by a person or group who operate it as a proprietary institution; and seven by other groups, chiefly the Y. M. C. A. As to length of curricula, 9 are 1-year institutions; 599 are 2-year institutions; 4 are 3-year institutions; and 40 are 4-year institutions, embracing generally the eleventh, twelfth, thirteenth, and fourteenth years. (All enrollment figures previously quoted include only the thirteenth and fourteenth years.)

It would appear from the above that the junior college is already making a significant contribution toward meeting the needs of those who wish to continue their education in their home communities beyond the high school. They are as varied in their programs as in their forms of control, and are flexible in their adjustment to local needs.

It is assumed, then, that the present junior college is pointing the way to an improved thirteenth- and fourteenth-year program. A change of name is suggested because "junior" no longer covers one of the functions being performed. The name was adopted when the pri-

mary and often the sole function of the institution was to offer the first two years of a 4-year college curriculum. Now, however, one of its primary functions is to serve the needs of students who will terminate their full-time college attendance by the end of the fourteenth year or sooner. For them a wide variety of terminal curricula has been developed. Such an institution is not well characterized by the name "junior" college.

Relation of the Community College to a State-wide Educational Program

No common pattern of the relationship of the community college to a State-wide education program can be suggested for all States. **A careful study should be made in each State of the needs for more and better educational facilities at the thirteenth- and fourteenth-year level. The State department of education, the public schools, the institutions of higher education both public and private, and interested laymen should join in making the study in order that the resulting plan shall take into account the total educational resources as well as the total needs of the State.**

Only considerations of efficiency and economy should be taken into account in planning for and locating a community college. Many extraneous pressures are likely to be exerted, but the decision should be based wholly upon the need as established by the State-wide study recommended above.

While no minimum enrollment figure is universally applicable, institutions with fewer than 200 full-time students, or the equivalent in part-time students, in the thirteenth and fourteenth years seldom can operate sufficiently strong programs without excessive cost. Even this number will justify only a partial program, but it may be good as far as it goes. On the other hand, many of the community colleges will have highly specialized terminal curricula in which the enrollment will be small, even though they serve a large region or sometimes, indeed, the whole State.

Community colleges should be located so that one is within reach of the largest possible proportion of the qualified young people, but the number should be kept small enough to permit their efficient administration. Of course not all the colleges should maintain identical programs, but among them should be found practically all of the types of programs needed by the State. Perhaps all should offer general education courses, while few should have preparation for the less common occupations, such as printing. The determination of where each uncommon curriculum should be located should be made by the appropriate State authority, but wherever it is located, it should be available to qualified young people in the larger area—perhaps the whole State—that it serves.

The Need for More and Better Public Community Colleges, Local and District

As indicated above there are now 180 local communities, mainly municipal school districts, which maintain the thirteenth and fourteenth years as a part of their school systems. Sometimes these local communities are entire counties. Though frequently organized separately from the local high school, the college programs have usually been closely integrated with the high school programs. They are commonly administered by the same officers who administer the rest of the local public schools. They are sometimes wholly supported by funds raised by the school district; sometimes by district funds supplemented by State allotments; sometimes in part by fees paid by neighboring districts for students resident in those districts; and sometimes partly or almost wholly by fees paid by the students who attend.

This Commission recommends that all states which have not already done so enact permissive legislation under which communities will be authorized to extend their public school systems through the fourteenth year.

When such permissive legislation has been passed, local school authorities in municipalities and counties which meet the specifications prescribed in the law are urged to give most careful consideration to establishing community colleges as a part of their school systems.

Even if all the local communities in a State having population and financial resources enough to justify establishing local community colleges do so, in most States there will still be large areas not served. Thousands of small town and rural high schools should not attempt to extend their work beyond the twelfth year. In fact many of them are too small to maintain efficient twelve-year school systems. Yet their young people should have the same opportunity to continue their education as the youth of the more populous centers.

This Commission recommends that to serve this large group of small communities a State-wide plan be developed embracing all communities large and small.

From developments to date it seems likely that two different plans will evolve for meeting the public educational needs of the State. One plan will be better in some States, the other plan in other States. These are: (*a*) a State-wide system of community colleges under the jurisdiction of the State department of education, or (*b*) a State-wide system of community colleges under the jurisdiction of some institution of higher education, or of an authority representing all public higher education in the State. In either case the possible participation of

the private and church-related colleges in the plan should be considered, but without implying that public funds should be used to support sectarian education. The first of these two plans amounts essentially to extending the State public school system through the fourteenth year. The second plan contemplates retaining the thirteenth and fourteenth years as a part of higher education and developing a comprehensive program for those years under the jurisdiction of the higher education authorities of the State. The rapid development of centers as branches of a State or private university indicates how strong this "university branch" movement is.

Under either plan the State would need to be divided into regions or districts not coterminous in most cases with any existing school districts. The community colleges in these districts would have to be planned so as to serve the needs of the whole State. A special board for the control of each district community college might be set up, or the college might be controlled by the local school board of the municipality in which it is located. The system of regional institutions might be controlled by the State board of education if a part of the public school system, or by the State board of regents (or similar body) if a part of the State system of higher education. They might be supported at least in part by a district-wide tax or largely by State funds. In fact there should be the greatest flexibility in the methods of control and support in order that the development of community colleges may fit into the existing pattern in each State, thus serving to strengthen rather than to weaken each State's present educational program.

The Place of the Private and the Church-Related Community College

There are 96 privately controlled nonprofit junior colleges, 191 church-controlled, 39 proprietary, and 7 controlled by other organizations. Their enrollments in 1946–47 totaled 78,150. Many of these junior colleges are the upper grades of schools with high school divisions and sometimes elementary schools as well.

The need for an improved and a more widespread opportunity for at least a 2-year course beyond the high school is a challenge to church-related and other private colleges as much as it is to public institutions. It is quite possible, too, that some of the present 4-year colleges will find it advantageous to stress even more than at present the work on the junior college level. Some may even discontinue their more expensive senior college work. **This Commission recommends that both the junior colleges and the 4-year colleges under private and church auspices have the fullest opportunity to be related to the movement to improve the program of the thirteenth and fourteenth years.**

Grades to be Included in the Community Colleges

With respect to length of curricula there is no single pattern applicable to all community colleges. In some States the pattern will no doubt follow the traditional arrangement, and thus the community college will be a 2-year institution above the 12-grade school. This is likely to be the plan followed in States which vest the administrative control of the community colleges in a State board since the State will hesitate to disturb the organization of the local high schools. The development of better counseling programs for students and closer cooperation between the high schools and the community colleges will do much to strengthen the continuity of the student's individual program and to enable the community college to serve its young people's needs efficiently.

Where a school extends its program through the fourteenth year, the senior high school and the first 2 years of college are brought under a single administration and into much closer relationship than formerly. About 40 communities or institutions have combined the last 2 years of the high school and the first 2 years of college into such a 4-year unit. This has naturally been accompanied by the expansion also of the junior high school into a 4-year unit. Thus, some communities (Pasadena, California, is a well-known example) have made a three-unit system—a 6-year elementary school, a 4-year high school (sometimes called junior high school) and a 4-year college (commonly called a junior college although in effect a community college).

No single plan of organization is advocated. What is urged, however, is that the present inefficiency and loss of time involved in the transition of students from high school to college be reduced as far as possible.

Lack of Cooperation Between High Schools and Colleges

High schools and colleges traditionally work separately on their common problems of preparing for and admitting youth to college. This is harmful to students and leads to inevitable irritations between high school and college personnel. High schools resist the "unwarranted pressure" from the college, and the colleges scold about the "miserable preparation" their students are getting in the high school. This separateness in jurisdiction of the colleges from the rest of the State system, while not so serious formerly when only a few attended college, is now becoming a major problem of organization.

The present difficulty grows largely out of the fact that the academic work of the last 2 years of the high school and that of the first 2 years of the typical arts college are essentially identical in purpose. Therefore, to have half of this 4-year period administered by the high schools, under one system of controls, and the other half administered

by the colleges, under another system of controls, constantly raises many serious questions. Only two of these will be discussed.

First, the present plan is wasteful.—Many of the same subjects are offered in high schools and in college. Beginning chemistry, biology, or physics; solid geometry or trigonometry; ancient, medieval and modern English, or American history; foreign languages, ancient or modern, these and many other subjects may be studied in high school or begun in college. Colleges, therefore, rightly try to dovetail their requirements for a given student with what that student had in high school: But great difficulties arise in doing so.

The question may be raised as to whether coordinating the thirteenth and fourteenth years more closely with the eleventh and twelfth really solves the problem of ill-coordination between the lower schools and higher schools. Does not such an arrangement merely postpone the problem to the transition from the fourteenth to the fifteenth year?

In reply it must be recognized that transition from one institution to another is bound to involve some difficulty. Coordination cannot be perfect if one institution is under one authority and the other institution under another authority. But for many students the end of the twelfth year falls in the middle of a program, while the end of the fourteenth year falls at the end of one program and the beginning of another. General studies, as distinguished from concentration or specialization, commonly terminate at the end of the fourteenth year. Hence the transition at that point to a different institution involves much less of a problem of coordination than at a point 2 years earlier.

Secondly, the present plan provides very inadequately for those who terminate their formal schooling at the end of the fourteenth year. Liberal arts colleges recognize two purposes—general broadening of understanding through study in many academic fields during the first 2 years, or, in a few institutions, during the entire 4 years; and deeper understanding through concentration in one field, during the last 2 years. Thus the distinction between general and specialized functions is recognized. Even where this is done most effectively, however, the programs of the first 2 years are designed generally to serve much better the students who continue through 4 years than those who drop out at the end of 2 years. To be sure, an increasing number of 4-year colleges and universities are introducing terminal programs of less than 4 years in length, but these are yet so few that they serve better to emphasize the problem than to solve it.

While there is wide variation among colleges, no less than one-third and in some institutions as many as two-thirds of the students follow-

ing 4-year curricula in liberal arts colleges drop out before or at the close of the first 2 years. In engineering schools the percentage is higher. For this large group, few educators contend that the present arrangement is the most desirable. Some of these "drop-outs" know at the time they enter college that they will attend no longer than 2 years. Others could be led to see the desirability of a shorter than 4-year terminal program by a suitable system of counseling.

It must be remembered, however, that the number of years embraced in a community college is important only as its facilitates close integration of the work of the senior high school and the first 2 years of the college. If other means are at hand of assuring essential unity of the program of these 4 years, little importance should be attached to the question of whether the community college is a 2-year or a 4-year institution.

Administration of the State-wide System of Public Community Colleges

A State which decides to develop a State-wide system of public community colleges will be confronted by three major questions respecting their management. First, shall they be under the management of the boards of education of the school districts where they are located, or under special boards created for the purpose, or under a State board, presumably either the State board of education or the board of regents? Second, how shall they be financed? Shall it be by a special tax spread over the local community or the region served by each one; by assessments upon outlying school districts on a fixed-fee basis per student attending the community college from that district; by the State's bearing essentially the total cost; or by relatively high student fees? Third, how shall the location and the programs of the several colleges be determined so as to assure their serving satisfactorily both the community needs and the needs of the larger area?

There is no single answer to any of these questions. A consideration of the merits of each alternative would involve a lengthy discussion. A few general suggestions, however, are given here.

Control. Complicated machinery of control such as a special board for each community college is to be avoided where possible. Even though the district served may be larger than the local school district, the actual administration of a community college may safely be left in the hands of the board of education controlling other schools in the community if some agency outside, such as the State, is in position to assure consideration by the local board of the interests of those students living in outlying territory not represented on the local board.

Meeting the cost. It is a sound principle to place upon each school district the responsibility of meeting at least a part of the cost of

public education of the residents of that district, wherever they must go for their schooling. This principle now prevails in most of the States when students go from one district to another for high school education. It would seem that it should prevail also for public community colleges. But it is to be presumed that the State will contribute a large share of the cost.

Student fees. This Commission believes that the public community college should be free as are the other parts of the public school system. The practice of charging fees would tend to jeopardize the most distinctive virtue of the American system of free public schools, and would in the long run greatly reduce the value which the nation hopes to derive from the recommended extension of the public school system. The principle here enunciated is discussed in other volumes of this Commission's report entitled "Establishing the Goals," "Equalizing and Expanding Individual Opportunity" and "Financing Higher Education."

Degree of State responsibility in the management of community colleges. Without regard to the plan of management or the measures adopted for financing the community colleges, they must be so organized that they serve the interests of the whole State as well as the interests of the communities in which they are located. Therefore, what each college includes in its curricula must be subject to State approval. Similarly, policies under which students from any section of the State have an equal chance to enter institutions having curricula found in only some of the colleges must be adopted by the State. Plans for transportation and for housing and feeding students who need these services must be made by, or at least approved by, the State. Some State agency therefore must have adequate authority and supervisory machinery to handle such matters.

COLLEGES OF ARTS AND SCIENCES

Until the junior-college movement began three decades ago, the 4-year institutions and the proprietary schools provided practically all the educational facilities available beyond the high school. They still furnish the great bulk of instruction for the thirteenth and fourteenth years of our educational system. For every full-time student who entered a junior college for his first post-high school year of college work in 1939–40, there were four students who entered the regular universities and colleges. The colleges of arts and sciences, operating sometimes independently and sometimes as a part of a university, have carried the most of this instructional load at the junior-college level. While students in considerable numbers enter certain professional schools such as agriculture and engineering directly from the high school, the enrollments in the first 2 years of

the colleges of arts and sciences are at least three times the enrollments in the first 2 years of all these professional schools which accept students directly from the high school. Thus they carry on the programs of the thirteenth and fourteenth years. But they do this in conjunction with other services in higher education. Their total program must be considered.

The community colleges discussed above will meet the needs of many of the increasing numbers who should continue their education beyond the twelfth grade. But out of the larger numbers there will be many, probably more than in the past, who will wish the type of program and of college life to be found only in the residence college which stresses the 24-hour-a-day life of the students. How large the demand for this type of college education will be will depend upon many factors, some of them quite unpredictable, such as the ability of larger numbers, with or without scholarships, to meet the costs. But of one thing there can be no doubt. The most important factors determining the extent of demand will be in the future, as in the past, the quality of the work of the colleges, and their adaptability to changing needs.

No institution in this country holds a place of higher esteem and deeper affection than the independent liberal arts college. There are 587 of them, 184 under private control, 253 affiliated with Protestant denominations, and 150 with the Roman Catholic Church. Some of them are parts of universities, but the majority are independent 4-year colleges of arts and sciences. They constitute a distinctive feature of the American educational system.

The services of the liberal arts colleges will be needed in the future as in the past. There are at least the three following types of program for which the country will look principally to the colleges of arts and sciences:

The 4-year, broadly general curricula embracing the thirteenth through the sixteenth year. If and when fairly complete and comprehensive systems of community colleges are set up in the several States, there will be still large numbers of young people for whom the general education program terminating with the fourteenth year will not be adequate. They, and their parents for them, will wish a well-planned 4-year program of general education above the present level of high school graduation. Life on a college campus during those 4 years will be cherished as an intrinsic part of that program. The positive religious influence exerted on the lives of the students will be an important consideration in the minds of many. Raising the level of general education for the many should go hand in hand with broadening and deepening still further the intellectual, moral, and spiritual foundations of those able and willing to pursue a more extended course. As the growth of the community college stimulates the continuing edu-

cational interests of more and more young people and parents, more and more will the capable young people, who now tend to drop out prematurely, remain in high school and college.

The four-year general curricula embracing the eleventh through the fourteenth years.—Many young people of ages 16, 17, 18, and 19 are well suited for residence on a college campus. In the school system developed on the 6–4–4 plan, the last unit embraces these ages. Liberal arts colleges may well parallel this last unit. These are the years when young people need the richest opportunity to develop their individual interests and aptitudes, to try their own wings, to get the full meaning of membership in a democratic society, and to be made ready for virtually unrestrained self-direction.

Furthermore, there is a tendency at present to stretch out too long the period of preprofessional and professional study. Students ought much more generally than now to enter many fields of professional study when not older than 20. It would be helpful if they could have finished a well-planned general education course before starting their professional study. Today the age of 20 falls in the middle of the arts college course.

Finally, only about half the students enrolling at present in the 4-year colleges in this country continue more than 2 years. For the half that drop out, a terminal program planned to serve them will undoubtedly be better than the present arrangement.

For these reasons, curricula which carry as much unity as possible for the 4-year span, eleventh through fourteenth years, are very desirable. In many communities and under many circumstances, this unity can be achieved most effectively by a 4-year community college or a 4-year residence college embracing those years.

The 2-year general curricula embracing the thirteenth and fourteenth years. Just as it is expected that many 2-year community colleges will continue or be organized in close coordination with the senior high schools, so it may well turn out that many liberal arts colleges will find it desirable to limit their work to the thirteenth and fourteenth years. This will be particularly true in States and communities where the public community colleges in general are 2-year institutions. In short, independent colleges of arts and sciences which offer residence facilities on their campuses should parallel the system of public community colleges in the several States, some having 4-year and others 2-year curricula.

A program designed to combine general education with preparation for occupations such as teaching, journalism, art, and music. There are many occupations for which preparation is found mainly in the study of arts and sciences. For such occupations some specialization is required, but not so much as for many other professions. The teach-

er or the journalist or the artist utilizes the arts and sciences as his principal stock in trade even though he must have considerable specialized professional knowledge and skill.

The certificate requirements for high school teachers are being constantly raised. Several States now require as a minimum a master's degree or the equivalent. It may be confidently predicted that most of the States will soon adopt requirements at least as high. This poses a serious problem for the colleges whose courses lead only to the bachelor's degree because teaching is one of the principal occupational outlets for the arts colleges.

Two ways of meeting the situation suggest themselves. The 4-year colleges which prepare high school teachers may add a fifth year, or they may discontinue the thirteenth and fourteenth years and maintain a 3-year institution beginning with what is now the junior year in college. In either case the concentration in some group of college subjects and the specialization in the pedagogical subjects through at least the last 3 years of the curricula leading to a masters degree should constitute excellent preparation for teaching. The present plan of building a curriculum for a bachelor's degree and then another often poorly related program for a master's degree is far inferior as a preparation for teaching than would be a unified 3-year program above the community college, or above the sophomore year of the liberal arts college.

What has been said of preparation for teaching may be said also with almost equal validity of preparation for journalism and many other callings closely bound up with the arts and sciences. Colleges of arts and sciences have a splendid field of service in preparing for these callings.

TEACHERS COLLEGES

In the early days of the development of the public school systems in the several States the most pressing problem was how to obtain good teachers. State after State established one or more normal schools to train their teachers. The public schools were largely elementary schools, and the primary purpose of the early normal schools was to prepare elementary teachers.

There are now 204 teachers colleges and normal schools located in 42 of the 48 states. Of this total, 162 are under State control, 5 are under district or city control, 20 are under private control, and 17 are under control of a religious denomination. Only a few still are called "normal schools." The great majority are now teachers colleges, but increasing numbers are becoming State colleges or State colleges of education. Practically all grant the bachelor's degree, many grant the master's degree, and several grant the doctor's degree. Increasingly the teachers colleges, particularly those which have become State col-

leges, are offering other curricula in addition to those for prospective teachers. For these the bachelor of arts degree is commonly granted.

The teachers colleges, therefore, partake so largely of the nature of the colleges of arts and sciences which also prepare teachers, that the discussion concerning colleges of arts and sciences is almost equally applicable to teachers colleges. A special discussion of the problems of preparing teachers appears in Chapter VI of this volume.

UNIVERSITIES AND PROFESSIONAL SCHOOLS

In the United States, a university usually consists of a college of arts and sciences, a group of professional schools, and a graduate school. Its college of arts and sciences is not materially unlike the independent colleges of arts and sciences; hence, what is said in that discussion has applicability also to the university college of arts and sciences. The university has a special obligation, however, to play its part in the development of a system of community colleges.

The University and the Community College

Does the proposal to develop a system of community colleges mean that the university will drop its freshman and sophomore program and become only a senior college of arts and sciences, a graduate school, and a group of professional schools? Probably some universities will. On the other hand most probably will not, at least in the near future. The universities have an obligation to continue their thirteenth and fourteenth year program for three reasons:

First, in every State there are likely to be vocational and semiprofessional fields so closely related to professional schools that preparation for them can be conducted more economically and effectively at the university than elsewhere. Medical and dental technicians are illustrations. Printing can be taught better where there is a school or department of journalism. Also, there are likely to be geographical areas within the State which can be more advantageously served by the university than by a local community college. Hence, a college patterned after the community college may well be maintained as a part of the university, particularly the State university, offering the general education program along with at least those vocational curricula associated with professional schools.

Secondly, through an improved State-wide guidance and counseling service, discussed in a later section of this volume, some young people will be identified who should start early on a program of broad basic education in preparation for lives of scholarship and research. The university may well provide a general education program for them somewhat more comprehensive in its program than would be appropriate for most of the community colleges.

Third, and most compelling the university should be pointing the way constantly to the improvement of the community college. The university should be the center for research and experimentation dealing with all the problems of administration and programs of the community college. Thus it should maintain its own unit as a sort of demonstration college. Without such a unit the university cannot exercise the leadership it should in the constant evolution of the community college. Nor can it discharge at all effectively its supremely important function of preparing teachers for the community college.

The Professional Schools

The comprehensive university in this country administers a varying number of professional schools, often as many as 15. This is a far cry from the time when the "learned professions" meant medicine, law, and theology. And the number of special fields taking on the status of professions continues to increase.

Each professional school has its own problems of organization. These cannot be considered helpfully except on the basis of a special study of each type of school by the profession served by it. The contribution to our national life made by the professions is measured in terms of our improved health status and lengthened span of life, our increased agricultural production, our material comforts, and a thousand other items in our high standard of living and in our sense of social and spiritual well-being. No one questions the need for adequate support of the professional schools to the end that the people may have ample professional services at a reasonable cost.

The proposals recommended above to extend the school system to include the fourteenth year by the development of community colleges does not mean that all professional study should be postponed to the end of that period. For example, pharmacy may well continue its 4-year curriculum based on a 12-year school course. Possibly engineering, or agriculture, may find it advantageous to base its professional curricula upon a 12-year or 13-year rather than a 14-year school course. To enter such professional curricula, students may be expected to transfer at the appropriate point from the community college to the professional school.

Graduate Schools

The most advanced unit of the American university is the graduate school. There are many variations in organization found in graduate schools. One thing they have in common; namely, all require the bachelor's degree or equivalent for admission. Some offer work leading only to the master's degree—usually 1 year. Others offer work leading to the doctor's degree in one or in several departments. A few organize postdoctoral work. Some limit their fields of study to

the basic arts and sciences, others include also professional subjects, while still others confine their work to a single professional field.

Despite the fact that there is no single pattern of organization into which the graduate schools fit, the services they render are of utmost importance to this country. They stimulate research and carry on a goodly part of it. They train research workers and thus help to assure continued effectiveness in the research activities throughout the country. Of equal importance is their third service, the education of teachers, particularly college teachers, and other leading scholars.

Research and the training of research workers as well as Government participation in research programs will be discussed in Chapter V. The graduate school as an institution for the training of college teachers is the principal theme of this Commission's Volume IV, "Staffing Higher Education." It must be remembered, however, that the graduate schools are the springs from which flow the main streams of our intellectual life. Whatever is necessary to keep these springs full, pure, and ever flowing is the least a free people can pay if they wish to stay free.

PROPRIETARY SCHOOLS

Most States provide in their laws governing corporations for two types of educational institutions. One of these is the nonprofit type. These are not authorized to make a profit for the incorporators. Their educational property is exempt from taxation. The other type is the proprietary institution which is authorized to earn a profit. The commonest illustrations of this latter type are the private business college and the private technical shool. Without doubt they play a very important role in our educational system. They should be strengthened and fitted more effectively into the total educational program of the State.

For decades the proprietary business college was almost the only institution offering practical training for office workers. The high schools and a few nonprofit colleges now share in that service. When automobiles first appeared in large numbers, the proprietary automechanics schools trained most of the garage workers. Now the public and private nonprofit trade schools share in that service. So in many other fields. Before the public school system can adjust to new demands, private initiative steps in and establishes schools.

Two forms of education which are especially adapted to the 18- and 19-year olds are apprenticeship and on-the-job training. One lesson is being unmistakably taught by the present veterans' education programs, however, namely, that if on-the-job training is to be truly educative, it must be associated with study at an educational institution. It must take on the essential nature of apprentice training.

As such it will be a very important phase of many proprietary schools as well as of community colleges.

Hundreds of thousands of students are in attendance at the proprietary schools today. These schools have their own machinery for accreditation, and the better ones are doing excellent work. But in most States there is no provision for checking the standards of these proprietary institutions by regular educational authorities. In many States neither their applications for charters nor their regular operations are supervised by the State department of education or any other State educational agency.

The commonly accepted theory seems to be that since they operate for profit they are outside the family of educational institutions. Anyone choosing to patronize them does so without benefit of any public assurance as to their standards. That theory is unsound. No educational program should be operated without approval of State educational authorities. While a large proportion of the proprietary schools in this country do high grade work, some follow recruiting and educational practices that are nothing short of scandalous.

Good proprietary schools would welcome close cooperation with the State school system and would be glad to operate in suitable relationship with the programs of the nonprofit educational institutions. The others should be improved or closed.

OPTIMUM SIZE OF INSTITUTIONS

A final factor influencing the effectiveness of higher education should be mentioned even if no conclusive light can as yet be shed on the problem. The undergraduate and graduate enrollments of most public colleges and universities are already far higher than their plant and facilities were designed to accommodate. We may not yet know the *optimum* desirable size for colleges with different aims and programs. But that sheer *bigness* now threatens to lessen the effectiveness of the education given will undoubtedly be conceded by all familiar with the facts.

A desire or excessive "bigness" must not interfere with high standards of effective quality. Furthermore, "small colleges" must be allowed to remain small. The megalomania of some of our state and municipal universities must give way to decentralization. And if the implications of better standards of size reveal that we have too few individual college units for undergraduate (or graduate) purposes, this fact has to be faced honestly as a problem of national policy.

This Commission believes that in the foreseeable future our Nation will need more, separate, 2-year and 4-year college and university units of small size, located geographically in economical relation to popula-

tion centers. These must be in addition to the recommended increase in community colleges.

Some of these added units should be created on the initiative of already established public institutions of higher learning; others through action by the State; still others through private foundations. The basic need is to assure decentralization and a closer approximation to an optimum sized institution.

Governmental Organization at the State Level

In New York, the Board of Regents of the University of the State of New York exercises jurisdiction over all levels of education from the kindergarten through the university. In four other States there is essentially the same unified administration although less complete. In all the other States, there is machinery for the control of at least a part, if not all, of higher education separate from the State department of education which has jurisdiction over elementary schools and high schools.

This Commission earnestly believes that a unified educational organization within each State is necessary. It recognizes that temporarily it may be expedient in some States to make use of a dual system of State administration. In such a transition period, there should be no unnecessary delay in bringing about a strong, unified State organization of education embracing higher education.

STRENGTHENING STATE DEPARTMENTS OF EDUCATION

There are States with education departments soundly organized and adequately staffed. Many States, however, still depend almost wholly upon the local communities, with practically no provision for Statewide planning or administration in the field of education. In these States the machinery of organization takes little account of the professional nature of education. For example, the State superintendent of schools in 31 States is elected by popular vote. This nonprofessional attitude toward the chief State school officer results in many cases in an unwillingness on the part of the best educational leaders in the State to run for the office of State superintendent of schools. The best prepared educators feel compelled sometimes to decline appointments to supervisorships and other important offices in State departments of education. In most such States, furthermore, the larger cities have been declared independent school districts and are thus out of the

jurisdiction of the State superintendent of schools in such matters as course of study and the certification of teachers. Thus the leaders in the city schools are not deeply concerned about the strength or weakness of the State department of education. For these and other reasons there has been little evidence in recent decades of any concerted effort in the States to abolish the practice of electing the State superintendent of schools by popular vote. In the view of most educators, this change is essential before adequate State departments of education can be developed.

But State programs of education have reached a critical period in their development. The Nation recognizes as never before that its welfare depends upon a greatly improved and extended system of education. Stronger State departments of education constitute the key to the solution of the problem. The success of the Commission's proposal to extend the public educational system to include what is now the first two years of college depends largely upon the ability of the State Departments of Education to organize this program. In the opinion of the Commission, the Federal Government will find it necessary and desirable to participate in financing an extended program of higher education. When it does so participate, it should adhere as far as possible to the policy of leaving almost the complete control of the program to the States. *But it should not and cannot safely do so unless in every State the department of education is qualified to assume leadership in State-wide planning and in the administration of the program.* Whether essentially complete local district control of education has been the wisest policy in the past may be debatable, but if a State-wide system of community colleges is to be established in a State, the authority and the responsibility for its development must rest largely upon the State. Local district control will not suffice for this extended program.

It is true that there are certain aspects of higher education which require interstate and national planning and administration to a degree greater than is true of the lower schools. But such larger planning must rest on better coordination of the colleges and universities on a State-wide basis than prevails at present.

Probably no one scheme of organization is best for all States. The important thing is that the department must be able to win the respect of the best educational leaders both within and outside the State, and must be able to draw to its service as staff members the most capable educators in the several fields of education.

To assure this status it is believed by this Commission that there should be appointed in each State, a group of distinguished citizens to serve as a State Board of Education. They should be individuals with a deep devotion to education but in general not connected

professionally with schools or colleges. The members of this board should serve for long, overlapping terms without pay. They should choose the State superintendent or commissioner of education and under his leadership formulate the basic policies under which the State educational system develops.

PRESENT STATE MACHINERY FOR THE ADMINISTRATION OF HIGHER EDUCATION

Private and Church-related Institutions

States provide for chartering institutions under private or church control. Most States allow a high degree of institutional variation and independence among these institutions. In some States, unfortunately, the State governments have been so lax in their chartering procedures that here and there institutions which are little more than "diploma mills" have been established. When once chartered, these institutions are practically without supervision by any State authority. On the whole, however, these State-chartered institutions under private and church control have maintained satisfactory standards and have contributed very greatly to the education program in most of the States.

Publicly Controlled Colleges and Universities

The machinery through which the States exercise control of public higher education is of three types. *First*, in certain States, five in number, all public higher education is under the control of the same board which has jurisdiction over elementary and secondary schools. *Second*, the State exercises its jurisdiction over higher education through a single board which has control over all or most of the publicly controlled institutions of higher education in the State, but not over the elementary and high schools. In some States this board, commonly known as the "board of regents," appoints an executive officer, usually called a "chancellor," through whom the board operates in its control over each of the publicly controlled institutions in the State. There is then an executive officer at each institution, usually called a "president," acting under the general direction of the chancellor. *Third*, there is a separate board of trustees for each of the State's publicly controlled institutions or groups of related institutions. Sometimes these boards within a given State or the presidents of the institutions maintained by a State under these separate boards organize a coordinating council to bring as much unity as possible into the programs of the several institutions. In a few States there is statutory provision for such a coordinating council. In general, however, each board acts separately.

States do not fall clearly into the above-described three categories.

State departments of education in some States control some colleges but not all. In some States the State board of regents controls a number of institutions but not all. In some States some institutions operate under their own separate boards while other institutions are under the State board of education or board of regents. In fact, the arrangements found for the control of public colleges and universities in the several States show wide variation.

During the past 35 years States have become increasingly aware of the excessive cost, in both money and public favor, of the incoordination represented by many of the present arrangements. Accordingly, a score or more of States, one after another, have changed the machinery for the control of their public colleges and universities. These changes have been of four types which may be roughly characterized as follows:

(1) Creating coordinating boards to approve curricula only, leaving the control of each college or university to its own board.

(2) Abolishing the separate boards in charge of the several institutions and creating a single board to have charge of all institutions.

(3) Creating an executive office of the board (usually a chancellorship) to execute decisions of the board at all institutions.

(4) Creating a single board with its executive officer, but limiting the responsibility of the central board to those aspects of control directly related to coordination and leaving the several boards in charge of the institutional operations.

Difficulties in State Organization

There are serious difficulties which the States experience in carrying out their higher-education programs under the various administrative organizational systems described above. *First*, there is the ever-present problem of properly coordinating higher education with edution in elementary and secondary schools. In few States is there a close working relationship between State departments of education and colleges and universities. This has led to numerous conflicts, notably with respect to college admissions and competition in the State legislature for funds.

The *second* difficulty arises from the existence of publicly controlled institutions and privately controlled ones in the same State. These two groups, instead of working in a closely coordinated system, too often operate in a competitive spirit. The privately controlled colleges in many cases of necessity charge relatively higher fees, thus making close cooperation between the two groups more difficult. In few States is there a legally constituted State office responsible for assuring high standards in both types of institutions or for developing a well-coordinated system involving both types of institutions. There is, accordingly, much overlapping and expensive duplication. At the

same time, there is neglect of certain fields of education not adequately covered by any of the institutions.

A *third* difficulty is the lack of machinery to carry on the necessary continuing studies on the basis of which a comprehensive and flexible program in higher education could be developed and maintained. Each educator is concerned almost wholly with his own institutional problems, and no one is concerned essentially with guaranteeing an adequate State-wide program in higher education. Many surveys have been made under the jurisdiction of boards of regents in individual States, but there has been inadequate machinery to carry out the recommendations made in these surveys.

Fourth, programs of research necessary for the development of the State's resources, both human and material, are urgently needed. These programs would naturally be coordinated with Federal research programs insofar as such coordination proved desirable. But there is no machinery at present to set up adequate research programs on a State-wide basis. These programs would no doubt involve faculty and equipment already found in many institutions in the State as well as new personnel and equipment not at present in any of the institutions.

Fifth, better arrangements for professional licensure are needed. Practitioners in many of the professions are licensed by the State. Without such State license they are not allowed to practice. Each State has separate boards to pass upon the qualifications of applicants for license to practice the several professions. These boards set the standards for licenses and hence for the professional schools which prepare for the examinations. These examining boards are composed mainly, sometimes wholly, of representatives of the given profession. This is the agency through which the public's interest is to be safeguarded.

Parallel with this examining function is the accrediting function, carried on sometimes by the organized profession and sometimes by the professional schools themselves acting through an association. Through the accrediting function, control is exercised over the enrollments in the professional schools and hence over the number of applicants for the examination. It is possible through this device to jeopardize the public interest by limiting unduly the numbers in a given profession or by failure to prepare for the less appealing types of service the profession should render. The present scarcity of doctors in country districts is an illustration.

The above comment is not intended to reflect upon the public service spirit of professional personnel. It is made for the purpose of pointing out that, in spite of examining boards operating under public auspices, each profession has practically a monopolistic control over

the quality and number of members in it. This imposes a special obligation on each profession to have constant regard for its public responsibility, and to organize its professional schools accordingly.

These five difficulties are by no means all. They serve to illustrate the urgency of the need for better organization at the State level.

DEVELOPING A STRONGER, BETTER COORDINATED STATE-WIDE PROGRAM IN HIGHER EDUCATION

From the point of view of organization probably the greatest need faced by higher education is for the machinery necessary to assure a comprehensive but economical State-wide system of higher education. *If the American theory of a maximum degree of State sovereignty over education is to succeed over the long years, States must assume the responsibilities inherent in that theory.* The most desirable objective is the development of strong State Departments of Education to provide essential coordination of all levels of education.

In those states which do not now have or do not establish unified educational systems, it is recommended as an interim measure until State Departments of Education are strengthened and their jurisdiction extended to higher education that a State Commission on Higher Education be created. Such commission should consist of representatives of the State department of education; of the various types of institutions of higher education—public, private, and church-related—including junior colleges or community colleges; and of leading non-educational groups. In States where there is a minority group problem, such minority group should be represented. Members should serve without pay other than to cover expenses. Except in those States in which the State department has jurisdiction over the publicly controlled colleges and universities, the Commission should operate outside the State department of education, since it will deal only with higher education. But it should always operate in close relationship with it. The commission should choose its own executive officer and should be supported by State appropriations made directly to it.

The functions of the State Department of Education or the State Commission in those states which do not have a unified State Department would fall into two groups, administrative and advisory.

Administrative Functions

Because voluntary associations are powerless to do anything about it, and because many States have failed to assume the necessary responsibility, one abuse has grown up in this country which is little short of scandalous. Many States still allow the chartering of institutions of higher education with almost no protection against fake operations. Thus it comes about that in a good many States institu-

tions are chartered and their control is granted to unscrupulous men and women, who virtually sell academic and professional degrees for a price. They run "diploma mills." For decades these have plagued this country not only at home but in its relation with other countries. That such a practice has been permitted can be explained only by the fact that in most States the legally constituted department of education presided over by the chief State school officer has little or no responsibility in the field of higher education and, therefore, takes little interest in safeguarding the standards of chartered institutions of higher education. In most States, too, even public higher education is not organized under a single board, and, therefore, there is no single agency in the State concerned with standards of higher education.

The State Department of Education should have authority to examine the applications for charters of institutions of higher education, and the State should not establish nor grant charters for post-high-school institutions without its approval. As a corollary to this, two activities would follow:

(1) *All existing college and university charters issued by the State should be examined with a view either to harmonizing the educational programs with the charter provisions where such is not now the case, or to suggesting modifications in the charter when necessary to allow an institution to engage in a needed program.*

(2) *Steps should be taken to have charters revoked in the case of institutions found to be engaged in disreputable practices.*

The State Department, secondly, should have responsibility for a limited program of accrediting colleges and universities in the State.

Some legal form of State accreditation of institutions of post-high-school character should be instituted insofar as is necessary to assure conformity with the State charters, and designated institutions should be approved for the receipt of Federal funds. In carrying out this function close relationship should be maintained with the various regional and national accrediting associations, utilizing their standards where acceptable, their inspectors, or even their accredited lists.

Advisory Functions

Although the functions in the second group are advisory, they are far more important than the two administrative functions named above. The State Department should work to secure the cooperation of all the colleges and universities in the development of a State-wide plan for a comprehensive program of higher education. Such plans should envisage the services of all of the institutions: public, private, church-related, and possibly others not yet in existence. While the participation of any institution in the program so planned would be voluntary, it is believed that in most cases the institutions would find it desirable to be a part of the coordinated scheme. The public should

be made aware of the proposed program and should be in a position to support it and to cooperate in its fulfillment insofar as it commended itself to the people.

Among the nonadministrative activities which the State department of education, where its jurisdiction extends to higher education, or the interim State Commission, should carry on, are the following:

First, constantly survey the State's needs in the various fields of higher education, noting the services of the various colleges and universities in relation to those needs, and propose modifications of present programs or indicate the necessity for new programs to satisfy those needs. Such a continuing survey would be a source of constantly fresh and reliable information to guide institutions in the development of their curricula and in the emphasis they put upon various phases of their work. This information would help guidance officers in high schools and community colleges to counsel students more intelligently with respect to their college and university plans. But more important still, this information would help public spirited citizens, institutional governing boards, and legislatures to have a clear State-wide picture of the services the colleges and universities are or should be rendering.

Second, keep constantly informed of situations in the State where equality of opportunity for higher education is denied on the basis of race, color, sex, or religion, and recommend to constituted authorities procedures to reduce and finally to remove those inequalities. The significance of this function is made clear in this Commission's volume, "Equalizing and Expanding Individual Opportunity."

Third, devise and recommend procedures to minimize handicaps due to economic status and distance of students' homes from college and university campuses. There is opportunity to break new ground in carrying out this function. Properly locating institutions and curricula within institutions, making available student work aids and scholarship grants, and providing transportation, are a few of the devices which merit consideration.

Fourth, devise and propose procedures to identify youth of exceptional talent in the State, and to encourage their advanced education. This function would reside in the State Scholarship Commission recommended in Volume II to administer Federal funds and to cooperate with the appropriate Federal officials in carrying out federally financed scholarship and fellowship programs. This field has been too long neglected in this country even though its importance is universally recognized.

Fifth, investigate the need for forms of education which cannot be offered economically in the particular State, such as forestry, veterinary medicine, and architecture, and propose plans whereby appro-

priate numbers of young people may obtain such forms of education under contractual arrangements by the State with other States or institutions. Since the States varied in population in 1940 from 110,000 to 13,500,000 and since each of 15 States had fewer than a million people, it is obvious that not all States should undertake to provide complete programs. But each State has an obligation to see that all forms of needed education are available to her people. One State, for example, recently appropriated $100,000 to pay the costs of contracts with other States for forms of education not found in that State.

Sixth, cooperate with the Federal agencies which subsidize or administer programs in higher education (including research) on a Statewide basis. Federal agencies are handicapped at present in operating higher education programs. In the absence of suitable machinery to represent all the institutions in a State, the Federal Government is compelled to deal with each institution separately. This involves responsibility for selecting those institutions qualified to conduct a particular program, a function which the Federal Government should be able to leave to the States. Some machinery operating on a Statewide basis to cooperate with the many departments and agencies of the Federal Government is essential to the development of the proper relations between the Federal Government and the States in higher education.

Seventh, cooperate with voluntary agencies working for the improvement of colleges and universities. These agencies are numerous, and because their programs operate with little or no coordination, there is danger that their benefits, particularly those of the accrediting associations, will be counteracted by the ill will they engender. With the cooperation of the State Department, these voluntary agencies should be able to work more effectively in the State.

Eighth, be alert to all the examples of outstanding practice in the State, in order to encourage and facilitate changes and movements looking to the betterment of educational services. Coordination of programs of institutions located near each other is a good illustration of the sort of movement which could be fostered by an effective State organization.

It is not assumed that the above list of functions is complete. It is hoped that it affords illustrations enough to show that a strong and effective State organization will help to give State consciousness to higher education and provide a simple mechanism whereby higher education may develop a more effective, economical, and comprehensive program in most of the States.

Governmental Organization at the National Level

The Federal Constitution makes no mention of education. Accordingly, it is among those interests traditionally "reserved to the States respectively or to the people." This does not mean that the question was discussed in the Constitutional Convention and a decision reached that education was to be a function of the States. Education was at that time so largely a matter of local interest that it was not a subject for debate in the Convention.

But as to the deep interest of our early Government leaders in education there can be no doubt. That was made clear even before the adoption of the Constitution. The Ordinance of 1785 which provided for the survey of the Northwest Territory declared that Section 16 of each township "shall be reserved . . . for the maintenance of public schools." In the Ordinance of 1787 adopted by the Congress of the Confederation as "articles of compact between the original States and the people and States in the said territory," the following declaration appears: "Religion, morality, and knowledge, being necessary to good government and the happiness of mankind, schools and the means of education shall forever be encouraged."

Throughout our national history this deep interest in education has found expression in Federal grants in aid of education. These grants have been of two types, (1) public lands or monies to the States to aid them in financing their own programs of education, and (2) special appropriations for special types or forms of education. The former characterized the first eighty years of our national life, while the second, starting with the Morrill Act of 1862, has more and more characterized the more recent decades. The first type involves no essential Federal control of education except such as grows out of an audit of the expenditures. The second type involves such a measure of Federal control as will insure the accomplishment of the special purpose behind the appropriation.

In the congressional hearings and debates concerning educational bills, the question of Federal control of education always has a prominent place. There is a growing recognition both in Congress and among other interested citizens everywhere that basic principles are needed to guide the Federal Government in its further development of a program of Federal aid to education.

A proper balance must be maintained among the Federal Government, the State government, the local government, and the institutions with respect to the responsibility each carries. Local and institutional initiative must be nourished. State responsibility must be fostered, not undermined. The Federal Government must play its role within the framework of these two demands.

But it must be remembered by all units of government that the entire Nation as a whole has a vital stake in the program of education maintained by the States, local communities, and institutions. This stake must not be jeopardized by failure on the part of the States and local institutions to meet national needs adequately. Few educators today question the wisdom of the Federal Government's having taken a hand in developing programs of agriculture and mechanic arts in American colleges and universities. Probably, too, most people will agree that there was no other practicable way open to the Government in the 1860's than to sponsor the establishment of a system of land-grant colleges and universities. The immeasurable contribution these institutions have made both to public welfare and to the changes that have taken place in the programs of American colleges and universities more than justifies the several acts of Congress in behalf of these land-grant colleges and universities.

Similarly it may be said that the slow progress of many of the States in broadening the base of the high schools in the early years of the present century was jeopardizing the national interest. The country badly needed more and better vocational education. But schools were being managed mainly by those interested primarily in the college preparatory function of the high school. The Federal Government, after a thorough study of the problem by a commission appointed by the President, passed the Smith-Hughes Act to aid the States in setting up programs of vocational education. Probably no one seriously questions the great contribution these programs have made to the national welfare and to the improvement of American secondary education.

These cases are cited to illustrate the fact that while local initiative and state responsibility are exceedingly important, the programs developed under that initiative and responsibility must take care of national needs. Otherwise the Federal Government is obliged to take such steps as are available to it. Education is the only instrumentality

through which many vital interests of the nation can be served. It is to be hoped that the State, local, and institutional programs will care for these interests, but if they do not, Federal legislation with the necessary measure of Federal control of education is both inevitable and desirable.

From the standpoint of sound theory, any Federal dictation of the basic concepts, techniques, or procedures of education is to be deplored. If at any time the general welfare or the Bill of Rights of the Constitution or the needs of national defense makes it seem imperative to depart from this principle, Federal control should be as limited as possible and for only so long as is necessary.

ACTIVITIES OF GOVERNMENTAL AGENCIES

As pointed out in previous chapters, higher education is carried on in this country by institutions created by State legislation or chartered by the several States but largely autonomous in their management. Most States do not have adequate machinery to assure either a comprehensive program to satisfy the essential needs in the field of higher education or an economical coordination among the institutions they charter. At the same time, the developments at the Federal level have been piecemeal and uncoordinated.

Among the federally subsidized programs accompanied by varying measures of Federal administration may be mentioned the following: In the Federal Security Agency, resident instruction in the land-grant institutions, Smith-Hughes vocational education, vocational rehabilitation of persons disabled in industry, and research in public health; in the Department of Agriculture, the agricultural experiment stations and the extension service in agriculture and home economics; in the Department of National Defense, the reserve officers training, the education of natives on certain island possessions, and a variety of research projects; in the Department of the Interior, the education of the Indians, the natives of Alaska, and the people of certain outlying territories; in the Department of Commerce, training in aeronautics; in the Department of Justice, the education of inmates in Federal prisons; and in the Veterans Administration, the rehabilitation of disabled veterans, and the education of veterans under the GI bill of rights.

Prominent among the new educational proposals before the Eightieth Congress are: in the Department of Labor, the workers' education program; in the Department of Commerce, the consumer education program; in the Federal Security Agency, the equalization aid to the States and the general adult education program; and in the proposed National Research Foundation, a variety of research projects and a system of Federal scholarships and fellowships. In this Commission's

volume "Equalizing and Expanding Individual Opportunity" there is proposed a comprehensive grant-in-aid and fellowship program.

This is by no means a complete list of the special Federal programs or projects carried on chiefly in schools, colleges, and universities. The list is representative, however, in presenting both the variety and dispersion of educational activities throughout the Federal Government. In 1947, at the request of this Commission, the Bureau of the Budget undertook a survey concerning Federal educational activities at the post-high school level. The agencies were asked to report their expenditures in five separate areas. A tabulation of the replies on this inquiry shows a Federal expenditure of $1,772,000,000 for education during the 1946–47 fiscal year. This figure, together with the proportionate amount of the total spent by various agencies, is presented in Chart 1.

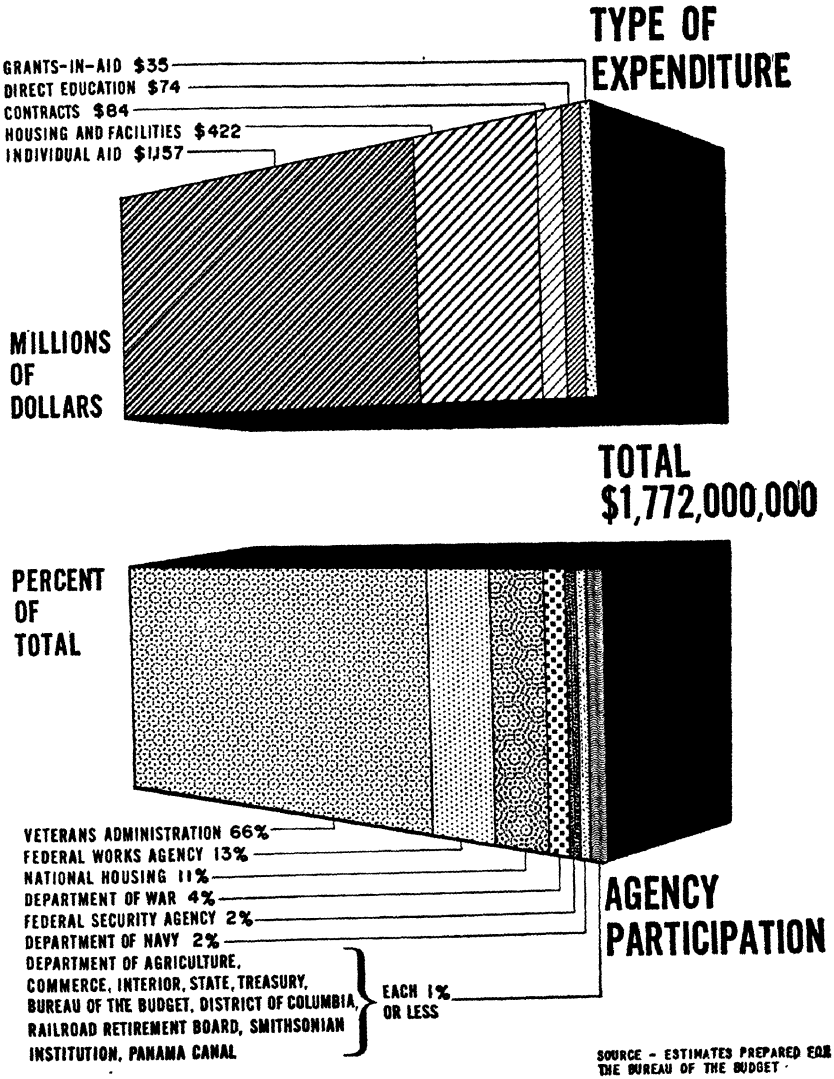
The maintenance by the Government of all these programs must not be allowed to obscure the fact that the most basic interest of the Federal Government in higher education grows out of its concern for the general welfare of the Nation. That there shall be available to all the people first-rate schools and colleges is essential to public welfare. What the Federal Government does or should do to assure this is of vital importance.

Beyond the stimulation, aid, or maintenance of education already mentioned, the Federal Government exercises other influences of far-reaching importance. The following examples may be cited: its provisions for tax exemption of a stipulated percentage of personal or corporate income if given to educational institutions; its provision for corporation tax exemption of public and nonprofit institutions; its exclusion or inclusion of teachers and professors under social security; its inclusion or exclusion of certain types of colleges and universities from programs of public works; its provisions governing extra immigration quotas for foreign students; its income tax policies by which it may drain off through Federal channels such a proportion of the wealth of the States and local communities that State and local enterprises such as education may have to be curtailed because of lack of funds otherwise potentially available or unless aid for such enterprises is obtained from the Federal Government.

It is clear, therefore, that the Federal Government has many vital interests in education. Not only is it concerned with the general outcome of the college and university programs, but it is engaged in administering many educational activities. It is of the utmost importance, therefore, that the government canvass carefully its policies so as to assure the most effective and economical handling of its educational interests, and at the same time assure the States and the colleges and universities a minimum of interference with them in the discharge

FEDERAL EXPENDITURES
IN CONNECTION WITH POST-HIGH SCHOOL EDUCATION

FISCAL YEAR - 1947



SOURCE - ESTIMATES PREPARED FOR THE BUREAU OF THE BUDGET

of their responsibilities for a comprehensive, systematic, and balanced program in higher education.

While no sharp lines of distinction can be drawn between them, it will be helpful to classify the Federal interests in education into the following three categories:

1. The maintenance under State, local, and institutional auspices throughout the country of the highest practicable standard of education—elementary, secondary, and higher—designed to assure the most satisfying personal achievement on the part of each individual and the most effective participation in the political, economic, and social life of the Nation and of the world.

2. The maintenance of certain special education programs subsidized and partially administered by the appropriate agency of the Federal Government.

3. Making most readily available to all qualified persons the rich educational resources of the Federal Government.

PROBLEMS OF ORGANIZATION OF THE FEDERAL EDUCATION AGENCY

This Commission has sought to answer the question: How shall the government organize its activities to help maintain throughout the country in every State and territory the highest practicable standard of education, elementary, secondary and higher, designed to assure the most effective participation in the political, economic, and social life of the Nation and the world?

This question concerns the fundamental purpose of our educational systems, public and private, State and local. Democracy depends upon education for its very life. At this time of conflict between competing national ideologies, there is an urgency about a high standard of general, vocational, and professional education we have not felt in the past. Federal, State, and local government authorities as well as private citizens and nongovernmental agencies see the need of unusual zeal in behalf of education.

The chief agency of the Federal Government charged with the responsibility for the Federal part of this program is the United States Office of Education within the Federal Security Agency. The office was established by an Act of Congress in 1867. But the financial support of the Office through the 80 years of its existence has been so meager as to limit its potential leadership in strengthening the educational system of the country. The salaries paid the specialists in the office have always been far below that of administrators in our leading schools and colleges.

Another difficulty, is that Federal educational activities are now carried on through a score or more of uncoordinated programs

handled by the several Government departments. Others are under consideration by the Congress. Many of these programs, both existing and in prospect, utilize the colleges and universities throughout the country.

This Commission recommends a fundamental change in the position given to the central education agency in the Government organization. First, the financial support given to the United States Office of Education must be commensurate with the great tasks confronting that agency. Second, the status of the agency within the framework of the Government must be raised.

There are at least three possible ways of raising the status of education. The first would be to create the office of Secretary of Education in the President's Cabinet. Back over the decades educators and educational associations have urged the creation of a Department of Education with a Secretary in the President's Cabinet. The basic importance of education in the attainment of the Nation's goals, the huge investment in educational plant, and the constantly growing expenditures for education justify a place in the Government for education comparable with that of commerce, agriculture, or labor.

Opponents of such a secretaryship have expressed the fear that such an arrangement would result in partisan political interference with education and in the selection of a Secretary of Education based on other considerations than competence in the field of education.

The second possibility would be to create an Undersecretaryship for Education in a Department of Education, Health, and Welfare. In recent years a proposal for a combination of education with health and other welfare interests has come into favor. The arguments used in support of such a combination are mainly these: that the Government is growing so huge and its interests so numerous that it is not feasible to give cabinet status to all its manifold agencies regardless of the importance of their work; that education has close kinship with health and welfare; and that it would be to the mutual advantage of all of these related interests to be administered under a common secretary. The status of each is believed to be safeguarded by the provision of an undersecretary in each field.

The opponents of this measure contend that to place education under an Undersecretary of Education would subject it to about the same risks as enumerated above concerning a Secretary of Education, and that to combine education with agencies administering such huge programs as social security would not only give it a subordinate position with correspondingly low status, but would also tend to emphasize the corrective or welfare function of education at the expense of its constructive and developmental functions. They point out further

that such a combination is not found in any of the States, but that education, health, and welfare are maintained under separate departments in State governments.

The third possibility would be to establish a Federal Board of Education appointed by the President, such Board to be an independent agency for education outside the President's Cabinet. It would have authority to choose the United States Commissioner of Education. The proponents of this proposal point to the harmony between it and the way education is organized in States and local communities under nonpaid boards of education, thus assuring consideration of major policies by a group of leading lay citizens. They maintain that such an arrangement would afford assurance against partisan political influences in the appointment of the United States Commissioner of Education, and would make possible securing and retaining a person of superior qualifications.

Against this third proposal its opponents point out that it runs counter to the present effort to streamline the executive branch of the Federal Government, that too many departments and agencies are responsible directly to the President, that such an arrangement would not give education a voice in the Cabinet where many questions affecting education are decided, and would not give the Commissioner of Education the desired influence in bringing about needed coordination among the many education programs maintained by the executive departments.

Regardless of the form of Government organization used to raise the status of education, the Commission is unanimous in the view that the status of education in the Government must be raised before the Government will be able to play its important role in the speedy improvement of education at all levels throughout the country.

This proposal to enhance the effectiveness of the central agency for education in the Government might be regarded as a step toward Federal dictation of educational policies. In the opinion of this Commission, however, the effect will be just the opposite. It will lessen rather than accentuate the present trend toward Federal control of education. A strong Government agency, competent to exert effective leadership, will do much to assure to the several States and institutions the fullest and freest opportunity to develop their own educational programs. A strong Government agency will be able to supply through research, information, and counsel the help which States and institutions need to enable them to develop adequate programs. This will check the tendency of the Federal Government to enact piece-meal legislation in support of special phases of education with the varying measures of control which accompany these enactments. Such an agency will be in position to assemble the data upon which the Govern-

ment can decide what its obligations are to assist in financing education. Such an agency can be an effective advisor in matters of proposed Federal legislation affecting education.

The stronger such an agency is in its exercise of leadership without control, the more effective it can be in safeguarding local initiative and State responsibility.

FUNCTIONS OF THE FEDERAL EDUCATION AGENCY

In the preceding chapter of this volume the dual nature of the control of education at the State level was recognized as the pattern prevailing in all but a few of the States. But in the Federal Government, fortunately, a unified organization already exists. The United States Office of Education deals with all levels of education.

Help Strengthen Elementary and Secondary Education

As its first obligation the central agency for education must be equipped to help strengthen elementary and secondary education throughout the country. Strong elementary and secondary schools are of vital concern to higher education. In the first place, the nature and standards of the work done in the lower schools condition everything done in higher education. In the second place, if and when more thirteenth and fourteenth year work, which is now done mainly in the colleges and universities, is done in community colleges as advocated in chapter II of this volume, this will tend to transfer to the jurisdiction of some of the State departments of education much of this very important phase of higher education. This will make essentially a 2-year extension of secondary education. The colleges and universities have a vital stake, therefore, in the improvement of the work in elementary and secondary schools. **Recognizing the basic importance of elementary and secondary schools, the Commission wants to make sure that the means it advocates to improve higher education must never be at the expense of elementary and secondary education.**

Provide Leadership for Higher Education

Most universities and many colleges regard themselves as national in service, and recruit students from all over the United States. Insofar as they look to any Government unit for cooperation in their programs, they are quite as likely to look to Washington as to the capitols of their respective States.

But more important than the national point of view which prevails among university officials is the fact that in higher education most students before they graduate come to regard the Nation (or the world) as their field of labor. Rarely does a college student expect necessarily to live in the State where he is attending college. Repre-

sentatives of many agencies and industrial establishments visit campuses from coast to coast and "sign up" the seniors.

Most important of all is the fact that the Nation looks to the institutions of higher education to help with many of its specific problems. While the colleges of agriculture devote much of their energy to State and local problems, the Federal Government's interest in food, cotton, wool, soil conservation, reclamation, and the like makes necessary close and constant relationship between the Federal Government and the colleges of agriculture. One of the largest services of the graduates of schools of veterinary science is with the Federal program of meat inspection. The same situation prevails for the graduates of schools of forestry and their work with the National Forest Service.

Quite unlike the lower schools, then, higher education can be more properly thought of as hundreds of largely independent institutions, voluntarily coordinating their programs in part on a State-wide basis but committed in spirit to public service on a Nation-wide and ultimately a world-wide scale. The following are the more specific functions of the Federal Education Agency recommended by this Commission.

Cooperate With States

Cooperation with the States, particularly with State departments of education or the proposed State commissions on higher education, and with individual institutions, is essential in solving problems in the field of higher education.

The State departments of education and the State commissions on higher education which were proposed in chapter III of this volume, and colleges and universities, acting individually or in groups, constantly engage in many undertakings which would benefit from Federal cooperation. Among these are:

Identifying young people of exceptional talent. The tests used for such a project need not be developed separately by each State. The procedures used would generally be greatly improved by collaboration with an office which is interested in the program on a national scale. Many of the talented young people so identified will need to go outside the State for their education. In short, this program should be a cooperative venture between the States and the Federal Government.

Carrying on student aid programs designed to remove or lessen the economic barriers to higher education. A proposal for a Federal student-aid program is described in "Equalizing and Expanding Individual Opportunity" of this Commission's report. In the administration of this program there is need for the constant cooperation of the Federal Government in such matters as: developing tests to help with the selection of students deserving of aid, providing information

on the relationship between student aptitudes and the supply-demand ratio of the many callings for which the students would wish to prepare, identifying the institutions best qualified to serve students of given aptitudes—these and many other aspects of the student-aid program suggest the need for the cooperation of the Federal Government.

Providing special services. The types of services which are called for from the Federal educational agency include: gathering and disseminating statistics and other information about higher education; holding conferences to help reach sound judgments with respect to urgent problems in higher education; and serving as a clearinghouse of information concerning the most promising innovations in higher education. These services are urgently needed to help strengthen the program of higher education.

Foster Research

The Federal Education Agency has a two-fold responsibility in fostering research. One is that of stimulating research studies dealing with such questions as curricula, methods of teaching, student counseling, public relations, income, and expenditures. Such research should be developed in cooperation with teacher-preparation departments, especially in the graduate schools.

Educational research is fundamental for the improvement of aspects of higher education, but especially its teaching function. An interesting and significant difference exists between education and industry in the use they make of research.

American industries spend hundreds of millions of dollars each year on research designed to improve their product, their services, and, finally, the material welfare of their customers, the American people.

American higher education, with an investment of more than 4½ billion dollars in plant and equipment, and an annual expenditure upwards of one billion dollars, spends relatively little on research and development—and that little sporadic and uncoordinated. There is no carefully planned and systematically carried out research program designed to assure the greatest effectiveness of this vast expenditure of funds for higher education.

Probably the reason is that education is so completely decentralized in control. The colleges and universities have not been brought together in such a way as to combine their resources in a systematic research program. It would be good economy in the long run for this country to make provision for a comprehensive research program to deal with problems of higher education comparable with the research and development program of big industry.

The Commission, therefore, recommends that funds be made available to the United States Office of Education for a comprehen-

sive program of educational research designed to improve the operating practices of colleges and universities, such program to be carried on largely by the institutions cooperating in developing and administering it.

The second function of the Federal Education Agency in fostering research is that of coordinating, as far as possible, the research programs of the various governmental agencies which utilize the services of colleges and universities.

The relation of research to effective teaching is emphasized in the volume entitled "Staffing Higher Education" of this Commission's report. It is necessary here only to repeat that the good teacher endows learning with the spirit of research. This he cannot do unless he has the research spirit himself. He cannot keep a research spirit unless engaged in research undertakings or associated with an institution which fosters research.

Beyond the basic connection of research with teaching, there is another reason for going very slowly in building up research agencies outside universities, instead of looking to the universities when research work is wanted. The tools with which the more highly specialized research projects are carried out today are very complicated and difficult to master. In consequence, only scholars who have devoted a good deal of time and painstaking study to the mastery of the tools of research can be very effective in carrying on research projects. Training of research workers is, therefore, the *sine qua non* of long-term effectiveness in the research field. Training research workers is one of the primary functions of the university. Competent scholars as faculty members and adequately financed research projects are the only means whereby the university can fulfill that obligation. If Government and industry drain off the scholars from the university, and if, then, funds are withheld from the university for research projects, the goose that lays the golden egg is killed. It is as though society were to say "We need doctors in our communities so badly to care for our sick that we will take all the teachers from the medical schools so as to increase our supply of practitioners."

The results of research which is designed to contribute to the ease, comfort, or pleasure of life, should be freely available to the public with the least possible delay. Universities are accustomed to doing their work in the public interest. Nevertheless industry should not and probably would not be found unwilling to contribute even more generously than it now does to the support of basic research in the universities if there were convincing proof that the universities were in a position financially and technically to carry on that research effectively. The scientist who is delving into the basic laws of science with little or no interest in the particular application of his findings would,

then, be found generally in the university rather than in the industrial laboratory.

This Commission therefore recommends that any basic research program of the Federal Government as recommended by the President's Scientific Research Board be carried on as largely as possible in the universities of the country, and therefore administered at the Federal level either by or in close relationship with the Federal agency which has due regard for all the functions of the university, particularly its teaching and its training of research workers.

The basic research referred to above is not intended to include those projects which are a necessary part of the service of a Government department and are, therefore, properly administered by the department.

Assist in Placement of Specialized Personnel

Industry, Government, and educational institutions are constantly in need of persons having not only excellent education, but having specific combinations of abilities and skills. As a counterpart of this, both educational institutions and students are constantly in need of information concerning the combinations of abilities being called for. They need to know, too, the shiftings, both current and in prospect, of supply and demand in the many phases of highly specialized service. At the same time there is need for frequent surveys of enrollments and facilities in the various educational departments and professional schools throughout the country so as to predict the supply of specialized personnel for some years in advance.

It is recommended, therefore, that working in close relation with other Government agencies, the United States Office of Education maintain a clearinghouse of information about current trends in supply and demand in the professional and other specialized callings.

Assure Equality of Higher Educational Opportunity

It was pointed out in an earlier section of this volume that even though education is essentially a State and local function, there are types of education which do not justify their being maintained in every State.

The Federal Government should have machinery with which to exercise initiative to assist States in negotiating contracts with other States or with institutions for forms of education which they cannot carry on economically within their own borders.

The Federal Government is interested in eliminating another kind of inequality. States differ greatly in the standards of institutions of higher education due in part to differences in financial resources. It is the opinion of this Commission that there is and will continue to be urgent need for Federal financial aid to higher education par-

ticularly in the economically less favored States as set forth in "Financing Higher Education" of this Commission. Machinery to administer such Federal aid will then be required.

Even within a State there are certain inequalities of educational opportunity which contravene in spirit the Bill of Rights in the Federal Constitution. Without being committed to any particular line of action to lessen and finally remove those inequalities, there should be an agency in the Federal Government to study constantly the problem and report its findings to the Government and to the public. This agency should work with the States and institutions.

Help Higher Education Meet Its International Obligations

Unless education, as a whole, and higher education in particular can play its important part in producing better understanding and good will among the peoples of the earth, what is done to improve education in any one country is not likely to have lasting significance. The role which education will play officially must be conditioned essentially by policies established by the State Department in this country and by ministries of foreign affairs in other countries.

Higher education must play a very important part in carrying out in this country the program developed by UNESCO and in influencing that program by studies and reports bearing upon international relations. In conformity with the provisions of UNESCO's charter there has been set up in the United States a commission representing the various agencies most interested in its program. This commission is staffed largely by personnel provided by the State Department and plays an active part in making the program of UNESCO effective in the United States. The United States Office of Education must be prepared to work effectively with the State Department and with UNESCO.

In practically all countries except the United States, professional licensure is a function of the central government. In this country it is a function of each of the 48 States. Complications are encountered when a physician, lawyer, or engineer from another country wishes to practice in America, or when a professional man from the United States takes up his residence abroad and wishes to continue his practice. Negotiations must be carried on through diplomatic channels, and since the separate States are not diplomatic units, the procedure is so cumbersome that action is nearly blocked in many cases.

The freedom of movement of professional personnel from country to country could do much to build good will and understanding among the peoples of the different nations. It would seem that simple machinery might be worked out which would enable the Federal Government as a unit to act for all the States in handling the movement of professional personnel to and from this country. A strengthened

Government agency for education might serve as a clearinghouse in cooperation with the Department of State. National Committees of State boards of examiners for the several professions might be responsible for establishing criteria to safeguard their professional standards.

To carry on these five named services and others, the United States Office of Education must be provided with a staff of distinguished leaders in the many phases of higher education to work under the direction of the United States Commissioner of Education. These leaders must have not only adequate education and experience, but also sufficient prestige of rank to enable them to deal on equal terms with the presidents, deans, and professors of colleges and universities, with the chief executives of voluntary educational agencies, and with other Government agencies which have relationships to higher education.

Further, this Commission recommends that, because of the distinctive place of higher education in the scheme of American education, the United States Commissioner of Education have the counsel and support of, and some measure of direct responsibility to, an able and representative body of citizens invited by the President to serve as a continuing National Commission on Higher Education. This national commission on higher education should be made up of distinguished citizens, mostly those not connected professionally with education. They should be appointed for long, overlapping terms and should serve without pay other than necessary expenses.

COORDINATION AMONG FEDERAL AGENCIES

The second category of educational activities carried on by the Federal Government consists of those programs administered by one or another Federal agency.

Many of these programs were named in the opening section of this chapter. Reference has been made also to the recent compilation of expenditures for these programs made by the Bureau of the Budget. The problem of organization is essentially that of confining the programs to such fields and aspects of education as are necessary adjuncts to the proper administrative functions of the various Government agencies, and of coordinating the several programs to simplify the relationship between each college or university and the several Government departments with which it cooperates.

Many adminstrative practices which have grown up through the years in carrying on these educational programs would profit from a procedure under which the administrator of each program could compare notes with the administrators of other programs, and where all these administrators might have a chance to comprehend all the edu-

cational activities, including research, carried on in colleges and universities by, or with the aid of, the Government.

It is recommended, therefore, that the President set up an interdepartmental committee consisting of a representative or representatives of each department or agency maintaining one or more educational or research programs which utilize the colleges or universities, the United States Commissioner of Education to serve as chairman.

This committee would be consultative only and without administrative authority. The colleges and universities individually or through their voluntary organizations would be free to bring to the attention of the committee any questions of policy which they care to raise with respect to these Government education programs. The committee would seek to develop as close coordination as practicable among the several programs, and to prevent unwarranted duplications. The committee would be in position to advise the President with respect to additional programs, including those under consideration by the Bureau of the Budget or by the Congress.

In Washington, the Library of Congress, the Smithsonian Institution, the science laboratories maintained in the several departments, and many other agencies both in and out of Government provide extensive educational resources. The many specialists found in the several Government departments and agencies constitute a body of scholars qualified to guide the educational studies of a large body of students.

Government educational resources and programs are not confined to Washington. Many Government departments, notably the Army and the Navy, conduct large educational and research enterprises at stations developed throughout the country. Industry, too, maintains extensive educational programs. Students in all these courses, governmental and nongovernmental, are anxious to have the academic recognition which should rightly attach to the standard of work they do. Colleges and universities face the problem constantly as to what recognition they should give for this work when students transfer to them from the Government or industrial schools.

This Commission is not prepared to recommend a plan to solve the many problems involved in making widely available the educational resources of Government and industry. It recognizes that the colleges and universities should be able to utilize these resources to supplement their own, and should have some mechanism to enable them to evaluate the work done in governmental and industrial courses. These problems are of special merit, and this Commission hopes that the appropriate agency will make a study of them.

Voluntary Agencies

As indicated in Chapter I, voluntary agencies have played the primary role in this country in helping colleges and universities improve and systematize their work. This is as it should be. The work of these agencies should be facilitated by government as one of the finest expressions of the democratic process.

NATIONAL VOLUNTARY AGENCIES

The United States Office of Education publishes annually a directory of educational associations. In the 1945-46 edition 366 national and regional associations are listed. The great majority of these are concerned with higher education. Many serve special groups of teachers such as music teachers or biology teachers. Others serve nonteaching groups such as school building architects, or collegiate registrars. Others serve the general interests of all teachers such as State or national associations of teachers or of university professors. Some have institutional rather than individual membership, such as the associations of colleges and universities. Others are councils to bring together associations having related interests. Others have a combination of institutional and association memberships.

Higher education profits greatly from the work of these voluntary agencies which have no connection with Government and which have no legal authority. These have been and should continue to be the chief agencies for the widespread exchange of views and of information. These agencies should continue to define standards according to the pooled judgments of the best informed leaders and thus give to all institutions a yardstick with which to measure their work. They should continue to use these standards in accrediting such institutions in their territory as request accreditation. By means of this program of extralegal accreditation these agencies will be in position to cooperate with state departments of education and the proposed interim State commissions on higher education in their existing or prospective programs of legal accreditation. Through these agencies, institutions should continue to work out plans for cooperation with their neighbors

and of participation in studies requiring the joint efforts of a group of institutions. Through these agencies, intensive and long time studies should continue to be made, and, based on the findings of these studies, pronouncements should be issued on the most fundamental and controversial questions in higher education. In short, these agencies should continue to play a major role in stimulating and guiding the improvement of practices in higher education throughout the country.

These voluntary agencies may be classified into three groups according to the nature of their memberships.

Agencies maintained by personal memberships

College and university teachers have many personal and professional problems. Some of these concern the individual's own welfare—his salary, his promotion, his tenure, his retirement, and the like. Professional problems concern his teaching procedures, his library, laboratory, and classroom facilities, his teaching hours, research opportunities, and such matters. Membership in professional associations on a local, State, and national basis provides the individual teacher with help on these problems through the exchange of information and opinions, and through participation in the processes—or at least the findings—of research conducted for the common benefit. Research is, in fact, one of the most essential services of such associations. Periodical reports dealing with such questions as faculty salaries, tenure laws, and retirement plans, and with provisions for professional growth of faculty members, are important aids to individuals or groups seeking to improve both their status and their service to society. All associations concerned with common problems should pool their interests so as to maintain the most effective research service. In such research, the Government may appropriately cooperate.

Agencies maintained by institutional membership

The agencies with institutional members have played the primary role in the systematizing of higher education in this country. It is to them we must continue to look for major improvements in institutional organization and cooperation. An activity most appropriate to such an assocation—and one currently being carried on by a group of institutions serving a single profession—is a research program to improve the teaching in a specific field. Such a program could secure the cooperation and counsel of a government specialist in that field.

It is recommended, therefore, that each association with institutional memberships consider maintaining a research program as an important part of its activities, and that it give consideration to possible cooperation with appropriate Government departments in the conduct of such research.

Agencies maintained chiefly by constituent associations

To provide for the consideration of common problems, related associations of individuals, or of institutions, have combined into Councils. Examples are groups of associations in the humanistic fields, in the social sciences, in the natural sciences, in the general field of education. These councils more nearly represent the Nation-wide interests in higher education, including research, than do any others, and thus render a most valuable service.

One of the most urgent needs in the fields of higher education is adequate machinery to develop as nearly as possible a united front on important educational questions. These national councils with association memberships are best fitted to bring together divergent views for thorough discussion in an endeavor to reach a united view, or at least a majority opinion to speak for higher education as a whole in its relationship with governmental agencies and non-governmental groups.

The Commission recommends, therefore, that the appropriate councils still further strengthen their machinery so as to provide better for the consideration of questions of common interest to all higher education including research.

Agencies Concerned with Accreditation

One of the most valuable services performed by voluntary agencies is accreditation. The national and regional accrediting associations do essentially what ministries of education do in most countries. Their work is outside the framework of law but is almost as compelling as if it were law. Their decisions are accepted as the voice of authority. While in some cases they may serve to block progress, they constitute on the whole a potent force for raising standards and systematizing programs in higher education in this country.

National (or, frequently, regional) accrediting associations fall roughly into two classes: (1) Those which accredit institutions on the basis of special academic criteria, such as their fitness to prepare students for graduate study, or their provisions for the education and living arrangements of women students; and (2) those which accredit professional schools, such as law and medicine.

Each such association establishes standards based upon what it regards as adequate criteria for its particular purpose. It offers its services to any institution which desires to be accredited. The accrediting process involves an examination of the institution by inspectors sent by the association, and, following initial approval, periodic reexaminations.

While there is an effort on the part of the accrediting agencies to provide for flexibility and wide variations and not seriously to throttle experimentation in educational practice, there are those in higher edu-

cation in this country who maintain that even the degree of standardization brought about by these associations is harmful. There is increasing apprehension concerning the multiplication of the accrediting associations and the overlaping of their programs. No one contends, however, that the degree of rigidity of standardization brought about by these associations is as great as the rigidity of standardization commonly found in countries where control of standards is legally vested in a ministry of education.

With reference to the standardizing activities of professional groups a comparable but somewhat different procedure prevails. Medical schools, for example, are accredited by the Council on Medical Education and Hospitals of the American Medical Association. But since doctors are licensed to practice in a given State by a board of medical licensure, that legally constituted board must decide whether to take into account the medical school from which the applicant for the State license to practice medicine comes. It is common, therefore, for State boards of medical licensure to require that the applicant for the medical examination be a graduate of an approved medical school. An approved medical school is interpreted by most States to mean a medical school accredited by the American Medical Association. Thus the voluntary extralegal activities of the American Medical Association become a part of the legal machinery for licensing doctors of medicine. The same procedure, with variation, holds with other professional groups.

The value of accreditation is obvious in a country which does not depend upon centralized authority to control education. Some of the dangers must now be pointed out.

What is needed is some provision for coordinating and limiting the activities of the several national accrediting associations. Common information concerning student enrollments, faculty, salaries, educational expenditures, and the like, called for by these agencies should be gotten from the several institutions on a single blank, not on many blanks using divergent definitions of terms. Standards of accrediting associations should be subject to review by some recognized agency. To illustrate the need for this, it may be recalled that a few years ago the colleges which had been denied accreditation by one of the regional accrediting agencies banded together to form their own accrediting association. This association called upon the United States Office of Education to include its accredited colleges in the office's compilation of accredited institutions. The office has no recognized agency to which to turn to justify its refusal to recognize this new accrediting agency.

The American Council on Education has made more than a begin-

ning in this field by maintaining for several years a Committee on Accreditation Policies. It is recommended that the Council strengthen the work of this committee and charge it with even more responsibility than at present for the following: (1) To suggest ways of lightening the labor and expense incurred by colleges, universities, and professional schools, in carrying on the work of accreditation; (2) to coordinate as far as practicable the work of the various accrediting agencies; and (3) to publish a list of accrediting agencies approved by the committee.

Relation of Voluntary Agencies and Governmental Authority

In this country governmental agencies have been relatively ineffective in systematizing and improving the work of the colleges and universities. Instead, the voluntary agencies have performed these functions through a variety of associational activities, including accreditation. The danger inherent in this is that higher education, having thus the power virtually of a monopoly, may come to disregard its obligations to the public. Medical schools may train too few doctors, for example, and thus make possible too high fees for medical service, and too few doctors to care for the people's health.

On the grounds of legal structure the principal question raised with respect to the informal, voluntary, extralegal procedure used in this country to establish and maintain as high a standard as possible in the work of colleges and universities is the possible conflict between this procedure and what is held to be the legal obligation of the State to assure a high quality of work in the institutions it charters. New York State, for example, assumes responsibility through its State department of education to accredit not only its own colleges and universities but many other institutions as well when and if students from them wish to transfer to New York institutions or their graduates wish to be licensed to practice a profession in New York. While at present not many States undertake this type of accreditation, there is always the possibility that a State, which has the legal responsibility for the standards of work carried on in its colleges, will exercise its authority and institute its own system of accreditation. The surest way to perpetuate the present effective influence of the voluntary agencies is for them to work in close cooperation with the legally constituted authorities in the several States and carry on in their democratic way a program which accomplishes what the informed public desires.

REGIONAL VOLUNTARY AGENCIES

For some purposes greater stimulation and help to higher education can be afforded by voluntary associations organized on a regional

basis than by national associations. To serve these purposes five associations have been organized to embrace among them all the territory in the United States but California. The New England association limits itself to institutions of higher education, while the other four associations include also the secondary schools. These associations are concerned with the total program of the college rather than with any particular function. They have the cooperation and support of practically all the colleges and universities (except professional schools) in their respective regions.

By the device of accrediting high schools, they have exercised great influence upon secondary education, particularly that phase of secondary education which prepares for college admission. But the work for which these associations are best known is their comprehensive program of accrediting colleges. These regional associations tend more and more to accredit each college on the basis of its qualifications to accomplish its own announced objectives. In this way they seek to avoid the evil of required uniformity and yet encourage high standards. Furthermore, they are tending more and more to encourage experimentation with yet unaccredited practices by providing machinery by which colleges may engage in such experimentation without losing their accredited status.

Each of these associations has a commission on higher institutions. This commission has the responsibility of working out standards on the basis of which colleges may be admitted to membership in the association and, hence, accredited. How to derive these standards has been the subject of elaborate studies in recent years. There is, therefore, general agreement among colleges and universities throughout the country that the work of accreditation done by these regional associations is of outstanding importance. To be accredited by these associations is regarded highly by the colleges, and most colleges in the several regions seek such accreditation.

The question may be raised as to the significance of such accreditation. The answer is very simple. Practically all the colleges and universities in the region or the nation as the case may be virtually agree that they will accept transfer credits at their face value only for students transferring from an accredited institution. This means that students will hesitate to attend an institution, academic credits from which are not accepted at other institutions. Even admission to study in medical schools, for example, is limited for all practical purposes to students whose preprofessional college work has been done in an accredited institution. It is obvious, therefore, that these regional associations are powerful instrumentalities affecting higher education in this country.

VOLUNTARY STATE-WIDE ASSOCIATIONS

In most States there has been and still is inadequate legal machinery for bringing about continuous study of the State's total needs in higher education. Similarly, there has been and still is inadequate machinery to coordinate the programs of the colleges operating in the State. This has made a rich field for the work of voluntary associations organized on a State-wide basis. The great majority of the States have such associations.

About half these associations seek the membership of all the colleges in the State. Others limit membership to certain classes or types of institutions. Some combine with high schools. Some are higher education divisions of State teachers associations.

In general these State associations have only one meeting per year. Sometimes committees are active between meetings and present reports which are the principal items on the agenda of the annual meeting. In some States, however, these associations have frequent meetings and rather comprehensive programs. A continuous series of research projects involving the services of a research specialist, and frequent publication of important reports are among the activities of one of the most alert State associations of colleges. The maintenance of a central office with a full-time executive officer devoted to bringing about as much coordination as possible among the colleges of the State is a recent development of promise.

In addition to holding annual conferences of representatives of all of the colleges and universities in the State, the activities now carried on by one or more of the State-wide organizations include: the development of a central service for audio-visual aids, cooperative arrangements for transfer of credits, planning and assisting in the conduct of a State-wide survey of the need for higher education within the State, and the ability of the institutions to meet these needs. These and other activities on a State-wide basis have stimulated professional growth and increased the effectiveness of all of the institutions, privately and publicly controlled, within the State.

Since the major services of the State commissions on higher education recommended in Chapter III are advisory rather than authoritative, the State commissions also may well utilize these State-wide voluntary agencies in States where their programs are effective. **Voluntary associations in the several States are urged to develop still further their programs of higher education. These services are particularly needed pending the development of an adequate State department of education whose jurisdiction includes higher education. In the absence of such department these associations should play an active part in creating, through law, a State commission on**

higher education and should cooperate actively with it after it is created.

The discussion of voluntary agencies has touched only a few aspects of their activities. Other aspects are perhaps of equal importance. Their activities deserve encouragement and their organizational machinery must be constantly refined.

ASSOCIATIONS OF STUDENTS

Colleges and universities exist for students. Student councils on most campuses have responsibility for many activities of an extra-curricular nature, but in only a few institutions does the administrative set-up provide for student participation in determining academic policies. This probably accounts in part for the apparent lack of proper educational motivation so common among college students.

But genuine interest in important educational as well as economic and social questions is not lacking among students. Growing out of this interest national associations of students had carried on significant programs for many years until interrupted by the war. These programs bore not only upon problems of American higher education, but stressed particularly the need for students of all countries to work together for a common basis of understanding and good will.

Segments of Education Requiring Special Organizational Arrangements

There are three vitally important segments of education which concern all levels of education. They cannot be served best by an organization set up for higher education alone, but they involve higher education. These are: teacher personnel for the elementary and high schools, guidance and counseling, and adult education. These three activities constantly cross the line between lower schools and higher schools. They are aspects of education which have probably suffered most from the fact that lower schools and higher institutions are organized so generally under separate jurisdictions. As the States unify their systems and develop State departments of education with jurisdiction over all levels of education, teacher personnel, guidance, and counseling, and adult education undoubtedly will benefit most distinctly.

This Commission takes the position, however, that it is not feasible to count on a unification of the State program at all levels in the immediate future. It assumes instead that in some, if not many, States, the State commissions on higher education will be created to work side by side with State departments of education. With respect to these three activities, then, it is necessary to recommend procedures which will fit into a dual system of control at the State level.

TEACHER PERSONNEL FOR THE LOWER SCHOOLS

One function of higher education to prepare teachers for elementary and secondary schools. For a little more than a century special institutions for the training of teachers have been maintained, usually by the States. These institutions started in practically all cases as normal schools with a curriculum of less than 4 years, at the completion of which a certificate rather than a degree was granted. For a good many years their work was little more than a review of what the teacher was to teach in the elementary school. Their stu-

dents in many cases had gone no further in their own education than the eighth grade.

During the century since that humble beginning, normal schools have raised their standards as rapidly as the demand for better-trained teachers would justify. Simultaneously, State after State established plans for the certification of teachers. Together they moved upward—normal-school work and certification requirements. Today all but a few States have made their normal schools 4-year institutions and renamed them teachers colleges, colleges of education, State colleges, or State universities. Many of them now grant the master's and a few the doctor's degree.

Side by side with this movement has been another. As high schools were organized and began to multiply, they needed teachers. The liberal arts colleges were the obvious institutions to train them. But these colleges were not as much concerned with the methodology of high school teaching as were the normal schools and teachers colleges with the methodology of elementary school teaching. "If a teacher knows his subject he can teach it." But later certification requirements for high school teachers began to include certain methodology courses. Professors of education began to be added to liberal arts faculties to teach these courses. Soon schools of education in universities followed and began to claim wider responsibility for training teachers than merely to offer the methodology or pedogogical courses. Although the subject matter courses usually continued to be provided by the liberal arts college of the university, special methods courses for each major field, such as history, were introduced as a means of assuring adaptation of subject matter to high school students. At that point the conflict in philosophy between, for example, the professor of history in the arts college and the professor of education became more sharp. That conflict continues. While the sharpness varies from institution to institution, and while a few institutions have virtually solved the problem, there is still widespread disunity in the teacher training efforts of the colleges and universities. Unfortunately, as the status of the teachers colleges is being changed in State after State to State colleges in order to authorize these institutions to give liberal arts degrees, the State colleges are falling heir to the same dispute that has persisted through decades in the colleges of arts.

What bearing has all this development on organization? Within the last 30 years a score of States have made careful surveys of their publicly controlled colleges and universities. Almost without exception these surveys reveal that the most perplexing problem of organization faced by higher education is the education of teachers. School superintendents and principals employ and supervise teachers, but they have little chance to influence significantly the colleges and

universities which educate the teachers. The State departments of education are usually responsible for issuing teachers' licenses, but in general the institutions which prepare teachers for those licenses are not within the jurisdiction of the State departments. Teachers colleges today are rarely supported financially on the same level as comparable curricula in the university of the same State. Their standards of faculty training and salary are lower. Their buildings are poorer. Their students rate lower on college-ability tests. In the liberal arts college the professor of education is often not regarded as the peer of the academic professor. In the universities the school of education is commonly the stepchild in the family of professional schools.

In consequence of all this, students of superior ability too infrequently enter public school teaching. The academic faculty members in the colleges frequently advise their best students against teaching. A vicious circle is thus created. Until better professional status is obtained, too few of our capable young people will enter teaching, and until they do the professional status will remain low.

What is obviously needed is a united front. Mutual confidence and respect must be established among all the agencies concerned with the professional status of teachers. The State department of education which establishes certification requirements must deal not alone with the professor of education in a college. So to deal tends to confirm the notion in the academic faculty members' minds that teacher training is regarded by the State department as a matter solely of pedagogy. The State department must deal with the academic faculty as well. *The concept must be firmly established on every campus that teacher education is a responsibility of the whole college, not just of the department or school of education.* Likewise the lower school officials must play a far larger part in determining all the aspects of the program upon which the professional status of teachers depends. They are the ones who must evaluate the product of the teacher training institutions and bear the brunt of inefficiency if it exists among the teachers. Finally, the lay public must share in the responsibility for whatever status prevails for teachers. Their children are the ones whose lives are made richer or poorer by the schools. The layman knows what is paid for other professional services because he pays for them directly; but he should be made aware of the fact that he also pays the bills for the schools, indirectly.

Hence, this Commission recommends that a council should be set up in each State where adequate machinery for the purpose does not already exist. Such council might be called the State Council on Teacher Personnel. It should be representative of both the academic and professional education departments of the several types of teacher training institutions, the public schools, the State

department of education, the State commission on higher education and influential organizations of women, of farmers, of industrialists, and of merchants.

While its functions may be advisory to other legally constituted agencies, it should be given responsibility for mapping out the plans necessary to procure and hold an adequate supply of well-qualified teachers. It should advise with respect to regulations governing teacher certification, tenure, salary schedules, and retirement. It should advise with respect to a placement service with provisions for cooperation with similar services in other States.

GUIDANCE AND COUNSELING

The choice of a college will be an even more serious matter to most young people in the future than it has been in the past. That fact has significance in two directions. First, many students will not be able to attend the institutions of their first choice. Consequently, colleges and universities would do well to establish a State information center to provide prospective students with impartial and objective data about the several institutions in the State.

The other aspect of choosing a college is the demand that the prospective college student understand himself. The guidance centers set up by the Veterans Administration in cooperation with colleges and universities have assisted in the development of tests designed to help the veteran determine the course of study he should pursue. Of equal weight in choosing a college are the abilities which the student has to work with and what the college has to offer.

A considerable number of colleges and universities and a few States have been conducting similar programs of college-ability testing for two decades or more. The decision about whether to go to college as well as the decision concerning what college to attend should rest as much as possible upon such self-understanding.

From both standpoints, therefore, there is need for guidance and counseling machinery both State-wide and Nation-wide. The States differ so much in size and in population that probably no one type of organization is best for all States. Whatever the form of organization, **it is recommended that some guidance and counseling center, set up as part of a State-wide plan, should be available within reach of every high school. At this center young people should find means of careful objective self-appraisal, and information about the facilities throughout the State and the Nation for the various types of higher education in which they are interested.**

Colleges and universities are developing constantly better and improved personnel services. Their student personnel officers are members in most cases of one or more of the regional and national associa-

tions devoted to student personnel work. They have had for years the effective service of the Committee on Student Personnel Work of the American Council on Education. The several reports published by this committee are comprehensive and helpful.

On the national level there should be a guidance and counseling service to facilitate the work of the centers maintained throughout the country and to provide information particularly about those educational facilities which are uncommon and therefore probably not known to many of the State centers. The national center should also carry on research to improve tests and testing techniques and to improve methods of evaluating the work of colleges and universities in order to make such evaluations most serviceable for purposes of counseling prospective students. It should cooperate with appropriate agencies, both public and private, in providing current information about supply and demand in the many specialized fields.

This Commission recommends that a Federal guidance and counseling service be organized within the United States Office of Education, with an advisory committee consisting of representatives of the State guidance and counseling centers, the associations and institutions most directly concerned, and with appropriate Federal agencies.

ADULT EDUCATION

More than two out of every five adults expressed a desire to attend classes and take some special courses for adults in some school or college, according to the recent Gallup poll described in "Equalizing and Expanding Individual Opportunity" of this Commission's report. This means more persons than all the children and youth enrolled in our established schools and colleges. The number who will in fact enroll in classes will depend upon many factors such as fees charged, distance to classes, suitability of subject matter available, methods of teaching, and the hour at which a desired class is held. But discount the number as one will, it is unquestionably true that the desire for class instruction by adults far exceeds what the schools and colleges are now doing or are prepared to do. The excellent efforts of many high schools, colleges, and universities, particularly municipal colleges and junior colleges, illustrate how extensive the demands of adults are, but thus far the efforts have gone only a short way toward meeting the needs.

But class instruction is only a part. Radio is a powerful instrumentality for adult education. It has been at the job for years with many programs such as Town Hall's Town Meeting of the Air. But it has barely scratched the surface. The motion picture industry with its almost limitless possibilities has as yet assumed little responsibility

for any outcome except entertainment. Newspapers and magazines vary from a high degree of helpfulness to a high degree of harmfulness. Organizations, national, State and local, such as the Adult Education Association, the League of Women Voters, and the Parent-Teacher Association are conducting programs of increasing effectiveness, including both publications and discussion groups. Trade unions and employer groups maintain their own training programs and include general work in civics and the social sciences. Churches are becoming more and more effective as real education centers. Libraries are making topically organized reading lists and cooperating with schools and colleges in their communities. Many utilize their rooms for classes.

The Federal Government has long helped to maintain adult education through the vocational divisions of high schools and through the extension services of the land-grant colleges and universities. A few States and quite a number of colleges and universities have established programs to prepare teachers and other leaders for adult education.

These and many other efforts which might be mentioned need further stimulation and help. They reach only a small fraction of adults with the types and amounts of educational service required today. These efforts and something of the urgency of the increasing demand for adult education are discussed in volume II of this Commission's Report. It is necessary here only to add suggestions and recommendations for improving the organizational machinery of adult education.

At the Community Level

Practically all adult education is part-time education for persons engaged in the home or in some money-making occupation. Therefore such education must be easily accessible to persons living at home. Community agencies must furnish the most of it, either with their own resources alone, or in cooperation with some noncommunity college or university, or some State or national program. The most important single development, then, is an agency or agencies in every community, large or small, where a variety of educational activities may be carried on for adults. In a large city, such agencies may be numerous and their programs can be facilitated as is done in many cities by a city-wide adult education council. But the minimum essential of every community is an effective evening division of the high school, or an adult education division of the local community college, junior college, college, or university, or a well-supported community center, or similar agency with actual facilities and personnel available for use. With them the State agencies, the Federal agencies,

and the nongovernment agencies must work. There must be leadership in these local agencies competent to develop and administer comprehensive programs for the adults of the community.

On the College and University Campus

A college or university has a triple role to play. (1) It should wherever possible provide a center for evening classes or for any other education activity in its local community. This needs no elaboration. (2) It may prepare teachers and other leaders for effective participation in the community program. They will be drawn from school and college teachers, professional personnel, housewives, skilled tradesmen, etc. The customary college entrance requirements, and degree requirements, should be forgotten in the case of most of them. (3) It may develop background material to aid all the community programs in which it cooperates. These might include library collections, educational films, language and other phonograph records, graphic materials and art collections.

As a part of the State-wide plan to be discussed below certain colleges may participate in the actual administration of the programs in local communities. They may supply part or all of the teaching personnel, stimulate the introduction of new activities, and serve in a consultant capacity to the local teachers and other leaders.

At the State Level

As in other phases of education, the State has the major responsibility of planning and stimulating the development of an effective program of adult education. Michigan is appropriating $250,000 a year to help start community programs and other activities. California pays about 85 percent of the cost of the adult programs in high schools and public junior colleges. Florida operates the huge Camp Roosevelt facilities as a State center for adult education. Many other States have State-wide plans.

Because so many agencies have a keen interest in adult education, State councils on adult education are found to be very helpful. In those States where no such council exists the commission recommends that one be formed.

If the State department of education has a strong adult education division, it may well take the initiative in organizing such a council. In States without a strong State department the State university or the land-grant college or some private institution which has developed a strong general extension division should take the initiative in organizing the council.

The State council should have representation from all the important institutions and agencies actively interested in adult education. It

should be charged with responsibility for developing general policies with respect to:

(1) Continuing study of needs and interests in adult education.

(2) The preparation of teachers and other leaders of adult education.

(3) The preparation of suitable instructional materials.

(4) The evaluation of the many aspects of adult education programs.

(5) Stimulation of experimentation to develop new subjects and techniques, especially such media as motion pictures and radio.

(6) Bringing about the rapid expansion of the many aspects of the program.

In addition the council, although possessing no administrative authority over any of its constituent agencies, would suggest to them phases or aspects of the program in which each one might operate to the best advantage of the State as a whole, and would help in every way to obtain support for each agency in carrying out its part in the suggested State-wide plan.

At the National Level

From the standpoint of national safety and interest probably no other phase of education is more important at this time than adult education. This generation of adults must act wisely in respect to many questions if we are to make sure that today's children will have a democratic society in which to live.

This does not mean that adult education should be "taken over" by national agencies, governmental or private. But it does mean that leadership on a national basis should be built up and recognized, and that funds should be made available to speed up developments in the State and local agencies. Powerful instrumentalities such as the press, the radio, and the movies should be actively enlisted in the program. Civic and social organizations, churches, trade-unions and employer groups, women's clubs, luncheon clubs, youth groups, and others should be stirred to more vigorous and effective participation. Every state should be urged to double and treble its financial and other efforts to develop effective programs in every community throughout the country.

This means three things organizationally. First, the United States Office of Education should create a strong division of adult education, or otherwise greatly strengthen its services in adult education, so as to provide leadership, inspiration, and cooperation to the State councils on adult education or other agencies in the States, local communities, or institutions. It should assume an unaccustomed aggressiveness in this field because time is so important.

Secondly, a national council on adult education, under the leadership

of the United States Office of Education, should be organized to enlist the cooperation and resources of all the interested national agencies in planning.

Thirdly, special commissions on education by radio and by motion pictures representing both governmental agencies and voluntary organizations should be established. These commissions should propose procedures to coordinate existing programs in these areas and develop new ones.

Appropriations should be made to the United States Office of Education for distribution to the States or to the several adult education agencies in the States to assure the prompt development of adult education programs in the many colleges, universities, and local centers, operating in conformity with plans developed by the State councils on adult education where such councils exist. Appropriations should be made available also to the Office of Education to support the work of the proposed national commissions on education through radio and motion pictures.

In Summary

There is no tightly organized, centrally supervised system of higher education in this country. There are 1,700 tax-exempt colleges and universities; in addition to these there are hundreds of proprietary institutions—mostly business colleges and technical schools. While created by State legislation or by charter granted under State law, the colleges and universities are largely autonomous in their operation. By working voluntarily together through hundreds of associations these institutions have developed reasonable uniformity, have accomplished constant improvement in standards, and have achieved a sufficient degree of systematization to meet most of the requirements of the localities, the States and the Nation.

This Commission recognizes the present need for increased effort to build a more effective system of higher education in this country. Government—local, State, and Federal—must promptly examine their procedures to discover whether they should do more than they are doing. But this Commission would not like to see government control increased at the expense of initiative and a sense of responsibility on the part of educators and institutions. Rather should the efforts of the educators and institutions themselves be stimulated and facilitated by government.

Flexibility must be preserved; rigidity of administration avoided. In all the efforts to improve higher education, freedom—the cornerstone of democracy—must be the cornerstone also of the structure within which higher education operates.

LOCAL AND INSTITUTIONAL RESPONSIBILITY

The most imperative present need of higher education is to increase its facilities. Post-high school education must be brought within the reach, economically and geographically, of many more people than at present. The program should serve the cultural and vocational needs of our total population, youth and adult.

The urgency of this need is most acute at the two years just above the

high school. The junior college has developed to meet this need, but **this Commission recommends a greatly increased expansion of community colleges. This development should be guided by a State-wide plan in which at least the following features should be found:**

(1) The larger municipalities will extend their public school programs to include the thirteenth and fourteenth years or grades, thus making possible the further experimentation with the 6–4–4 plan.

(2) Systems of district community colleges or branches of other institutions will be created to take care of territory not well served by the larger municipalities, these to be administered by special boards, or by the State boards of education, or by the governing boards of the State universities or colleges.

(3) Private and church-related institutions will extend their programs for students in the thirteenth and fourteenth grades.

(4) While no fixed pattern should prevail for the financial support of the publicly controlled community colleges, there should be a large measure of State aid in order to guarantee the development of a system which will care for the needs of the whole State and make available as far as possible to each individual the type of education he should have through the fourteenth year or grade regardless of his race, color, religion, or economic status.

In addition to the rapid multiplying of public community colleges and the extension of private and church-related school programs through the thirteenth and fourteenth years, facilities in higher education should be increased or strengthened through the following types of adjustment:

Colleges of arts and sciences should: (*a*) In some cases maintain 4-year or 2-year general, and possibly vocational, curricula above the twelfth grade; (*b*) in some cases maintain 4-year general, and possibly vocational, curricula above the tenth grade, thus providing a residence college parallel with the community college serving the eleventh, twelfth, and fourteenth years; and (*c*) in some cases maintain 3-year curricula above the fourteenth year devoted to further general education and to the intensive study of some field of the arts and sciences with sufficient professional preparation to adapt its use to some occupation such as teaching, art, or journalism.

(2) Teachers colleges, while striving constantly to improve their primary and all important function of educating teachers should also utilize their facilities wherever feasible to help carry on the other aspects of the higher education program.

(3) Both the graduate and professional schools (including teachers colleges), whether operated independently or within universities, should maintain such a regime of life and instruction as will help

most to assure that professional and other scholarly services will be carried on with due regard for the public interest, regardless of the fact that each professional group has virtually a monopoly over its own educational program.

(4) Proprietary schools should be better coordinated with the rest of the State's educational program than at present, and better recognized for the important part they play in providing a share of that program. Their application for charters and the standards of their work should be subject to approval by the appropriate educational authority in each State.

STATE ORGANIZATION

The State is the governmental unit in this country which is charged with the responsibility for developing an adequate program in education. How the State discharges this function is of supreme importance. Most other movements to improve education are dependent upon the effectiveness of the State in performing its part.

The unbroken continuity of objectives of education at all levels makes it highly desirable for the State to vest in a single State department of education, whatever jurisdiction the State should exercise over all education from the nursery through the university. This Commission recommends that States move promptly to achieve this goal, strengthening State departments and expanding their jurisdiction to encompass all fields and levels of education as rapidly as possible. Where State departments of education are not in a position to exercise this needed leadership, the Commission recommends in those States that there be created an interim State commission on higher education.

Unfortunately State departments of education in many States are not sufficiently well staffed to enable them to discharge adequately even their present more limited responsibilities. The development of a State-wide system of public community colleges as advocated by this Commission would throw a greatly increased responsibility upon many State departments of education. As a further means of bringing about essential coordination of all levels of education, the resident's **Commission recommends the appointment of a State board of education in each State. Its membership should be composed mainly of distinguished citizens not professionally connected with schools or colleges. This board should be charged with the selection of the chief State school officer and, under his leadership, responsible for the major policies under which the education program of the State operates.**

The State organization should be responsible for devising and recommending a comprehensive program of higher education for the

State, pointing out the part which might appropriately be played by each existing institution and indicating what, if any, additional institutions are needed. Its functions should be largely advisory, with no authority to replace existing boards in control of the several institutions, public or private; or to compel any institution to conform with its proposals.

Cooperating with the State governmental organization, there should be in each State a strong effective voluntary organization of colleges and universities. It should include all of the institutions of higher education within the State, both publicly and privately controlled.

FEDERAL RESPONSIBILITY

Under the American concept of the division of responsibility between the States and the Federal Government, education is one of those interests traditionally left "to the States and to the people." This, of course, does not mean that the Nation as a whole has no stake in education. On the contrary there is incontrovertible evidence that the Federal Government has always felt a deep concern about education.

For the first half of our national life this concern found expression mainly in public land and money grants to the States for education. During the last half of our national life, a change of policy has occurred. Increasingly the Federal Government has subsidized special types or aspects of education. Inevitably, such subsidies have been accompanied by a measure of Federal control but only sufficient to assure the accomplishment of the purpose for which the subsidy was given.

Most if not all the Federal grants thus far made in support of special types or aspects of education have been made to strengthen weaknesses which had been permitted by the States and local institutions to persist in the program of education. *Nevertheless, this Commission holds the view that strengthening through Federal aid the financial structure on which education in the several States rests, and improving the machinery, both State and Federal, through which needed changes can be made, is better policy than for the Federal Government to subsidize specific types or phases of education.* If in the future the general welfare of the people, or the Bill of Rights of the Constitution, still requires Federal appropriations in support of special phases of education in addition to those now supported, these appropriations should carry a minimum of Federal control, and should be made for only so long a period as is required to demonstrate the value of the program subsidized.

To aid in improving the program carried on in the institutions of

higher education throughout the country, there is need of a Federal agency staffed with personnel of such high quality as to enable them to exercise effective leadership without authority. This requires a high place in the Government for the agency representing education. The position now occupied by the United States Office of Education does not give the necessary status and recognition to education to enable the Office to function effectively. **The Commission recommends legislation aimed to raise the status of this office.**

Regardless of future policy with respect to federally controlled or aided programs in the field of education there are already in operation more than a score of such programs administered by the several departments or independent agencies of the Federal Government. Most of these involve cooperation with some of the colleges and universities throughout the country.

To increase the efficiency of these programs and to bring about as much coordination as possible among them, this Commission recommends that the President create an interdepartmental committee with representation from each of the departments and agencies maintaining educational programs.

The United States Commissioner of Education should serve as chairman. The committee should be advisory to the several departments and agencies but without administrative authority over any of them.

VOLUNTARY ORGANIZATIONS

Neither States nor the Federal Government has exercised extensive supervisory authority over the programs developed by the colleges and universities in this country. Government agencies have chosen to allow essential autonomy within the general limitations of the legislation or charter under which each institution was established. It has been left to the voluntary cooperation of educators or institutions acting through more than 300 national, regional, and State associations to stimulate individuals and institutions to improve their work and to bring about a reasonably satisfactory system among the 1,700 essentially autonomous institutions.

This Commission endorses this procedure as an excellent manifestation of the democratic process, and urges Government to avoid as far as possible the exercise of supervision over the curricula, methods, and management of colleges and universities, but instead to facilitate the effective functioning of the voluntary agencies in this field.

ORGANIZATION FOR SPECIAL ASPECTS OF EDUCATION

There are three special aspects of education which suffer more than other aspects from the dual nature of the control of education in many

States. These aspects are: the maintenance of high quality teaching in the lower schools; educational and vocational guidance; and adult education. Problems in these fields cannot be solved without the active cooperation of elementary, secondary, and higher education within their jurisdictions; with their cooperation these aspects of education will be much benefited.

Pending that development, this Commission recommends that, where State commissions on higher education are set up, the interested agencies, local, State, and national, make special efforts to bring about cooperative arrangements under which these important aspects of education can play their important role most effectively.

VOLUME FOUR

Staffing Higher Education

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PREFACE

This is the fourth volume in the report of the President's Commission on Higher Education. It will present the Commission's proposals on the expansion and the improvement of the staffs of our colleges and universities.

If the Commission's recommendations for the broad expansion of higher educational opportunities are to be achieved for the youth of this country, there must be a concurrent growth in the number of faculty members. But growth in numbers alone is not enough. The requirements of a new and complex age underscore the college's obligation to produce rigorously disciplined minds, capable of the technical, personal, and social versatility demanded for successful living. Meeting this obligation will involve sustained efforts at improving the teacher's mastery of a constantly expanding subject matter field, and elevating his competence in presenting his materials.

Other volumes in this Report have pointed out the particularly heavy obligations which American higher education faces at this time. In all of these volumes, however, there has been the realization that our success in meeting these problems will depend upon the courage, the leadership, and the scholarly achievements of those who teach.

A total of six volumes will be issued by the Commission under the general title "Higher Education for American Democracy."

Volume 1, "Establishing the Goals," was issued on December 14.

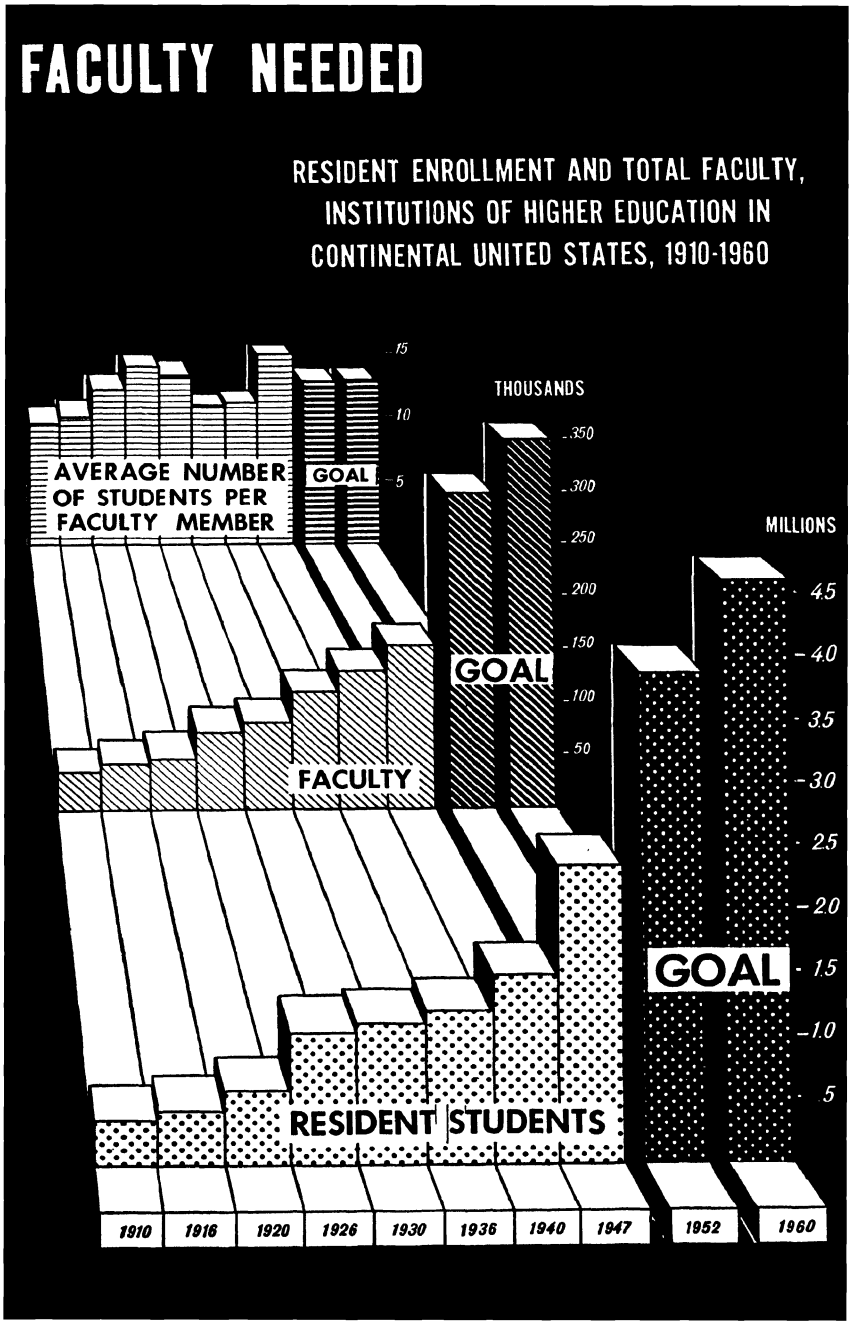
Volume 2, "Equalizing and Expanding Individual Opportunity" was issued on December 21.

Volume 3, "Organizing Higher Education," was issued on January 12.

Volume 5, "Financing Higher Education," is an appraisal of fiscal needs and policies necessary for the program of higher education recommended by the Commission.

Volume 6, "Resource Data," is a compilation of some of the basic information used by the Commission in preparing its reports.

CHART 1



Data for 1910-47, from U. S. Office of Education

The Task Ahead

Educational opportunity for every American to the fullest extent of his ability is the announced goal of the President's Commission on Higher Education. In the three preceding volumes of its report, *Higher Education for American Democracy*, this Commission has offered a series of broad proposals aimed at achieving this objective.

The basic recommendations of the Commission envision a potential enrollment of 4 million young people, 18 to 21 years of age, in the undergraduate college in 1960; an additional 600,000 should be registered in the graduate and professional schools at that time.

But there can be no such expansion of enrollment without massive efforts at reducing the economic and other barriers which presently limit the opportunity of millions of our most talented young people. To that end, this Commission has recommended a frontal attack along two major lines. First, through publicly controlled institutions, a nation-wide expansion of community colleges to provide for all who wish it the opportunity for tuition-free education at least two years beyond the high school, and a reduction of student fees above the fourteenth grade. Second, this movement should be supplemented by a national program of scholarships and fellowships in such numbers as to insure that qualified youth would be given the fullest possible opportunity for intellectual development.

This Commission believes that higher education will undergo sweeping curricular changes in the days ahead. The developments in modern technology and the social changes which this will entail, make necessary widespread modifications in subject matter offerings. To this end, deliberate planning is urged toward:

Education for a fuller realization of democracy in every phase of living.

Education directly and explicitly for intellectual understanding and cooperation.

Education for the application of creative imagination and trained intelligence to the solution of social problems and to the administration of public affairs.

But the expansion of facilities, the adjustment of curricula, and the elimination of attendance barriers cannot guarantee an effective system of higher education in America. The fundamental issue is that no program can be better than the people who operate it. This is nowhere so true as in a program for a system that deals directly with people. *Education is such an activity. Its goals are man-made; its accomplishments are determined by personal effort. Its techniques enable capable people to do better jobs; its tools increase the effectiveness of its personnel. Smooth operation and good organization are required, but they are dependent on efficient personnel. At every point the men and women who teach and guide students, conduct research, offer special services, and administer the system, largely determine its character and quality. It is against this background that the Commission proposes to discuss the problem of "Staffing Higher Education."*

PERSONAL AND COLLECTIVE QUALITIES

The qualities the individual faculty member should possess include sound scholarship, professional competence, a clear concept of the role of higher education in society, broad humanistic understanding, lively curiosity, a sincere interest in research, insight into motivation, and a sympathetic, intelligent understanding of young people.

No matter what may be the primary function of the faculty member, he should possess these qualities. In addition, a teacher must know how to make his subject matter alive and understandable to others and to give to students something of his own broad concept of its content and its relationship to other branches of knowledge. Further, he should be able to guide research and to counsel students.

The researcher has a responsibility to teach by example and to create the atmosphere in which intellectual curiosity may thrive.

The administrator's role is to make it possible for staff members to function in a smoothly run organization. He sets an example of how the tools of management contribute to organization, and offers leadership and opportunity to the faculty in its continuing efforts to do better work.

Those who offer special services should always recognize that their function is that of supplying the basic professional assistance which facilitates the operation of the educational process.

Collectively the faculty must realize their intellectual and social interdependence.

Functions of the Faculty

What precisely should be expected of the faculty, individually and collectively? That depends upon the answer to another question:

To what end should our people be educated. The faculty must keep clearly in mind the goals of education and then concentrate its energies on achieving these goals in its students. The least that may properly be expected of the faculty is that it should:

1. Teach effectively all those who are admitted and wish to be taught.
2. Teach not only the youth but also those adults who are seeking further knowledge or skills.
3. Guide and counsel students in their adjustment to adulthood and careers. Instill some of the insight, broad learning, desirable social attitudes, intellectual curiosity, and other personal qualities with which the faculty member himself should be endowed.
4. Conduct the research that is basic to an understanding and mastery of the forces operative in this physical, social, and spiritual world.
5. Aid the student in comprehending the relation between fields of subject matter and between research and action.
6. Administer the system of higher education so that it serves as a model of good management and evidences that the academician himself can synthesize research and action.
7. Develop and provide the instructional tools with which to further these ends.
8. Plan constantly to meet the demands that society increasingly places on the higher education system.
9. Lead the community in social and cultural enterprises.

Variety of Faculty Personnel

No one individual can be expected to perform all of these functions. In the light of the increasing trend toward specialization, it would be the rare individual who would possess professional competence in all of these activities. Essentially, the modern faculty is composed of five separate groups, although an individual may serve in two or more of them. They are administrators, teachers, counselors, researchers, and special service personnel.

The administrators include presidents, provosts or vice presidents, deans, bursars, registrars, and, in some cases, heads of teaching departments. Quite often these staff members teach and do research, and certainly at least the deans are also counselors. The main function of this group, however, is that of management. Management is much more than the active running of the organization; modern management includes intelligent planning in terms of foreseeable future needs, leadership for the teaching and research staff, and the integration of other staff activities. The personnel engaged in special services in-

clude those who construct and administer mental tests for students and who develop appraisal techniques for faculty performance, those who are responsible for the organization and operation of counseling services, the designers and innovators of audio-visual aids, and consultants to industry. These groups are fairly new to many college campuses, and their acceptance will depend upon the assistance they give the teaching function and all other aspects of the educational program.

Often the teacher is also a researcher. In fact, all teachers should continually engage in creative activity. Just as all teachers should continue investigation and study, so should all researchers be permitted to teach. Rarely, if ever, should the two functions be separated.

Ideally, each teacher should act as counselor to his students. An understanding of the psychology of college-age youth, appreciation of the effects of previous experience, command of the techniques for gathering and using pertinent information about individuals, and a realization that learning is a unique process for each individual are requisites for good teaching. In addition, guidance and counseling have highly technical aspects which require professional competence of their own.

The teacher is and must be the mainspring of the guidance and counseling function, but it is necessary that he receive the assistance and support of a professionally trained counseling staff. Teachers and counselors are working toward the same goals; the professional counselor usually teaches one or more classes, and the teacher has the primary responsibility for guidance of the student in the selection of courses of study, and not infrequently counsels on other problems.

While teaching and research are long established faculty functions, professional counseling and guidance are relatively recent innovations, developed largely within the last thirty years. Only within that time have they been recognized as a true faculty function.

Failures of the Past

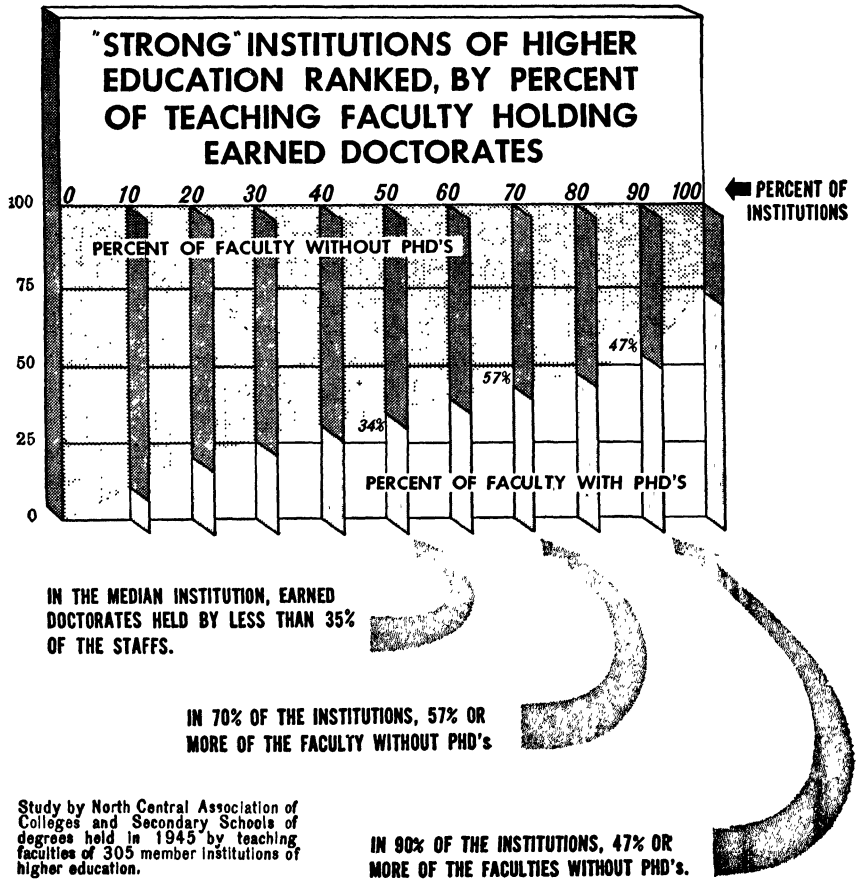
What specifically is the task ahead? To answer this question requires a look backward to determine whether the faculty has consistently provided the services required to meet adequately the objectives of higher education. There is little doubt that the faculty has recognized the functions of colleges and universities. There is nothing discussed above which is new to them. And yet it must be admitted that faculties have not consistently met these qualifications. Stronger personnel and better training are required if the objectives of higher education are to be fully realized.

In 1945 a survey of 305 fairly strong colleges and universities revealed that in 10 percent of the institutions, only 10 percent or less of the teaching faculty had a second graduate, or doctor of philosophy

degree. With exceptions for those individuals with rich experience, the possession of that degree represents a minimum level of training to assure the sound scholarship and professional competence which can rightfully be expected of a faculty member. If these institutions were ranked from those with the highest proportion of Ph. D.'s or equivalents on the staff to those with the lowest proportion, the median institution would be one with less than 35 percent of its teaching staff holding that degree. Even institutions which ranked above the lowest 80 percent and below the top 15 percent of the group had teaching faculties half of whom did not possess the doctor of philosophy degree or its equivalent. (See Chart 2.)

CHART 2

FACULTY TRAINING - 1945



Study by North Central Association of Colleges and Secondary Schools of degrees held in 1945 by teaching faculties of 305 member institutions of higher education.

But the possession of the degree is only a first step in the equipment of the teacher. When the Ph. D. represents the completion of a number of formal courses of a low level of importance or without an overall pattern, and the mastery of an inconsequential research technique, as may be the case, it signifies very little. Only where the degree represents a broad approach to the subject matter field and its relation to human learning, only in so far as it evidences that its possessor can conduct and has conducted independent research, is it a valid measure of preparation.

But the possession of the degree based upon good preparation is still not enough. To knowledge of subject matter and research ability must be added the mastery of teaching techniques. The young instructor frequently lacks this essential skill through no fault of his own, but because the institution did not provide for his acquiring it. Too often graduate schools provide training for research and not for teaching, though a high percentage of their graduates go into college teaching.

The major responsibility for the inadequate mastery of teaching techniques on the part of new recruits rests with the institutions which prepare them. The institutions are largely responsible for one of the serious weaknesses in our system of higher education—teachers with undeveloped teaching abilities. There are at least four defects in our system, particularly in the graduate schools which train college teachers: the requirements for the advanced degree, the formal courses offered, the absence of programs for developing teaching ability, and the lack of student guidance.

It is not possible to endow each potential college teacher with all of the personal qualities that have been described, but it is possible to give the student a reasonable understanding of techniques. Even for the limited number of faculty members with doctoral degrees, the training for teaching is frequently inadequate, even though they may have been well trained to conduct research, to work as administrators, or to perform other specialized tasks. A major part of the task ahead is the preservice education of faculty members for the specific responsibilities which will be theirs after graduation.

This is only a part of the problem. Those with the potential capacity to teach must be and can be encouraged to become teachers. It is a well-known fact that many faculty members lack the qualities of a good teacher, while many of the most capable graduate students do not enter college teaching. Thus recruitment, selection, and placement of the kinds of people needed in college constitute a fundamental need.

But more than selection and recruitment are required. Institutions have failed to provide adequate inservice training for new faculty members. It is essential that when the recruit enters the profession he

be encouraged to continue his personal and professional growth and that he be assisted by the institution in that effort.

Thus, the basic needs in developing a high quality faculty are: (1) adequate preservice training; (2) better recruitment, selection, and placement procedures; and (3) a definite program of inservice training.

FACULTY PERSONNEL REQUIRED

An understanding of the purposes of higher education is necessary before it is possible to determine the numbers of faculty members needed. Two factors must be taken into account: the number and distribution of students by subject matter fields, and the kinds of programs to be taught.

Program Needs

A variety of general and specialized curricula are now offered—humanistic studies, social studies, physical and biological sciences, and technical, vocational, and professional courses of various types. Many of these programs need strengthening. In addition, a wide variety of new courses will require staffing. The volume of this Commission's report "Establishing the Goals" describes the kinds of education needed. A few of the fields which will require new or expanded staff are suggested below.

General Education. The crucial curriculum problem facing higher education today is that of providing an integrated general education program. Responses to a questionnaire distributed in February 1947, stated overwhelmingly that colleges are suffering from the lack of faculty members prepared to teach general education courses; that there is an urgent demand now for a large number of people prepared to give those courses; and that this demand will increase during the next five years.

Adult Education. Higher education faces the inescapable obligation of preparing adult citizens to meet their problems. Colleges and universities have the major responsibility for preparing leaders of adult groups—leaders who can translate the findings of research into understandable terms, who can give basic information on pressing problems, who can increase the understanding of many citizens, and hence increase their value to society. To meet this responsibility, the institutions must expand their extension programs. The burden of this expansion cannot be borne by those who already have full time teaching loads. Many new, specifically prepared teachers who have aptitude for leading adult groups are needed.

International Studies. Colleges and universities should be playing a major role in providing American citizens with the background of

information they need to form the attitudes that will make them intelligent world citizens. College students should acquire a sympathetic and accurate understanding of other peoples as a part of their general education. Some college graduates should be prepared for technical posts and others for positions of leadership in international affairs; many should be equipped to give courses on international relations or on some one region of the world. Research attention should be devoted to the problems of world peace, world trade, and world-wide promotion of democracy. The universities and colleges of the country should provide teaching and research centers on every major region of the world. There is a need for faculty members capable of directing students who are concentrating on professional fields involving international relations, such as diplomatic service and foreign trade. Such programs should develop an understanding of the history, economics, customs, and ideologies of other nations.

Preparation of Teachers. The elementary schools of the Nation, according to the United States Bureau of Labor Statistics, contemplate a need for 1,000,000 new teachers between 1950 and 1960. In addition, the professional preparation programs for these people will necessitate devoting more faculty time per student than in the past. A constant pressure for higher certification standards will require that prospective elementary teachers complete 4 or 5 years of pre-service college preparation, and that prospective secondary school teachers complete at least 5 years of such training. The shortage of personnel to provide the necessary instruction for them is acute.

Counseling and Guidance. There is an obvious need for the counseling and guidance of students. Ideally, each college teacher should perform this function through day-to-day contacts, thus providing a basis for discovering the student's abilities and aptitudes, and establishing rapport. Since not all teachers are equipped to counsel and guide, professionally trained personnel are required. This service is a responsibility of the faculty, and personnel must be available to meet it.

An example of the difficulties caused by the lack of adequate counseling is the situation which prevails with respect to secondary school teachers. Approximately half of all teachers for secondary schools receive their preparation through liberal arts colleges. Frequently the decision to teach is made late in the student's course. Adequate counseling would help the student identify his vocational interest in teaching early enough for him to acquire adequate professional training. Another example of the difficulties related to lack of counseling is the tendency of a student to transfer to a professional curriculum, such as engineering or premedicine, late in his course. Such changes frequently result in loss of credit and time in preparing for his career.

Administrative and Special Service Faculty

The need for strengthening existing programs and for staffing new programs is not the only factor in determining the desirable size of the staff.

In the years just prior to World War II, about 13 percent of the total staff was engaged in administration. As higher education is made available to greater numbers of people, the proportion of administrators may be slightly decreased. After studying various institutions and the possible needs of the system, it appears that 1 administrator will be required for every 10 faculty members (teachers, researchers, and counselors). As to the numbers required to staff the special services, there is little experience on which to base a judgment. But considering the types and extent of service which will be needed, 1 such person for every 15 teachers, researchers, and counselors would seem desirable. On this basis, a balanced faculty for the Nation then might have approximately the following composition:

	Percent
Teachers, researchers, and counselors	85
Administrators	9
Special service personnel	6
Total	100

Thus the problem of determining the size of the administrative staff becomes one of considering the number of the teaching faculty.

Teaching Faculty

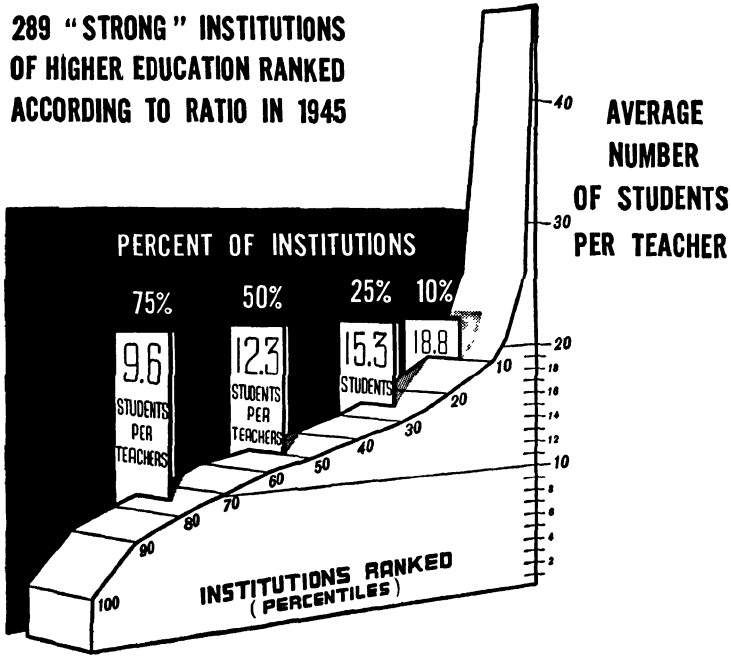
In the years just prior to World War II, there was a close relationship between resident enrollment and the size of the total faculty as measured in terms of full time equivalence (i. e., a person teaching half time is considered as a half-person). This relationship, as measured by the number of students per faculty member, showed a slight downward trend from 1920 to 1940 but was in excess of that prevailing prior to World War I. There is no particular sanctity about any student-teacher ratio. The ideal relationship can be determined only through consideration of several factors: the level of education which is being discussed, the changing relationships of teaching and research, the subject matter field, the availability of special professional services, and the adequacy of clerical and other assistance.

During the regular sessions of the 1946–47 academic year, more than 2⅓ million students were on the Nation's campuses. If the pre-World War II trends had prevailed, there would have been a total faculty of about 210,000 persons or 11 students per faculty member. A reasonable estimate of the faculty for that year is 155,000. This is a national average of 15 students per faculty member, with some institutions reporting a ratio as high as 33 to 1. (See chart 1.)

Had these comparisons been made with teaching faculty only, then the ratios would have shown a larger number of students per teacher. For a group of 289 "strong" institutions, the distribution of the student-teacher ratio in 1945 shows a wide range, with the median institution having a ratio of 12.3 students per teacher, and 43 percent of the institutions having a ratio of 13.0 to 1 or higher.

CHART 3

STUDENT - TEACHER RATIOS—1945



50% of institutions, more than 12 students per teacher.
20% of institutions, more than 16 students per teacher
10% of institutions 19 or more students per teacher.

Study by North Central Association of Colleges and Secondary Schools of students per teacher in 1945 in 289 member institutions of higher education

It is obvious that the comparison of the 1947 ratio with those prevailing before World War I or World War II does not enable us to determine the desirable teacher-pupil ratio. It does, however, indicate a trend which throws light on the situation.

Although the use of audio-visual and other teaching aids may make it possible or even desirable to raise the student-teacher ratio

in certain fields, **the necessity of providing opportunity for personal association between faculty and students makes it desirable to move in the direction of lowering the over-all student-faculty ratio. This means that the trend of the postwar period should be reversed.**

What then shall be the basis for determining the size of the teaching faculty? Obviously the factors cited above must be given full consideration. The need to staff new programs and to strengthen existing ones cannot be ignored. As a result of reports on teaching technique, personal experience, and observation, the Commission concludes that while no one formula is valid for all institutions, all courses of study, and all levels of instruction, some general pattern is possible and desirable as a goal. The Commission realizes that any formula is subject to the criticism that it does not recognize qualitative factors or variation in instructional techniques between scientific courses and those in history, for example. Moreover, it is aware of the fact that there is now no means for determining the number of faculty members needed for the special programs, such as adult education.

While recognizing these and the other limitations of a statistical formula, the Commission believes that the following ratios may serve a useful purpose as a general pattern:

In the 13th and 14th grades (community college, or junior division of 4-year colleges).	A national average ratio of 20 students per faculty member.
In the 15th and 16th grades (senior division of 4-year colleges).	A national average ratio of 13 students per faculty member.
In graduate and professional (schools above the 16th grade).	A national average ratio of 10 students per faculty member.

THE TOTAL NEED

Based on these ratios and on the enrollment goals established for 1952 and 1960, and here 1952 is shown only as a point of interest, faculties of the following size will be required:

	1952	*1960*
Administrative and special services	43,000	50,000
Teaching Faculty	257,000	300,000
Total	300,000	350,000

In the light of the above facts it is clear that the number of additional teachers required to man our system of higher education will be enormous. For example, our present staff should be doubled by 1952, and another 50,000 added by 1960.

The task ahead is of unprecedented magnitude. To provide the number of competent and well-qualified faculty personnel required by American colleges and universities is a problem of the first importance. It can be solved only by herculean efforts.

Preservice Education

The graduate schools of American universities have long provided the traditional avenue for entry into the profession of college teaching. These institutions have built a great tradition of scholarship over the years. It is through their work that America has been able to extend her achievements in many important fields of knowledge. There has been in recent years, however, a widening gap between the demonstrated needs of the country for highly trained personnel and the actual offerings of the graduate schools. It is not within the province of this report to investigate all aspects of this situation. The purpose is, however, to explore this hiatus to the extent that it affects the preservice education of potential members of college faculties.

OCCUPATIONAL INTERESTS OF GRADUATE STUDENTS

Students enrolled in the graduate schools have usually represented at least three rather well-defined occupational interests. (1) The great bulk of enrollment in the past has been composed of those who were planning to teach. (2) There has been a considerable segment aiming at a career in research or administration outside the university. (3) A smaller group has been interested in preparing primarily for research duties on the campus. There have been other interests represented, but these have been a decided minority.

The traditional graduate program aimed at producing the research scholar has been presented with relatively minor variations to one and all of these students. Regardless of objectives or field, the students have been required to follow well-nigh identical procedures. The inflexibility of the graduate schools in the face of demonstrated need for change is a matter of great importance to society. Some effective work was done between 1938 and 1944 by the Commission on Teacher Education in carrying out under the sponsorship of the American Council on Education, a series of

cooperative studies designed to improve teacher education. In the study, *Toward Improving the Ph.D. Degree*, it was pointed out that a great shift has occurred in the objectives and occupations of holders of advanced degrees. It seems likely that the trends noted in that inquiry will be even more marked in the years ahead. The first volume of the Report of the President's Commission, "Establishing the Goals", has presented a number of fields where the need for advanced education will be especially great. The general responsibility of the graduate schools in adjusting to changing social needs is also discussed in this volume.

The present report, however, will explore only the possibility and desirability of adapting the graduate program so that it may better fit the needs of prospective members of college faculties.

The medical or law student enters his period of professional training with well-defined objectives. The medical student is given specific clinical training; in addition, he is required to complete satisfactorily a period of internship before he begins his practice. The law student, likewise, is given definite training in courtroom and other legal procedures. In the education of college teachers, however, it is assumed that the diversities are such that no general plan would be workable. Such an assumption does not appear to be valid and may be used only as a rationalization for lack of careful training.

For at least 20 years there has been a growing demand for change in the education of prospective college teachers. The Association of American Colleges, the American Association of University Professors, the National Society of College Teachers, the regional accrediting associations, and many other professional groups repeatedly have urged more realistic methods for training prospective college teachers. Private educational foundations have subsidized investigations, and various national councils and commissions have issued recommendations.

In spite of all these efforts there is little to indicate that the graduate schools are fully aware of their opportunities and obligations in the preparation of college faculty members.

OBJECTIVES OF GRADUATE STUDY

There are various kinds of experience which the graduate school should offer students preparing for college teaching. Some of the more important are briefly described.

Broad Scholarship and Special Competence

In the first place, we should expect the graduate school experience to provide a prospective teacher with a pattern of study designed to

develop broad and thorough scholarship with special knowledge of his chosen field and the ability to communicate with others at a highly effective level.

Unified Knowledge

There should be a core of unifying, synthesizing studies running throughout the period of preparation but concentrated at the undergraduate level. The basic objectives of this core program are set forth in the Commission's volume, "Establishing the Goals." This program should seek to assure the student's possession of a broad general education in addition to competence in a field of specialization. The compartmentalization of knowledge has grown to such an extent that it has become more and more difficult for students to grasp the relationships of their fields to other disciplines. And as knowledge has grown, the results of compartmentalization have been reflected in increasingly complex social and technical developments which intimately affect human existence.

There is, consequently, need for the broadest kind of interpretive scholarship in everyday life. The multiplicity of subject matter fields makes more and more remote the possibility of any one person's spanning more than a relatively minute segment of human knowledge. By the same token, the increasing specialization within a given field of knowledge has made it impossible for individual faculty members to master completely even the "major" subject of their own specialties.

This Commission is of the opinion that it is necessary for the faculties of the universities to attack the presently unmanageable bulk of specialized learning in an effort to reduce it to basic, understandable concepts.

There was a time when the English essayist, Francis Bacon, could take all learning to be his province. That possibility is long past, but the obligation to understand and to teach the basic concepts and interrelationships of knowledge is stronger than ever. A number of institutions have sought to develop a unifying core of studies primarily at the undergraduate level and to a limited extent in the graduate schools. Illustrations of these are the core curriculum patterns of Princeton, Harvard, Yale, the University of Chicago, and a number of State universities. But much more needs to be done. The Commission recognizes the efforts which will be required to effect such a synthesizing of knowledge, and that the task will have to be carried on simultaneously with the progressively more rapid expansion of highly specialized learning.

A Base for Continued Professional and Personal Growth

A third aspect of work in the graduate schools should be that of providing the student with the means of continuing his professional

and personal growth. Too often it is assumed by the student that his education for college teaching is complete when he is awarded the doctorate degree. On the contrary, the training he has received in fulfilling the requirements for this degree should, if successful, propel him to extend his professional competence throughout his active life. The graduate schools must provide training in the essential tools and instill the incentive for utilizing them.

The graduate schools should assure the student, through his graduate studies, at least the following grounding in his "major" field: a knowledge of the history of the field, an understanding of its most important theories and principles, mastery of a substantial body of facts, and a competence in the working tools to extend knowledge. Beyond this, however, it is desirable to provide education that will equip a student with the thought and working habits which are broadly applicable and which will permit him to grow professionally throughout his lifetime. This type of training is a fundamental prerequisite for teaching.

Basic Auxiliary Skills for Transmitting Knowledge to Others

The most conspicuous weakness of the current graduate programs is the failure to provide potential faculty members with the basic skills and the art necessary to impart knowledge to others. College teaching is the only major learned profession for which there does not exist a well-defined program of preparation directed toward developing the skills which it is essential for the practitioner to possess. The objectives which higher education seeks to achieve cannot be reached unless there is realism in the programs for preparing college teachers.

World War II was the greatest mass training effort ever undertaken in this country. The Nation recognized the great potential resource represented in the training and research facilities of the universities and colleges. These facilities were utilized on an unprecedented scale by the armed forces. Inevitably, defects were revealed in our educational system. The demands of the times were such that a student faced the necessity of absorbing information rapidly and effectively. Ineffectiveness in teaching at times impeded progress in the training program and brought forth such remedial measures as the exigencies of war would permit. A very great impetus was given to the idea of assessing the effectiveness of teaching.

The great postwar migration of former members of the armed forces into the colleges has served to intensify concern for this problem and further to focus public attention upon an issue which had been the concern of the American educator for years. The peacetime expansion of enrollment in American colleges and universities makes still more pressing the problem of providing effective teaching.

It was pointed out in Chapter I of this report that the failure of individuals to learn how to teach is largely the failure of the present graduate school system. Inflexible requirements for the degree, the formality and dispersion of the established curriculum, the absence of programs designed to develop skill in presenting subject matter, and the lack of appropriate guidance have been largely responsible for the fact that advanced degrees frequently do not indicate an ability to teach.

One would be understandably concerned about submitting his person to the ministrations of a surgeon who had had no opportunity to apply his theory in actual practice. One should be concerned equally at the prospect of exposing the minds of college students to a faculty member who lacks adequate preparation in the content of his field and practice in the presentation of subject matter. The long-term results are perhaps less visible, but nonetheless as damaging.

It is clear that it may not be possible for the graduate schools to instill the social consciousness and freshness of spirit which ought to characterize the effective teacher in all who enroll as graduate students. This means that in order to achieve effective results, there must be improvement in recruitment and in selection of those who plan to teach. If effective selection could be made early in the college years, the task of the graduate school in developing good teachers would be made much easier. It is impossible to lay down hard and fast rules for the development of teaching ability, but it is possible to state certain principles that may serve as a guide in such efforts.

ESSENTIAL FACTORS IN PRESERVICE PREPARATION

This Commission holds that the academic offerings of the graduate schools should be suited to the needs of students who are preparing for careers in higher education.

This problem has not received adequate attention. The relative amount of effort required for such adjustment would yield rich dividends in terms of steady improvements in colleges and universities. Many needs are common to all prospective college teachers while those who are preparing for specialty assignments have additional requirements. Some of the needs common to all persons seeking positions in higher education are listed below.

Period of Preparation

The program for preservice preparation for college teaching should embrace the equivalent of three years of study beyond the bachelor's degree. Entrance upon college teaching should be made contingent upon possession of this amount of preparatory work as soon as it is feasible to exact this requirement. At least during the

interim period some recognition may well be given for a certain amount of "equivalent experience" as an important and desirable background for teaching.

Admission

If the recommendation of this commission is to be carried out that graduate and professional schools should enroll 600,000 students by 1960 there is imperative need for increased facilities for such study. Libraries are already inadequate in most graduate institutions; laboratories are overcrowded; class sections are becoming dangerously large.

These facts are simply a preface to stating that until facilities can be expanded, even greater care and diligence is essential in the selection and admission of individuals to graduate schools as candidates for teacher education. Students should be permitted to choose such a course in a given graduate department only when they can show that they have the background to undertake the program successfully. One of the essential qualifications for such study should be a broad program of general education at the undergraduate level, together with evidence of higher scholastic achievement. Many holders of bachelor's degrees are not qualified for preservice training as college teachers. In many cases they should be required to undertake further preliminary work. This process of admission presupposes considerable expansion of research on factors involved in successful teaching, and the application of these findings by better-trained admissions officers.

A university may properly decline to undertake the preparation of an individual for teaching on the ground that he has certain weaknesses which are irremediable or which the institution, at any rate, is not prepared to remedy. But if it accepts and retains him, it has the obligation to provide him with those educational experiences best calculated to develop in him the qualities that will make him professionally competent.

Economic barriers and racial and religious discrimination have reduced materially the number of excellent prospects which the graduate schools should have from which to choose their students. The means of relieving these obstacles to admission to advanced education are discussed in the Commission's volume, "Equalizing and Expanding Individual Opportunity," and specific measures aimed at their early elimination are recommended.

New Patterns

In order to receive official recognition from the university as a professionally prepared teacher in his chosen field, the candidate should complete what has already been described as a pattern of study, appropriate for developing broad scholarship and the ability to communicate with others at the expert level. The candidate should understand

that he is embarking upon a program aimed at developing competencies. The responsibility for achieving these abilities—with or without the benefit of courses—should be placed upon the candidate.

Study Programs and Advisement

Practically no element of the teacher-preparation program can be required of all candidates without running the risk of wasting time in repeating something already well done. It is indispensable, therefore, that the candidate's achievements and his requirements be appraised with great care in planning his study program. A large share of responsibility belongs to the candidate, but he will require assistance in discerning what he needs to do in choosing among the opportunities available. His progress will have to be evaluated periodically and his plans checked for thoroughness of coverage.

He should be given the opportunity to become especially proficient in some area of human knowledge, but not to the extent of overspecialization. The degree of specialization should vary somewhat with the teaching field, but in general it should follow the professional rather than the academic pattern.

Experience has demonstrated that strict departmental control of advanced degree programs is too inflexible for the achievement of objectives common to the entire university. This idea suggests that drastic changes of policy may be necessary in many graduate schools if they are to plan teacher preparation studies which will be professionally realistic and to operate them on a university-wide basis.

It will be important also to strengthen the present advisory service through systematic efforts to procure highly qualified advisers for the prospective faculty members. Men of broad learning, with deep human understanding, and with a sound grasp of educational objectives should be appointed to these positions.

Designation

The successful completion of the teacher preparation program should be indicated by some suitable designation to be conferred by the graduate school. It is not expected that this designation would replace the doctor of philosophy degree, but would be conferred in addition to the degree to attest the candidate's additional achievement.

Opportunity for Training in the Principles of Research

The doctoral degree as presently constituted is primarily a research degree. Although a progressively smaller percentage of graduate students is preparing for a career which would require the use of research techniques, this Commission feels that opportunity for training in such skills should continue to be universally available to all who are preparing for a career in higher education. The emphasis in these techniques should be upon the acquisition of broad

principles, rather than exclusively upon the mastery of some highly particularized form of inquiry. The faculty member who is to grow professionally and preserve his vitality of outlook must be equipped to work independently.

Professional Standards

Every effort should be made to imbue the prospective faculty member with the ideals of the profession he is entering. A conscious effort should be made to give him insight into the objectives and problems of higher education and into the standards held by those who work and study in this field.

The teacher in the graduate school can do much, by example more than by precept, to develop high standards of professional life in his students. Honorary and other professional organizations may exert an extremely important influence in challenging the best efforts of prospective teachers. The administration has a distinct responsibility for the development of a carefully planned assimilation of entrants into the profession.

INTERNSHIP PROGRAM

The great majority of graduate students preparing for academic careers in the colleges go directly into teaching. Smaller numbers begin their careers as researchers, counselors, or special service personnel. A few, usually the more mature individuals, go directly into administrative positions.

This Commission recommends that the graduate schools take advantage of the opportunity and the obligation to make a distinguished contribution through providing internship training for those who plan to enter these different fields. The proposal represents a departure from current practice, but one not too difficult to achieve. Most of the elements necessary for successful internship programs are already available on the campus.

For the Prospective College Teacher

The medical and engineering professions have demonstrated the value of internship as preparation for successful performance. College teaching can derive equally substantial benefits.

A carefully arranged period of supervised internship should become the very keystone of an effective preparatory program for college teachers.

What is contemplated here is something far more comprehensive and more expertly aimed at developing teaching competence than the typical graduate assistantships, although based upon the same principle. In most cases, these assistants receive little or no supervision

in their teaching. The intern would not be one who performs only the simple and repetitive tasks connected with teaching, nor would he do one segment of the teaching job without helping to plan the whole. Internship would be on-the-job training in the finest sense of the term.

This Commission recommends that each graduate school engaged in the preparation of individuals for careers in higher education take steps immediately to expand the supervision of their instructional and research fellowships into a program of real internship.

The form of these programs would depend upon the ingenuity of the planners and upon the resources available. It may be that each graduate department would prefer to plan this activity independently. On the other hand, individual departments may wish to call upon the graduate school or department of education for assistance. It is possible that adequate opportunities for directed classroom experience could be found on the campus of the institution operating the program. It may be necessary or desirable to establish working relationships with nearby junior colleges or 4-year institutions.

Internship might well contemplate some full-time employment in fields other than teaching. The college teacher needs a rich background of experience in other than academic pursuits. For example, the teacher of economics or business administration could present his theories with much greater vigor after a period of service in business or industry. Teachers of foreign language or international relations could profit enormously from a period of travel abroad, an opportunity now available to many through the Fulbright plan. The political scientist who has worked within government at the local, State, or Federal level is professionally enriched by this experience. The possibilities for such arrangements are limited only by the energy and resourcefulness of those who operate the internship activities.

The core of the internship, however, will remain centered about improving the prospective teacher's performance in the classroom. It will be necessary to greatly extend research into the processing of learning and teaching and of improving evaluation procedures. The inauguration of the internship program should not await the establishment or expansion of these research projects in teaching techniques. They are simply the means of providing for its constant betterment.

For Research Workers

Those graduate students who are preparing specifically for careers in research should also have internship opportunities. It is a disturbing commentary upon graduate study that so little attention is given to the actual business of teaching a student effective techniques in research. By the same token, the pressure of other faculty duties often prevents close supervision of research projects. But the increasing

complexity of the techniques and equipment of research foreshadow the necessity for a much more formal period of training in methods of inquiry. The vast expansion in the use of machines to perform certain functions in research, the spread of survey and sampling techniques, together with various elements of statistical practice, have opened new vistas for the scholar in a number of fields. It must be remembered, however, that the essence of research is not found in tools or in techniques alone, but must include a single-minded dedication to the search for new truth. The spirit of inquiry and honesty in facing facts can best be learned through actual work with those who have mastered the discipline.

This Commission proposes the extension of formalized programs aimed at teaching the methods of investigation. Those who are planning a career in research should be assured of the opportunity for training in research techniques under conditions approximating actual work experience.

For Counselors and Special Service Personnel

The privilege of learning by doing should be expanded to embrace those graduate students who plan careers as counselors or members of the special services branch of the institution. The phrase "special service" is used here to refer to such activities as test construction and evaluation, counseling services, provision of audio-visual aids, and parallelism maintenance of historical and statistical records of the work of the institution. This group of activities is usually centralized within an institution and is coming to have increasing importance in the management plan of colleges and universities.

The preparation of an adequate supply of personnel for these activities will be facilitated by the establishment of appropriate internship opportunities. This Commission recommends that such facilities be provided.

For Prospective College Administrators

The classroom has been the traditional proving ground for the college or university administrator. A thorough grounding in teaching in an educational institution is certainly a desirable preparation for the potential administrator. It would seem desirable to institute carefully designed programs of selection and training for those graduate students with experience and maturity who show promise in academic administration.

Administrative skills must be learned largely through experience; but by an internship program, it is possible and necessary to pass on to prospective administrators some of the accumulated wisdom of those who have had successful experience in college and university administration.

The trainee should have the opportunity through progressively more difficult assignments to learn the techniques of group leadership. By precept and practice the student should be imbued with the attitudes necessary for democratic administration. He should be guided in experiences which would permit him to work with the public relations problems of the institution. If feasible, he should be given experience in the organization and conduct of fund-raising campaigns. In publicly supported institutions he should be acquainted with the problems of legislative liaison. His work should be so arranged that he would have ample occasion to participate in actions directed toward the improvement of instruction. In short, he should be given the opportunity to appreciate the deep insight and great skill necessary in handling the extraordinarily diverse activities of an institution of higher education.

The practice of conducting summer workshops for college executives should be continued and expanded. The most promising graduate interns might be invited to participate in these programs. But in all of these efforts to introduce individuals to personnel policies, operational procedures, and other management skills, it should never be forgotten that the primary obligation of an administrator is to provide the climate of endeavor which will produce the fullest realization of the ideals of learning. It is the obligation of the administration and the graduate school alike to cooperate in developing this attitude in the intern.

NEXT STEPS IN PRESERVICE EDUCATION PROGRAMS

There is no simple formula for initiating action to put the proposed graduate program and internships into effect. The Commission is of the opinion, however, that there are several lines along which attacks might be launched simultaneously.

Leadership

A vigorous and well-conceived program in a leading academic institution, under the personal championship of a dynamic figure, has frequently touched off chain reactions in educational practice. The time is opportune for such leadership to be exercised in behalf of teacher preparation.

Liaison with Employers

College and university administrators through their organizations should be more vocal as employers in demanding better teacher preparation programs. It would be highly effective if their requests could be made upon a personal, cooperative-planning basis. They should make regular calls upon individual graduate deans, depart-

ment heads, and professors in charge of graduate courses and present, through personal conference, the urgency of their needs for properly trained personnel. Many such conferences are necessary. They should be sought.

Reorganization of the Graduate School

The failure of graduate education to take into account the needs of teachers has stemmed primarily from the amorphous, unorganized nature of the typical graduate school. If only a few of the leading institutions, under the leadership of farsighted presidents, faculty members, and governing boards, would set up a functional organization for graduate education, they would affect immediately the preservice preparation of college teachers. There are some who go so far as to insist upon the total abolition of the graduate school structure as it stands in 1947. Such a move throws responsibility for standards and methods of training directly upon the departments concerned. The usefulness of such a device would be contingent upon the individual leadership in the various departments.

Further Study of the Problem

There have been a number of interesting efforts made to concentrate attention upon the problem of preparing college instructors but there has not been a long-range, concerted, national effort to improve their preservice education.

Machinery should be set up immediately for exploring the feasibility of a national cooperative developmental study for the improvement of college teacher preparation. Such a study might be similar in conception to the cooperative inquiries of the Commission on Teacher Education already mentioned. If the exploration indicates that such an undertaking is practicable, no time should be lost in inaugurating it under the sponsorship of a professional organization which could secure the voluntary and eager cooperation of the nation's leading graduate schools.

The Commission is fully aware that the objectives and programs described in the earlier part of this chapter may not be realized for a period of years. Graduate schools, like other institutions, grow best through soundly conceived, evolutionary developments. The will to seek these developments should become an even stronger, integral part of the planning of every great institution.

THE IMMEDIATE EMERGENCY

The pent-up demand for college education has brought unprecedented enrollments to American institutions of higher education. The Commission believes that a properly balanced and adequate staff

to handle present and potential enrollment will call for approximately 350,000 faculty members in 1960. This means an increase of more than 125 percent over the 1946–47 figure, estimated at 155,000. It is obvious that concerted action is necessary if 195,000 new faculty positions for colleges and universities are to be filled by 1960.

As a result of this need, graduate schools face an emergency situation if they are to provide to the youth of America the services of instructors who possess even minimum acceptable qualifications. The following steps are suggested for meeting this emergency.

1. Graduate schools might continue to develop and to expand a special 2-year program designed to prepare beginning college teachers. The program should include provision for the broad study contemplated in the regular 3-year schedules. Some degree of specialization may be deferred; dissertations may be postponed; and normal course loads may be raised slightly. Internship for at least half of the period of the normal program should be provided, and increased guidance facilities afforded. The educational experience in this curriculum would, of course, be fully applicable toward the doctor of philosophy degree.
2. Funds from foundations, private donors, and public sources should be made available in generous amounts to finance these special programs.
3. Individual colleges should seek to identify, and enlist in the preparation program, those holders of baccalaureate degrees to whom they can extend reasonable assurances of employment upon completion of the special program.
4. The program to expand educational opportunity recommended in the second volume of the Report of the President's Commission, "Equalizing and Expanding Individual Opportunity," should result in students accepting an invitation to participate in this special preparation program.
5. The entire effort should be coordinated and promoted by a suitable national professional agency.

It is expected that the bulk of the growth in college enrollment during the next decade will be absorbed by the community colleges. The community-centered, community-serving institution is rapidly emerging as a distinctive American institution. The curriculum it is developing calls for some unique teaching abilities. The basic program of preparing teachers for these institutions will resemble closely that which has been discussed at length above. The emergency aspects of the need make it desirable to call special attention to the problem. There are other special subjects which would be included in the training of the prospective community college teacher. For example, the

community college teacher needs an understanding of the community, an insight into the total public school program, and a background in the special professional problems of the community college.

Two years of graduate study, including a rich internship, should be sufficient to equip these teachers with minimum qualifications.

Such a 2-year program, however, should be accepted only during the period of the emergency and as a temporary expedient aimed at meeting the needs of prospective teachers for the thirteenth and fourteenth grades.

Recruitment, Selection, and Placement

Better education will result largely from more stimulating and challenging contacts between teachers and students. These contacts are primarily person-to-person relationships, which means that the personal equation is of first importance in the educative process. More and better teachers working with more and more interested learners is a large portion of the answer to a better education. How can we get more and better teachers, teachers with sufficient background, understanding, and ability to cope successfully with the fundamental problems involved? The present chapter suggests some answers by treating each of the following aspects of this important question: recruitment, selection, and placement.

RECRUITMENT OF FACULTY

There were approximately 135,000 teachers and research workers and 20,000 administrative and special services personnel on the American campuses in 1947. As has been previously stated, higher education will require 257,000 teachers and research workers in 1952, and 300,000 in 1960 if this Commission's recommendations are carried out. The number of persons needed for general administrative and special services is expected to rise to 43,000 in 1952 and 50,000 in 1960.

Considering retirements, drop-outs, and the desirable elimination of substandard and emergency teachers, a minimum of 250,000 new persons will be needed on college faculties by 1960, of whom about 55,000 will be replacements and 195,000 will fill new positions. Such a vast number of top-flight young men and women are not likely to enter the profession in the next 12 years without special encouragement. They will have to be recruited, consciously, directly, and aggressively.

Vigorous recruitment efforts are justifiable from the point of view of society and the individual. To society, effective college teaching offers a means of bringing intelligence to bear upon the solution of fundamental problems, for the release of human energy through the

increase of knowledge, for preparing people to operate our increasingly complex civilization. To the individual the profession affords an opportunity for maintaining stimulating contact with ideas and persons, rendering satisfying service, and receiving an increasing degree of prestige and financial security.

Inducements to Teaching

Among the more important factors for attracting competent persons into the teaching profession are adequate salaries, reasonable tenure, and proper provisions for retirement. These are discussed in other chapters of this volume.

Beyond these factors, the most important aid in enlisting and recruiting teachers is psychological. In a national opinion poll conducted for the Commission, college professors rank seventh in a rating of the prestige of 90 occupations, topped only by United States Supreme Court Justices, physicians, State Governors, members of the President's Cabinet, diplomats in the United States Foreign Service, and mayors of large cities. It is apparent that teaching in college is generally recognized as one of the most important services to society but too few young people are aware of this fact.

The Future Teachers of America, organized among high school and college students, has for its purpose the giving of information and inspiration to students who prepare for teaching. It is not selective as to membership. No doubt some who join the FTA ought not later to be encouraged to become teachers, but the organization serves the useful purpose of bringing to the attention of many students the opportunities offered by the teaching profession.

There are several preprofessional and professional honor societies in the educational field with chapters in many universities and colleges. While the members of these organizations have usually been identified already as prospective teachers, the activities of these societies doubtless help to confirm them in their ambition. The presence and program of such groups on a campus tend to give prestige and recognition to education as a career.

Sources of Personnel

There are four major sources of supply for new faculty: (1) adults now in some other line of work; (2) recent graduates of colleges and universities not yet established in a life career; (3) students who are or will be enrolled in colleges and universities; (4) secondary school teachers who might wish to enter college employment.

A comparison was made of the number of persons who reported to the United States Bureau of the Census that college teaching was their major occupation in 1940 and the number of faculty members which the institutions reported were on their staff during the same

year. From a comparison of the number reported by institutions and the number of individuals reporting college teaching as their occupation, it is evident that one-third of the total full-time and part-time college and university teaching positions normally have been held by persons whose preparation and major employment was in another field. It is estimated that 1 million men and women in America have had 5 years or more of college training or study. There are many more without this academic background but with rich self-education and practical experience who can teach effectively in their specialized fields. The future will probably see an increase in the use of their part-time services, notably in the expanding field of adult education. The major burden of college teaching, however, should not be carried by persons whose primary interest and preparation lies elsewhere.

A second source of supply lies in the large numbers of graduates of colleges and universities who have taken employment other than teaching but who are not yet established in a life career. It is reasonable to assume that a fair proportion of them would be competent teachers; that a year-round, dynamic recruitment program would draw many young people back to the campuses for graduate work and teacher training. The availability of general fellowships and other attractions might induce a significant, although relatively small, number of otherwise employed holders of graduate degrees to pursue further preparation for college employment.

The recent faculty shortage has been due in part to the restricted number of persons receiving undergraduate and graduate degrees during the war years. The system has failed to receive enough new entrants to serve either as normal replacements or as necessary additions to the present faculties.

In the 6-year period 1940–45, the United States Office of Education reports that only 15,971 doctoral degrees were granted. The possession of a doctoral degree, as previously stated, generally is considered evidence of minimal training for college teaching. Yet of even this limited number, by no means all entered college teaching. In the same 6-year period, the United States Office of Education reports that 100,759 masters degrees were granted, and normally only a very small percentage of these, without additional training, would become members of college faculties. However, in the 1946–47 teacher shortage, recruits were drawn from this latter group and even from graduates with only the bachelor's degree.

The total picture is not encouraging. The United States Office of Education reports that 3,787 doctorates were awarded during the academic year 1947 as compared with 3,290 in 1940 and 3,497 in 1942. Further, there is strong evidence that the graduate students of today are less interested in teaching than formerly.

The largest potential source of supply is the young people presently enrolled or who will enroll in the colleges and universities of the country.

A fourth source would be an unknown proportion of high-school teachers who might desire to become members of college faculties and who would consider this a step forward in their professional careers. Without handicapping unduly the secondary schools, a program of recruitment for the faculties of institutions of higher education should logically be directed to adults already trained and practiced in the educational professions.

A PROGRAM OF RECRUITMENT

This Commission is of the opinion that the major source of supply for new trained college faculty always will be the student body of undergraduate and graduate schools. The Federal Government, professional and industrial research organizations, and private business enterprises are conducting skillful and well-financed campaigns to attract college graduates. These agencies are offering scholarships, salary inducements, and superior working conditions. In order that colleges and universities may meet this competition successfully, the following recommendations are made.

Recruitment of needed faculty should be as well organized and carefully conducted as the procurement effort of competing employers.

The various national educational organizations, through their local units, should conduct talent searches and stimulate local recruitment activity. Carefully chosen visitors and advisers, serving under appropriate organizational sponsors, should interview promising high-school and college students. Advertising and publicity pointing out the rewards and satisfactions of the profession should be directed toward college enrollees and the general public. Professional journals and associations, academic meetings, and honorary societies should strive to raise the morale of those already in the profession and make their enthusiasm contagious.

Promising students who desire to prepare themselves for college employment should be urged to apply for fellowships.

In the volume "Equalizing and Expanding Individual Opportunity", this Commission recommends that fellowships be provided by the Federal Government, supplementing State and private funds, as one of the major efforts to promote national interest in advanced training including preparation for the field of college employment. These fellowships are to be open only to advanced students of high scholarship and potential leadership.

The experience of Princeton University with the Woodrow Wilson Fellowships offers compelling testimony to the fact that desirable candidates for preparation as college teachers respond in large numbers to invitations to enter upon graduate study for that purpose. In the immediate future, to meet emergency requirements, universities should approach foundations and other public and private donors for additional funds for teacher-fellowships.

Frequently special scholarships are offered by private organizations for advanced training in a given field—for example, nuclear physics—and these are made contingent upon later acceptance of a position with the scholarship providing agency. It is suggested by the Commission that a given proportion, say 10 percent of such scholarship funds, should be reserved for persons who will prepare for and enter college teaching or research in that particular field. This assures the continuance and vitality of such specialized programs both on the campuses and in the industrial or research organizations.

The faculty of each institution should stimulate the interest of all students in professional educational activities.

It seems reasonable to expect that teachers, counselors, researchers, and administrators, with a sincere interest in the over-all welfare of our society, should feel an obligation to recruit outstanding talent, as well as to guide away from teaching and into something more suitable, those who are not well qualified to meet the particular requirements of the profession. The enthusiasm and excellence which we should expect from staff members in the secondary schools and in the institutions of higher education constitute a most effective means of interesting young people in teaching careers. *The influence of excellent teachers is great. The effect of inept, unimaginative teachers in conditioning young people against the profession is equally great and cannot be tolerated.*

Due to the unfortunate economic status of the profession, most undergraduate students evince slight interest in it. Yet the situation is not hopeless. There are many present day college students who have made unrealistic vocational choices, or are still undecided; with proper guidance many would make good teachers and would doubtless find it a satisfying career under the improved conditions which this Commission recommends and anticipates.

An agency, national in scope, should be charged with the responsibility for promoting and coordinating recruitment efforts.

The agency chosen might well be one of the existing national professional associations, or it might be a specially appointed group. It would perform the functions of marshalling resources, stimulating action, and focusing public attention. The success of such recruitment efforts as have been proposed above is dependent largely upon the provision of leadership, which must be bold and imaginative in

devising ways and means of picturing teaching as the glorious adventure that it really is.

Stress has been given throughout this discussion to the problem of recruiting for college teaching, but it must be remembered that, in reality, the same techniques and agencies serve also to recruit qualified persons for research work, general administrative functions and the special services.

SELECTION OF FACULTY

The various techniques and media of college faculty recruitment discussed above would operate consistently at all levels in the educational system.

Selection is a continuous process. Teacher selection begins when the individual first attracts attention as a promising, potential teacher and extends to the time of his final acceptance as an accredited member of the profession. The problem of attracting promising men and women to the teaching profession is one of the most important in American education and the one farthest from solution. The best possible teacher education resources will be wasted if recruits to such programs are from among less able students. This means that at some point or points there must be elimination of candidates who can render more service or less damage in another field.

Principles and Procedures of Selection

Although the process of selection and guidance of prospective teachers is never completed, entrance into the teacher-education program is the time when effective guidance needs to be particularly exercised. The meshes in the selection sieve must be finer at this point than in the earlier stages of guidance. At this point it is the responsibility of the teacher-education institution to dissuade from the program any persons for whom available evidence indicates a lack of the basic qualities for teaching. This responsibility may be more easily met if it is recognized that in such guidance the individual is being assisted, while at the same time future students are being protected.

There is today no positive program for selecting those who should teach. Few graduate schools have machinery or have fixed the responsibility for selecting potentially capable faculty members or for rejecting unlikely ones. Relatively little is known about the candidates' previous experiences and personal qualifications when they are admitted. Further, there are few graduate curricula specifically designed for the preparation of faculty members, and, in most instances, only academic attrition is relied upon to make selection from among those who are in training.

A serious result of this lack of selection at the admission level and during the preservice period is that prospective employers find it difficult to secure pertinent information about faculty candidates. Most of the available evidence is restricted to formal records of credits and grades, or is based on subjective factors. Nowhere does there exist a well-defined, scientifically planned program for assembling objective, unbiased reports which will contribute to the final selection of faculty talent.

A positive program for developing an effective selection process requires a general acceptance of certain fundamental principles and an application of them in the procedures adopted. The following principles are recommended:

1. That the university graduate schools take initial responsibility for preadmission and in-course selection of prospective college faculty. Personal qualifications, social attitudes, educational training, scholastic achievement, interest in and grasp of the subject matter, are among factors to be considered in the evaluation of each student's potential.
2. That there be Nation-wide acceptance of a three-year period of graduate study as the normal and proper pattern of preparation. This allows time and opportunity for a realistic study and selection program. For prospective teachers in junior colleges, for teachers in special fields such as the arts, and for emergency posts, special preparation programs may be acceptable.
3. That internship, under graduate school sponsorship, is a necessary preparation and an invaluable means of appraising would-be college faculty members.
4. That there be a distinct and official designation for students who have completed the essential preparation programs.
5. That institutions of higher education select their faculties from those who have been officially designated by the graduate schools or from persons possessing experience equivalent to the preservice teacher training.

In order to implement these principles, the academic institutions must:

1. Create criteria and develop machinery for initial selection, counseling, and final approval of teachers.
2. Develop and use the intern system as well as appropriate tests for measuring not only sound and well-rounded scholarship but also teaching aptitude.
3. Develop criteria for evaluating nonacademic experience in specialized fields as background and preparation for college employment.

4. Develop techniques for evaluating the probation or orientation employment period in terms of selection of permanent staff members.
5. Develop pertinent and reliable information regarding prospective faculty employers.

The Administrator's Role in Selection

The administrators have the responsibility for selecting faculty members and are in the key position to provide conditions conducive to personal and professional growth. *In order that appointments may be made on the basis of merit, to the exclusion of extraneous factors, the qualifications to be emphasized are those which have a direct bearing on teaching success.*

Preference in selection of faculty members because of local residence, and discrimination because of marital status, race, or religious affiliation is unscientific, unprofessional, and un-American. The promotion of democratic ideals which is so peculiarly a responsibility of educational institutions suffers greatly through failure to practice consistently these ideals in the actual operation of the colleges and universities.

Colleges and universities annually appoint two kinds of faculty personnel: young men and women, to carry on introductory work and to assure the vigorous continuity of the several departments; and distinguished persons, for advanced work and immediate prestige. The latter are easily singled out by their reputation among their fellows.

In choosing young people, colleges tend to follow two opposite rules: they take their graduates or they take any but their own. The arguments are evenly matched—one, that colleges know their own product best and think it the best trained; two, that filling the ranks exclusively from their own people soon produces the bad results of "inbreeding." Both rules work against the only good rule, which is to judge cases as fully as possible on their merits, and to choose not classes of men but individuals.

In theory, it should not be difficult to discover a candidate's qualifications before hiring. The applicant customarily submits a complete scholastic record, letters of recommendation, and he is usually available for interview. Reports from those who have had previous work experience with the candidate ought to be indispensable sources of information about such qualities as sincerity, ability to cooperate with associates, initiative, and energy; but unfortunately even this kind of information rarely provides a forecast of teaching ability. Favorable reports on the applicant's work as an intern and later, in the probation employment period, are perhaps the surest indications of the probable success of the new teacher.

The personal interview is an extremely fruitful means of appraising characteristics such as appearance, voice, poise, and habits of dress. It also may afford an excellent informal opportunity for the officials of the institution to judge whether the applicant has faith in his work and definite ideas for accomplishing his educational purposes. The interview is helpful to the applicant also, in that it may give him insight into the objectives of the institution, and indicate the relationship of the institution to the community.

A word of warning derives from the observation that good teachers will never be identical. They may differ in endless, unpredictable ways, yet together may form an admirable faculty. This is possible because the students also display a variety of human traits and cannot all be reached and moved by the same approaches. Skillful selection acknowledges differences in persons and situations; locates and defines the competencies of staff members in terms of the people with whom they are to deal, the environment in which they are to work, and the objectives toward which they are to strive. Having selected its faculty, the institution should be ever imaginative and experimental in devising new ways and means for developing further the competencies needed.

PLACEMENT OF INDIVIDUALS

American tradition generally upholds the freedom of the institution to choose its teachers. Selection is ordinarily made by the administrative officials of the institutions. **For maximum efficiency in bringing together supply and demand, this Commission recommends the establishment of a Nation-wide clearing house of information regarding personnel needs of colleges and universities and personnel to meet these needs.**

Negotiation between prospective employers and employees may be direct or may be carried on with further assistance from the clearing house. Periodic follow-ups would insure that the record of every applicant contains up-to-date information, and those who are not eligible for immediate employment are weeded out of the active list. The services of the agency would be made widely known through cooperative agencies, but information regarding individuals and institutions would be kept strictly confidential.

Such a clearing house program would be national in scope but might also provide valuable service to prospective employers and employees in foreign countries. It will be eminently successful if used to supplement and coordinate the placement activities of professional organizations and other agencies. It will require liberal financing by the Federal Government or by voluntary associations and institutions.

Inservice Education

Success in the future for higher education requires the most effective instruction that it is possible to achieve. Ineffective teaching cannot be tolerated, and more effective teaching will need to be constantly sought. Faculty personnel will need to be alert to rapidly changing methods and techniques of research.

Changes in our social and economic life, usually gradual, were accelerated by World War II. Higher education must do more than reflect such change; it must be a forceful agency in giving direction to these changes. But colleges and universities will exercise such leadership only if experienced faculty members, thousands of young beginners, and the inadequately prepared instructors brought in to meet emergency needs, are all challenged vigorously to strengthen both their command of subject matter and their conduct of instruction and research. They will need also to keep pace with the increasing number and kinds of responsibilities thrust upon them.

The process of strengthening the effectiveness of the faculty cannot be left to chance. Comprehensive programs for inservice education are needed on every college and university campus.

No over-all pattern can be recommended since the nature and extent of such a program will vary with individual institutions. But inservice education frankly recognizes that initial employment as a faculty member marks only a change in the scene of self-education, not a terminal point. The attainment of permanent tenure marks arrival at self-responsibility for continued growth, not the peak of educational attainment.

Although no sharp line of differentiation exists between the responsibility of the institution and of the individual for his continuing education and improvement, they are discussed separately in the following brief analysis of desirable inservice activities. It is recognized that the attitude of the faculty member toward self-improvement is just as vital as that of the administration if any program for the improvement of teaching and research is to yield results.

No attempt is made in this report to distinguish between the various levels of administration that are responsible for the in-service program. Some of the suggested activities involve top administration; this is especially true in the development of an atmosphere which will not cater to mediocrity and which will encourage the entire staff to strive for ever more effective results. Other activities rest largely with the dean of a college or the chairman of a department.

At least six types of activites, each possible of wide variation to meet local needs, are desirable means for the in-service development of faculty personnel. These are the induction of new members, opportunity for group participation, intervisitation and exchange, use of outside resources, the development of central services, and directed teaching.

Induction of New Faculty Members

For many years, it has been the practice of a number of colleges and universities to require new students to come to the institution several days before college opens. During this period a carefully planned program is given to imbue them with the purpose and spirit of the institution and to acquaint them with its services.

The typical new faculty member arrives only long enough in advance to find housing accommodations, procure his teaching schedule, and be assigned an office. Yet certainly it is more important for the new faculty member than for the new student to be at least as fully oriented to the institution. Orientation sessions for new faculty members may be used to build morale, acquaint them with resources for instruction and research, and put emphasis upon teaching for the sake of the whole college as well as for the sake of the department. Careful attention to welcoming and guiding the individual entrant pays high dividends.

An increasing number of institutions have found it desirable to prepare a concise summary of the history, purpose, and operational procedures of the college to present to new faculty members. The preparation and frequent revision of such a manual also provide a further opportunity for in-service appraisal of existing procedures jointly by faculty and administrative officers.

Opportunity for Group Participation

The most obvious opportunity for group action is in the regular faculty meetings. Yet all too often they become tiresomely routine and deal with unimportant details rather than significant issues. The regularly scheduled, periodic faculty meeting is one of the oldest institutions of college life. At one time it was expected to carry the

major burden of "educating the faculty." Within recent years its functions in this respect have been largely supplanted by cooperative, informally scheduled group studies.

Whether the formal faculty meeting is an asset or a liability in a program of in-service education depends largely upon the purposes which such meetings are to serve. Faculty meetings are assets when they are designed deliberately and skillfully to build morale. They should be carefully planned and expertly conducted, or not held at all. Successful faculty meetings have presented opportunities for one department or division to get to know what another department or division is doing, and why. They have been devoted to presentation of current data about institutional enrollment, admission policies, and the marking system. They have allowed actual demonstration of services available from such resources as the college Central Services Divisions. They have featured speakers with new ideas. They have afforded opportunities for round-table discussion of current issues.

For a faculty, busily engaged in a wide variety of improvement projects, meetings may well be few and devoted chiefly to the building of morale and of common grounding in institutional policy. On the other hand, if all college meetings are to be the core of the improvement program, they deserve tangible administrative support not only through careful planning but also through the investment of such funds as may be necessary, for example, to procure leaders in various fields from outside the faculty.

Departmental meetings provide another opportunity for group participation. Discussions and reports of such matters as course content, methods of presentation, facilitation of essential class routine, and research activities of department members and students can make such meetings a basis for the continual growth of every member of the department.

Less obvious but equally important is provision for faculty participation in one or more of a wide variety of other meaningful group activities. Groups of faculty members may engage in planning for general education, in projecting particular courses, or in degree programs. To illustrate, the realization of a college's objective to develop the scientific attitude may call for committee work of continued character; or, volunteer groups may plan and execute testing programs and set up experimental teaching procedures. The extent to which group faculty endeavor is employed in some institutions to recast college and university instruction is an impressive feature of modern higher education.

An extremely important area of group endeavor is that of developing the most effective means of stimulating and guiding research by students. This is even more important in relation to the term papers

and incourse projects of undergraduates than in relation to research at the doctoral level. It is while still an undergraduate that the research attitude is developed and primary techniques are mastered. The coordination of a series of individual research projects into a significant study has frequently been developed through group planning by faculty members.

Since the value of group participation depends so largely upon the spirit in which it is conducted and the methods of its operation, the general principles of group action are briefly summarized below.

Voluntary participation should be the major pattern. Spontaneously formed groups to work on problems of immediate concern, such as the selection of films for a course in biology, usually start faster and go farther than formal committees appointed to carry on a complete curriculum study. Even when a comprehensive curriculum revision program is contemplated, it is a good policy to make individual participation voluntary.

Group work is most productive when the objectives are of immediate concern to the persons involved. A typical faculty group works much harder at the task of defining "teaching load," for example, than at "defining the relationship of the college to the social order." The problems of administrators or other leaders may not be problems in the minds of teachers; it is a mistake to assume that the existence of a problem and the eagerness of a faculty group to attack it are synonomous.

Group decisions should result in action. Faculty members must see that their deliberations and study do have immediate effect. Long term, abstract study alone does not hold interest or induce the intense effort which is desirable; deliberations which have some immediate results, such as the purchase of new movie projectors, or the issuance of a career guidebook for students, give faculty members a satisfying sense of accomplishment. No means of overcoming the dampening effect of administrative vetoes or inertia have yet been found.

Consensus is the aim of group study. Listening to arguments and then taking a vote is not the process for getting the most out of group study. Attitude polls based on thorough discussion are preferable to firm commitments by individuals. At its best, group study results in the generation of new ideas to which most participants can give allegiance; it is less productive when it eventuates in merely counting the adherents to differing old ideas.

Informal procedures are most desirable. Much promising group endeavor has been stifled by too much formality in procedure. Group study meetings are best when they are work sessions unhampered by the restraints imposed by strict parliamentary decorum. Too much concern with the lines of authority frequently destroys initiative and

originality. Few administrators, or other faculty leaders, have become sufficiently familiar with the growing body of knowledge concerning the strategy of group leadership; yet, there is ample evidence that proper strategy can assure desirable outcomes.

Skillful leadership is necessary for successful group meetings. Many promising group endeavors bog down because study sessions are so conducted that they frustrate most of the participants. A study group is much more than several persons who get together and talk—or listen. It is a team which is attempting to do by collective effort a job which no person could do so well alone; skillfully led group meetings facilitate teamwork.

Follow-through between meetings is essential. The effective group meeting results in acceptance of tasks to be performed in preparation for the next meeting. It is a major function of leadership to take steps that will assure the performance of such tasks.

Effective procedure is from specific to general. Administrators tend to think in terms of a logical approach to curriculum problems—formulating an over-all philosophy first, then stating broad objectives, appraising the present program in terms of those objectives, defining weaknesses, and discovering ways to eliminate them. Experience demonstrates that this approach is likely to be unproductive of the one essential change, a change in the thinking and teaching and research activities of individual faculty members. Far better results have been secured by approaches which seize upon the expressed concerns of faculty members and provide an opportunity to do something tangible about those concerns. This type of approach proceeds from the specific to the general, from the symptom to the cause, and then to the remedy.

Organization for group work should be kept simple. Machinery for conducting group studies need not be elaborate, and is always a secondary consideration. Focusing attention upon the organization rather than upon the objectives may retard desirable developments. Maintaining a pattern is not nearly so important as providing for the progress of ideas.

Intervisitation and Exchange

Institutions seeking faculty improvement would do well to provide freely for intervisitation of faculty members. Such visits may be to classes either within or outside of the department, or to classes in other institutions. Such visitation should not be left to the whim of an instructor but should be an integral part of the inservice education program. To make each visitation most effective, preliminary planning is essential, and the department head or dean has a major responsibility in developing it.

Visiting may be a group enterprise as well as an individual undertaking. "Clinics" which revolve around the teaching of one volunteer

who has been observed by a group of colleagues frequently have proved successful.

The practice of interinstitutional exchange of professors has a long history in America, but has never been common. When this device is used in favorable conditions and is planned to afford opportunity for individual development, it has great potential usefulness—especially since exchange with foreign universities again is becoming possible and is increasingly desirable.

It is strongly recommended that faculty intervisitation and exchange become widespread and more effectively employed as a means of inservice growth. Some steps should be taken to facilitate this development.

Drawing Upon Outside Resources

Consultants from outside the college may render distinct service not only to planning groups but also to the entire faculty. Leadership makes one of its richest contributions in serving as liaison between local needs and outside consultants. Capable speakers on technical or popular subjects may keep the faculty more fully informed of significant developments outside of its own field of usual interest. The typical college or university has made, in the past, only slight use of consultative and other services; it should tap these resources more fully in the future.

Another means of using outside resources is through participation in interinstitutional studies. Recent years have witnessed such undertakings as the Cooperative Study in General Education and the cooperative studies of the Commission on Teacher Education of the American Council on Education, both of which have made marked contributions to the growth of individual faculty members. Moves now underway to launch or expand regional studies of the same character are promising extensions of a valuable idea. College and university leaders would do well to explore the possibilities inherent in such voluntary and cooperative action.

Development of Central Services

There are many services, requiring specialized personnel and expensive equipment, which are an integral part of the activities of various groups on the campus. Some of these are evaluation programs, testing programs, audio-visual aids, statistical services, reference services. The last decade has witnessed the establishment by several universities and colleges of central units to provide these services. Their establishment not only effects economy for the institution but also serves as an aid to the individual faculty member and assists in unifying these activities on the campus.

A centralized agency to prepare examinations for individual courses has the advantage of freeing the instructor's time for other activities. Such service is especially helpful when objective tests are used. To be used wisely, however, and to assure inclusion of the factors emphasized by the instructor, there should be adequate consultation between the teacher of the course and the person in the testing service who prepares and scores the examination. There is testimony that technical assistance on tests has made fundamental improvements in the practice of teaching by many instructors. Such centers may make even more significant contributions to faculty growth in the future.

Since the statistical aspect of research is being done more and more on machines, there is now greater need than ever for a centralized statistical service headed by a competent statistician. Not only can the machines save time and labor, but the statistician in charge of that service can do much to improve and coordinate the research activities of both faculty and students by providing information on what others are doing and expert judgment on statistical techniques.

The library should be adequately staffed to serve the faculty by preparing lists of references, current bibliographies in specific fields, and photostat service. Such materials made available to the faculty will do much to improve both teaching and research. Too often the library is thought of primarily in terms of its help to students, not as a central service for the faculty.

Through interlibrary loans and other techniques much more extensive use can be made than at present of the rich resources of the larger libraries and especially of the Library of Congress.

Equally important services can be performed by centers for audio-visual aids. The importance of radio, recordings, motion pictures, filmstrips, slides, exhibits, and other similar instructional aids can no longer be questioned. Their supply is increasing, but they are of no value unless used by the faculty. The central agency should not only make them available, but should also inform and assist faculty members in selecting appropriate material. Many instructional aids can be procured for permanent possession or on a loan basis, often at very little cost, from industrial and commercial organizations. Several universities and colleges have established audio-visual aid centers under the direction of specialists who make such materials available not only to their own faculty but also to those in smaller institutions that cannot maintain so extensive a supply.

The voluntary State associations of colleges and universities might well develop the programs for State-wide central services. Or such leadership might be taken by 1 or more of the institutions. For example, in 1 State, 2 universities and 4 teachers colleges are co-

operating with 27 high schools in an experiment aimed to determine the most effective procurement and use of films at all levels of education.

One great weakness in higher education is the lack of knowledge of the impact which instruction and research may have upon the student. Investigation of this fundamental question has been piecemeal and inadequate. An expertly led, long time, cooperative study of what happens as the result of teaching in a given college would be a prime means for bringing about decided growth on the part of faculty members. Such an investigation is under way at Princeton University, to continue over a number of years, and efforts will be made to determine the gross effect of the college upon the lives of its students. Other studies, primarily emphasizing the evaluation of curricula, have been made at Ohio State, the University of Chicago, the University of Minnesota, and other institutions.

There is no better way to improve instruction than by having the faculty constantly seeking to measure the product of their instruction. A central service can provide the guidance and stimulation, as well as technical assistance, in such evaluational procedures of the college as a whole, of curricula, or of individual instruction. The appraisal of results is a determining factor in setting the goals for both instruction and research.

Directed Teaching

Schools below the college level have long recognized that directed teaching is one of the extremely important means for the improvement of instruction. But in college, even a young instructor is usually left wholly to his own devices unless, of course, his teaching is so ineffective that students report it to some administrative officer.

Most colleges and universities are even now reluctant to employ the supervisory approach to the improvement of instruction, in spite of large numbers of inexperienced teachers. Directed teaching at its best is a consultative, professional service to professional people; it need violate no sound conception of academic freedom or of professional prestige. The need for it is great and will be greater each year. A fundamental change in policy on the part of colleges and universities is desirable. Supervision, in the finest sense of the term, is a positive contribution to the professional growth of the individual. It should become common practice on every college campus and be the responsibility, largely, of departmental chairmen.

Some institutions have initiated one or more of the policies suggested, but much too large a percentage have ignored one of their basic responsibilities—that of stimulating the personal and professional growth of all members of their staff. Too few have provided concrete programs of inservice education even though they may have given lip service to the desirability of improved teaching and research.

THE INDIVIDUAL'S RESPONSIBILITY

The most comprehensive program of inservice education will be of little value unless each member of the staff recognizes its importance and participates wholeheartedly in it. There is no place in higher education in the years ahead for the college teacher who smugly assumes he cannot improve his teaching or the quality of his research product.

There is great danger that inservice education will be conceived primarily as something done *to* people rather than *by* people. Some of the many activities which college teachers may initiate for their own self-improvement include: organized study, development of research, self-and-student rating, and participation in professional associations.

Organized Study

Faculty members, both new and experienced, should take advantage of opportunities for further formal study in their own field, in new subjects, or the general field of higher education. Many graduate schools are to be commended upon the rich opportunity they afford for such study. Some few colleges are placing all staff members on twelve-month contracts with the provision that they engage in study during the summer quarter; it is reported that the move is a popular one. If those who do engage in advanced study can have increased opportunities to pass on to colleagues ideas they have gained, additional benefits should result.

Departmental, divisional, or college seminars for faculty members have yielded good results. Some such seminars deal with problems of instruction or student guidance. Others consider new contributions to a teaching field, such as recent developments in measuring intelligence. Particularly valuable have been the seminars upon some broad social problem, such as the future of urban development, which assemble scholars from several academic fields to pool the findings of their specialties.

A number of universities sponsor regular study for younger instructors. Others have attempted to prepare for broadened basic courses by organizing classes in related fields—a course in the history of painting for English majors preparing to teach humanities, for example. Occasionally, a formal, locally conducted class in the objectives of higher education or methods of teaching has been deemed to be reasonably successful. Valuable services are being rendered through instruction in higher education now being offered by a few of the large universities.

The relatively few postdoctoral centers in the country now provide the capstone of the organized study programs for mature faculty

members. This type of scholarly effort exists best where there are superb facilities of personnel, library, and laboratory. A number of the great foundations have long recognized the desirability for affording outstanding persons the opportunity for highly specialized study beyond the doctoral degree. The rapidity and diversity with which academic fields are developing strongly underwrites the need for expansion of such study centers. These postdoctoral institutions, staffed by communities of great scholars, and adequately supported with the material means for research and teaching, represent an indispensable element in constructive planning for raising the level of collegiate instruction.

Particularly promising is the the possibility of developing large university programs of service to smaller colleges, taking the teaching resources of the university to college instructors through planned institutes as well as bringing the instructors to the university. Many colleges of education have demonstrated the value of inservice assistance to public school systems; universities and colleges may well cooperate in the same manner with smaller institutions of higher learning. Such off-campus service will be a mark of distinction for the graduate school of the future.

The value of summer workshops for college teachers has been demonstrated conclusively. Organizations, as well as individual colleges, attest the contributions made to the personal and professional development of workshop participants. It is recommended that this means for promoting faculty growth be accorded widespread attention.

Special attention is called to the educative value of practical work experience outside the field of regular academic teaching. The teacher of sociology who works in a social service agency gets insights and appreciations which could hardly come from reading the printed word; the teacher of statistics may derive great benefit from participating in a large field survey. It would be difficult to think of better antidotes for too much detachment from the world of reality.

The provisions of inservice education should take into account the significant demand for college and university administrators capable of exercising leadership of truly creative character. Several leading universities have set a pattern through the development of special courses for college administrators. Too many enter upon their responsibilities without even the rudimentary techniques of their jobs; the statesmanlike characteristics which their position demands are undeveloped.

A fourfold attack may bring about the elimination of this serious lack: First, there is needed an organized attempt to identify those faculty members with administrative leadership potentials, and to interest them in preparing to assume such responsibilities. Second,

even more credit and noncredit study opportunities for administrators should be developed by suitably staffed universities; professional organizations and educational foundations should join in making such programs accessible to as many individuals as possible. Third, professional organizations should take the leadership in expanding the "School for Executives" idea. Fourth, the development of internship programs for administrators in training should be accelerated.

Opportunity for Research

The conduct of individual research is one means of furthering individual faculty competence. It is through research that a faculty member becomes an authority, adds uniqueness to his teaching contributions, feeds his own intellectual curiosity. As with other worthwhile activities, research may be abused and made to detract from effectiveness of teaching; it makes its richest contributions to faculty growth when it is employed deliberately as only one phase of well-rounded teaching performance. Fellowships frequently foster research interest, overcome economic barriers to individual action. Provision of time for research does not guarantee individual activity, but lack of time is almost certain to guarantee inactivity. The schedule for teachers should take more account of this fact.

Not only does research contribute to the professional growth of the faculty member, but it also may be a basic factor in providing for student growth. The parallel functions of higher education—teaching and research—cannot wisely be separated. As pointed out in the 1947 Report of the President's Scientific Research Board, the research role of the colleges and universities is uniquely that of developing potential scientists, then conducting basic research and, only incidentally, except for that conducted under contract, is it that of procuring significant results from applied research.

Assistance through Rating and Student Reaction

Some colleges use programs of individual rating as stimuli to individual action. Self-ratings seem to be the most productive; administrative rating devices and procedures are fraught with grave dangers, and should be used with caution.

The case for student evaluation of instruction as a means for improving teaching excellence is a strong one. Most theoretical objections to it vanish when practical try-out is made; faculty acceptance is typically favorable. Faculty-student analysis of course content, of degree patterns, or of college services has been helpful in changing teacher-pupil relationships for the better.

The counseling of students may be a further means of increasing the effectiveness of teaching. Excellent results have been achieved in several colleges from procedures which encourage faculty members

to engage in long-term studies of individual students. Changed attitudes, increased insights, more sympathetic understandings emerge.

Participation in Professional Organizations

The large number and wide variety of voluntary professional organizations, which characterize American higher education, provide an opportunity for all faculty members to affiliate with others of like interest. General organizations such as the American Association for the Advancement of Science, the American Association of University Professors and special groups in a single field such as the American Association of Collegiate Registrars or the American Sociological Society can be important agencies in the inservice education of faculty personnel provided they direct clear-cut attention to that end.

College faculty members too seldom have or take advantage of the opportunity to attend the meetings of these professional organizations. The institution which does not make provision for extending such opportunity to a large portion of the faculty is short-sighted. Funds expended for travel and substitute teachers constitute an excellent investment. Through attendance at conferences and professional meetings, faculty members may get new ideas, be challenged into thinking about fundamental problems, and secure recognition from colleagues for professional performance. College administrators should make an extra effort to see that these benefits are available to most faculty members.

In conclusion, occasional excellence among faculty personnel can no longer suffice to provide the high level of instruction and research needed by colleges and universities. All members of college and university faculties will need increasingly to display professional devotion to ideals, to become and remain professionally competent in aiding social improvement. Such development should be fostered by carefully designed programs of inservice education—programs which will aim at improving the effectiveness of administrators, teachers, researchers, and special service personnel for the tasks they must perform, and assuring that professional growth shall be continuous. The provision of such programs is vital to the welfare of the nation.

This Commission strongly recommends that each college and university, with adaptation to local situations, immediately initiate or expand its program of inservice education.

Improved Working Conditions

The conditions which surround faculty personnel as they work have a major influence upon the quality of their teaching and of their research. Salaries, personal security, professional rewards, working facilities, and relationships with others are by no means the only factors affecting the quality of faculty performance, but they are important in determining whether or not the faculty personnel for higher education is adequate, both in numbers and in effectiveness.

Low personal and professional morale on the part of college faculty members in 1946–47 would have occasioned no surprise. Salaries were inadequate, classes were large, teaching loads were heavy. The faculty was weary after a succession of wartime emergency programs, and now found itself in the midst of another period of tremendous pressures.

But morale of college faculties was not low. An interview inquiry conducted for the President's Commission on Higher Education in 29 institutions revealed that a large majority of faculty members believed in their profession, in their college, and in their particular jobs. The faculty members felt secure in their positions, were reasonably certain of old-age security. They were well pleased with the results they were achieving; were frankly enthusiastic about the caliber of the students in their classrooms and laboratories. Four out of five wanted to stay with their particular college, and 9 out of 10 wanted to remain in college teaching. These attitudes are borne out also by a similar study conducted for the Commission by the American Association of University Professors.

Teachers frankly recognize the intangible values of being on a college faculty. As previously pointed out, they are in a profession which ranks high in prestige value. The relatively long vacation for faculty and independence in the apportionment of time are also given emphasis in maintaining morale. Most significant of all is the sense of importance of the task, whether it be that of guiding the development of young minds or making new inroads into the endless frontiers of human knowledge.

The results of the surveys were not entirely reassuring, however. Substantial minorities felt that some institutional policies definitely discouraged faculty members with outstanding ability, or disregarded the interests of the faculty in arriving at important decisions. A majority of all teachers expressed dissatisfaction with the lack of freedom of expression accorded them. Nagging frustrations—too many students, too many teaching hours, inadequate instructional materials and library facilities, heavy committee assignments—were referred to with disturbing frequency. Less than half felt they had sufficient opportunity to engage in individual research activities. Housing conditions were highly unsatisfactory for one out of three.

The greatest source of personal disturbance to faculty members was the compensation received. Fifty percent felt that present incomes were such that continuance in the teaching profession was at a great personal sacrifice; that the quality of their work was being seriously affected by financial worries. It seems evident that the favorable report upon faculty morale will soon be succeeded by an unfavorable one unless faculty salaries are made more adequate.

SALARIES AND SALARY POLICIES

The American public has long been aware of the fact that college teachers are poorly paid. It is doubtful, however, that the average citizen realizes how poorly. It is doubtful, too, if he knows how wide is the variation in salary policies.

Salaries

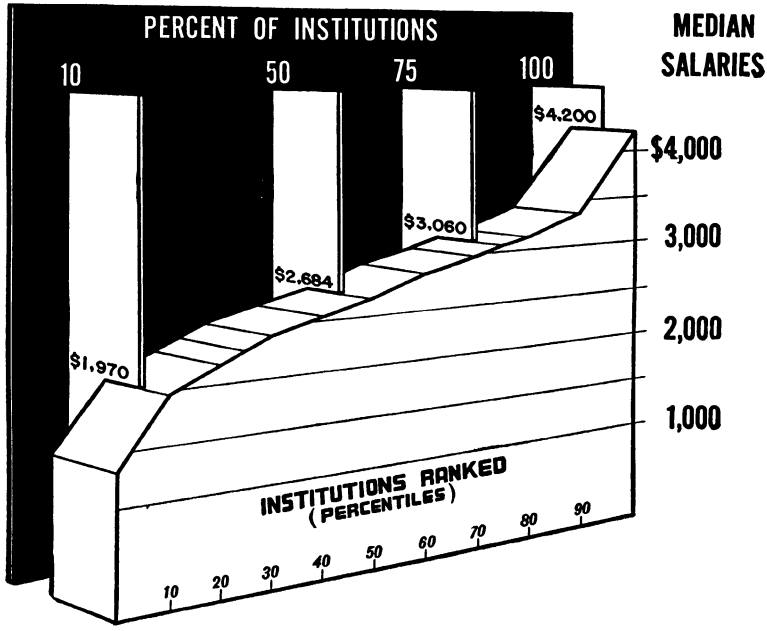
In 1945 a study was made of 257 "strong" institutions. The facts revealed need little interpretation. In 10 percent of these institutions the median salary of the teaching staff was $1,970 or less for 9 months, the equivalent of about $2,600 or less per year; in the next 15 percent of the institutions having the next higher salaries, half received $3,000 per year or less; in half of the institutions the median was under $3,600 per year, whereas the median salary in 75 percent of the institutions was under about $4,100 per year. Nor was the staff in the best paying institutions too well off: in the best paying institution half the staff received less than $5,600 per year. (See Chart 4.)

The unprecedented demand for college teachers deriving from the rapid rise in enrollments has resulted in a general increase in salaries. The 29 institutions included in the interview survey referred to above give revealing information as to the trend in faculty salaries. It is to be noted that these institutions are among the strongest in the country and pay higher salaries than the great majority. Even in these institutions the average salary for teaching faculty in 1946–47 was

CHART 4

COLLEGE TEACHING SALARIES WAR PERIOD

MEDIAN SALARIES; 1945; AT 257 "STRONG" INSTITUTIONS (9 MONTH BASIS)



Study by North Central Association of College- and Secondary Schools of salaries of full-time teaching faculty during 1945 in 257 member institutions of higher education.

$3,867 for a 9-month period. This amount becomes more meaningful when it is considered along with an average age of 40½ years and an average teaching experience of 14.3 years. The "average" physician might have about the same experience at a slightly higher age with a net income at least twice that of the teacher. The "average" real estate salesman in a city of 50,000 would have 50 percent more net income.

Salaries of college faculties had been relatively stable prior to World War II; a graph of the median salaries paid professors in 51 land-grant institutions between 1928 and 1942 is almost horizontal. (See chart 5.)

Between the fall of 1940 and the spring of 1947 there had been salary increases of from 7 to 45 percent in various institutions, with an

Many factors other than salary considerations rightfully determine promotion from rank to rank. The attainment of reasonable financial ambitions is too often dependent solely upon changes in academic rank. Regular increases should be recommended for the typical faculty member, and such increases should not be contingent upon rare performance. Additional merit raises should be granted to recognize outstanding competence and reward genuine merit, never solely on the basis of length of tenure.

The typical salary should provide for the maintenance of reasonable living standards and should reflect recognition of the individual's worth to society.

It is necessary for morale and required by simple justice that the capable, experienced professor receive significantly more than the inexperienced beginner. Young people will be attracted as much by the possibilities of increasing salaries as by the initial income level. In strong universities, professors' salaries in 1947–48 were about twice that of the instructors; this ratio is certainly not too high.

This principle has not been applied uniformly in the past, and too many volations continue. Because of limited resources some colleges and universities in 1946–47 and 1947–48 were adopting the dangerous expedient of holding increases in professors' salaries to a pittance while increasing instructors' by 35 and 40 percent. The increases for instructors were not too large; those for the professors were much too small. The competent, experienced faculty member, who follows the traditional pattern of standing by his institution and waiting for salary increments and rewards, should not be penalized because he does not sell his services each year in a competitive market; if he is so penalized, the professional morale of the entire faculty may be undermined.

Salary policies in individual institutions should be determined with the participation of faculty representatives.

The policies should be clear-cut and understood by all. They should fix the minimum for each rank but have wide flexibility as to maximum salary and should provide for complete freedom of decision for exceptional cases. Such freedom is important in order that the administration can encourage maximum effort and high-quality performance. Altogether too frequently fixed and automatic salary increases, without regard to merit or the contributions a faculty member is making, tend to stifle incentive on the part of the ablest staff members. *It is imperative, therefore, that, within any scale adopted, faculty salaries continue to be related to performance.*

Problems regarding automatic or merit-based increases, differences in competitive situations between departments or colleges, equal salaries for men and women, compensation from outside sources, extra

compensation for some additional collegiate duties, and other similar problems can be solved best at each institution through frank discussion and open facing of facts.

It is encouraging to note the decided trend toward the adoption of stated salary schedules in colleges and universities. According to the United States Office of Education, prior to 1940 only the rare institution had such a statement, whereas in 1946 one institution out of three reported the existence of schedules. It is urged that with the qualifications stated above the practice become universal, and that the administration secure the full cooperation of the faculty in evolving plans.

PERSONAL AND PROFESSIONAL SECURITY

Salary alone will not assure the degree of security which makes it possible for the individual to devote his energies primarily to increasing his effectiveness as a teacher, a research worker, or an administrator. Among other equally important factors are tenure and promotion policies, protection against hazards, provisions for retirement.

Tenure of Position

Commendable progress has been achieved in establishing suitable protection of tenure for college faculty members; the typical member now feels confident that his position is as stable as he would want it to be. There have been a few reprehensible violations of sound tenure principles in recent years; especially grave have been some attempts to inject political spoils system tactics into decisions involving dismissal or employment of faculty members. **Such violations and attempts are to be condemned in the strongest terms, and should be eliminated by the pressure of informed public opinion and legal sanctions wherever they occur.** It is heartening to observe that both the organized educational profession and the general public are displaying increasing and effective resistance to political aggression directed toward higher education.

Institutional personnel policies should be such that the continued employment of individual faculty members depends exclusively upon professional competency. Abuses of administrative authority in dismissing individual employees should be ended by action of the educational profession itself. Infrequent abuses of permanent tenure by individual faculty members should also be the target of equally vigorous action by the profession. The enactment of legal or statutory regulations guaranteeing permanent tenure can work great harm unless both parties—administration and teachers—are in accord with the spirit of professional integrity; if such spirit prevails, enactment of legislation is hardly necessary.

Promotion

Public recognition of professional advancement in higher education is based on the system of rank, from the fellow or graduate assistant through instructor, assistant professor, and associate professor to professor. There are relatively few institutions, other than junior colleges, which do not have this system of advancement.

Since the individual's salary is usually kept relatively confidential, public recognition through academic rank is almost as important an incentive as income. Some institutions have, in fact, used promotion in rank as a means of keeping salaries at a low level. This practice cannot be condoned; prestige alone will not provide security.

Promotion from rank to rank should be determined by merit—merit in teaching, research, publications, or other academic service.

The promotion policies of some institutions are the source of decided faculty dissatisfaction. Good teaching, it is charged, is not recognized when promotions in academic rank are being considered. The charge is made that the sole bases for recognition are the amounts of individual research done and the quantity of publications achieved.

Neither should promotion be based upon the number of years in teaching or research. Time served is not a measure of professional growth. Promotion should be earned, and each advance in rank should be based upon an evaluation of the individual's achievement in the light of carefully developed and commonly accepted standards. As in the determination of a salary scale, such standards should involve active participation of the faculty. The standards should be formulated with the aid of a faculty committee, but preliminary planning and final adoption may very well involve the entire faculty.

Provisions for Retirement

Every member of a college or university faculty in America, after a probationary period, should be covered by an actuarially sound old-age retirement plan. According to the Social Security Administration, almost 92,000 faculty members in 1946 were on the staffs of institutions with retirement plans, so that about 60 percent of the faculty members in the country had this type of protection available to them. Joint contributory plans of retirement should become universal.

The retirement allowances now in prospect for those who have been contributing to retirement plans at the usual 5-percent-of-salary rate for the individual and 5 percent for the institution will not be adequate. Two alternatives present themselves: the rates of contributions of the institution may be raised; or these may be supplemented by also amending the Federal Social Security Act to cover college and university faculty. Because of the heavy financial burden already faced by most employers and employees, the former alternative

is not generally feasible. Without reducing the benefits now available under existing retirement plans, the provisions of the Social Security Act should be amended at once so as to extend old-age and death benefits to all members of college faculties. In the meantime college faculty members should vigorously press for the improvement of existing retirement provisions whether state or privately supported.

Protection Against Hazards

Group life insurance plans and cooperative health and accident protection are also essentials of a satisfactory personnel policy. Adoption of such institution-wide arrangements has been accelerated in the past few years, but their importance to faculty members should make them universally available. In fact, a number of institutions have made both retirement deductions and participation in group insurance and group health plans mandatory upon all new appointees.

If the Federal Government enacts legislation to provide group health insurance, educational institutions should seek to be included. They ought not to repeat the error made earlier when they strongly resisted being included in the provisions of the Social Security Act.

OPPORTUNITIES TO WORK EFFECTIVELY

A second group of factors which influence working conditions of faculty personnel relate to institutional policies. These include faculty workload, leave policy, working facilities, the practice of partnership in academic matters, and academic freedom.

Workload

Measured by the faculty-student ratios presented in this report, the majority of college instructors in the United States in 1946–47 were assigned classes which were too large. The mere fact that an instructor may receive extra compensation for extra assignments should not blind administrators and instructors to the fact that the overload is harmful to both the teacher and the education of his students. It should not be necessary for the teacher to choose between being overloaded or underpaid; it is unwise for administrators to offer financial temptations to instructors to attempt excessive teaching tasks.

But size or number of classes are not the only factors causing heavy workloads. The pressure upon institutions to conduct military and other contract research, highly desirable in itself, frequently prevents the individual faculty member from being either a capable teacher or a competent research worker. The emphasis upon counseling by classroom teachers adds still more to the responsibility which each must carry; particularly, the increasing number of graduate students en-

tails the necessity of devoting a greater amount of time to give them adequate and necessary guidance. This report constantly has stressed the desirability of faculty participation in matters of curricula and other institutional policies, yet this still further increases the demands upon the time and energy of faculty members.

Finally, the workload of individual faculty members is greatly augmented by the necessity and desire of each to keep abreast not only of his own field but also of national and world affairs. *A fresh social perspective and continuing competence in his subject matter is necessary if the teacher is to stimulate the minds of youth to their maximum development. Above all else, it is the teacher's obligation to maintain his virility of thought.*

The overload borne by college and university administrators is also of serious consequence; it causes inadequate study of basic problems; it leads to faculty and student frustration when decisions and executive action are either hasty or long delayed. Poor internal administrative structure frequently contributes to overloading of administrators. The workload of individual faculty members may be lightened by more effective delegation of responsibilities, wider distribution of committee and other assignments, and greater utilization of younger members of the faculty. But the only real solution of the problem of workload is the employment of additional staff, both at the professional level and at the level of student assistants and clerical help.

Leave Policy

One of the important means of improving the effectiveness of instruction, research, and administration is the establishment of a definite leave policy. Although it should not be mandatory, every professional employee of the institution, including the administrative staff, should be encouraged to take periodic leaves of absence.

Leaves for study, travel, or research are entirely too rare in American higher education. The minimum requisites of a sound institutional leave policy are: three to six months free from teaching duties in every 2-year period, without reduction in scheduled compensation; extended leaves to younger instructors for completion of basic preparation; liberal fellowship and research grants, or revolving loan funds available without interest charges.

Institutions, especially those operating on a semester basis, have frequently found it desirable to give sabbatical leave once in each 7 years, with full pay if for one semester, and half pay for an academic year.

Working Facilities

The most effective policies regarding salaries and personal and professional security will fail their purpose unless the institution improves

the work conditions of its faculty. Often the college or university may, by a supplementary and relatively minor investment enhance the effectiveness of its entire educational program.

Even the obvious need for individual desks and office space for the faculty is too often disregarded. Adequate laboratory apparatus and supplies are as essential as reference books, yet requisitions for both are frequently given niggardly consideration. Maximum utilization of instructional aids will be possible only if the central services, such as suggested in Chapter IV, are adequately equipped. Graphs, charts, motion-picture projectors, and other aids to instruction should be liberally provided in certain departments, even in institutions in which there are central services. Adequate clerical assistance in many cases would make possible fuller utilization of the talents of faculty personnel; the additional cost would be far outweighed by the enhanced effectiveness of the faculty member.

Partnership in Academic Matters

Even though higher educational institutions have a corporate structure with boards of trustees and administrative officers, there are many occasions for cooperative endeavor between the faculty and the administration. The spirit of partnership should prevail; the feeling of co-responsibility will go far toward making the individual faculty member more effective in the organization.

This intangible community spirit has its origin in tangible opportunities to work together in meeting present problems and in formulating plans for the future. Specific opportunities for such teamwork have been indicated throughout this report, but it is so essential a factor in better working conditions that it is here emphasized again.

Academic Freedom

The principles of academic freedom, enunciated in 1941 by a joint committee of the Association of American Colleges, the American Association of Teachers Colleges, and the American Association of University Professors, are generally accepted by the nation's educators. Very few institutions have adopted them formally, however, and it is clear that the general public has little grasp of the practical implications of those principles.

A prime essential of a free society is academic freedom. Without it there can be no real profession of teaching or research. Pressures to bend or twist truth, to stay away from controversial issues about which the professor is competent to speak, and to avoid certain areas of inquiry, are not compatible with the ideal of professional integrity.

A democratic society has a grave responsibility for maintaining free and untrammeled the avenues of communication and discussion. No society can long remain free when its educational institutions are

not free; unfettered institutions are not possible without guarantees of academic freedom for the individual.

But freedom for the individual implies also the acceptance of basic attitudes toward the preservation of democracy. The faculty member cannot expect to be immune from the obligations and restrictions citizenship imposes. Conversely, the public must not expect renunciation of citizenship rights and of participation in community and national life to accompany the wearing of an academic gown. Both principles are being violated too frequently in our country today.

Academic freedom, always essential, is even more imperative in periods of tension, whether these tensions are produced by local, national or international issues. It is therefore strongly recommended that a move be launched and carried through by national organizations of laymen to acquaint the American people, including the teaching profession, with the practical implications of academic freedom and the need for championing it as a fundamental national policy.

VOLUNTARY ORGANIZATIONS

In the previous chapter, reference was made to the opportunity for inservice education of faculty members provided by voluntary organizations. The invaluable service these organizations have rendered to higher education, and also to the improvement of working conditions in colleges and universities, cannot be overestimated. They have been active also in promoting academic freedom. The national and regional accrediting associations and the professional associations in their separate fields have required certain minimum standards as a basis for accreditation. Other organizations, both State and national, through surveys, reports, and conferences, have advanced the personal and professional status of the faculty. Yet, more remains to be done in coordinating the efforts of all organizations in meeting the challenge of the task ahead.

There is danger, however, that some of these associations may become closed guilds and, in pressing for the more satisfactory conditions for their own members, may lose sight of the total needs of higher education. As they attempt to check on the encroachment of political power, they must themselves avoid encroaching upon the rights of the individual institution.

But the most effective work of all of the organizations and institutions in higher education will be of relatively little value unless the general public realizes its importance. Public support is essential—support commensurate with the prestige which the profession merits.

Summary and Recommendations

The serious problems which confront higher education today only foreshadow the even greater problems of the years ahead. Accelerating social change, increasing demands for world citizenship, pyramiding technological developments, greater emphasis upon ethical ideals—all create demand for qualities in faculty personnel now too rare on college and university campuses.

The expanding services of higher education to the nation and to the individual, and the return to faculty-student relationships which make possible effective teaching, research, administration, and special services, will entail immediate and continued increases in the number of faculty members now employed.

If these quantitative and qualitative demands are to be met, immediate steps must be taken to give better preparation to larger numbers of prospective faculty members; to improve the present methods of recruitment, selection, and placement of faculty personnel; to develop and expand inservice education programs; and to enhance the working conditions of all who carry the responsibility for post-high school education.

To achieve these ends, this Commission makes the following recommendations:

That graduate schools, which are the primary agency in the preservice education of faculty personnel,

(1) provide prospective teachers with a study pattern appropriate for developing broad scholarship and the ability to communicate at the expert level;

(2) develop adequate training programs for non-teaching activities including administration, research, counseling, and special services;

(3) develop patterns of study in preparation for relatively new and currently expanding areas of teaching and research such as international relations and adult education;

(4) assure graduate students the means for continuing personal and professional growth, including the expansion of opportunities for social development, maintaining physical health, and procuring professional aid and counseling; and

(5) provide faculty personnel with effective programs of in-service education.

That an internship program for faculty personnel be developed through the cooperation of graduate schools and other institutions of higher education.

That a definite designation of competency for college teaching be established in addition to earned degrees, the standards for such competency to be developed by a representative agency.

That special consideration be given to the pre- and in-service education of the unprecedented number of teachers needed for the expected expansion of the thirteenth and fourteenth grades.

That vigorous recruitment policies be coordinated by a national agency to encourage students of high potentialities to prepare for and enter upon employment in colleges and universities.

That more adequate means be developed by educational institutions for the selection of able persons for their staff and for the evaluation of the individual's effectiveness during the probationary period.

That a national agency be created or designated to assist capable prospective faculty members in procuring appointments and to aid institutions in acquiring information about such candidates.

That both the institution and the individual faculty member accept responsibility for constant improvement in teaching, research, counseling, and administration.

That, to this end, definite programs of inservice education be developed or expanded on every college and university campus. These programs should be adapted to meet local needs, but should include induction of new faculty members, opportunity for group participation, intervisitation and exchange, use of outside resources, the development of central services, directed teaching, and participation in professional organizations.

That working conditions for faculty members immediately be improved through—

(1) salary increases such as to provide income commensurate with those earned in other fields requiring similar preparation;

(2) the establishment, through cooperative action of the administration and other faculty members, of definite policies regarding salaries and promotions;
(3) opportunity for participation in group annuity and insurance programs to assure personal and professional security;
(4) better adjustment of the work load;
(5) more adequate provisions for special services to faculty members; and
(6) guaranteeing academic freedom.

That the institutions and organizations of higher education and appropriate agencies of the Federal Government cooperate in a continuing study of the general problems relating to faculty personnel.

To translate these recommendations into effective programs of action will require the supreme effort of all in the profession. But this will not be enough; it will require also an awakening of the public to a sense of their responsibility for encouraging the ablest youth of the Nation to choose careers in higher education, for cooperating with local institutions in provision for special services, and for providing funds adequate to meet the expanding needs.

The task ahead of providing faculty personnel adequate for the kind of higher education our Nation requires places a tremendous responsibility upon our democracy. That responsibility is one which must be borne collectively by public and private agencies, by lay and professional citizens, by teachers and administrators. Only pooled efforts can meet the challenge—the challenge to improve democracy by improving higher education.

VOLUME FIVE

Financing Higher Education

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PREFACE

This is the fifth and last of the policy statements of the report, *Higher Education for American Democracy*, prepared by the President's Commission on Higher Education. This volume is an appraisal of the fiscal needs and policies necessary for the program of higher education recommended by the Commission in the four preceding volumes of its report.

This discussion of fiscal problems is the logical capstone of the Commission's conclusions. The goals of higher education have been charted; the plan has been drawn to broaden and equalize opportunity for higher education and to assist able, but financially handicapped students; the blueprint has been made for essential organizational changes; proposals have been presented for the expansion and improvement of the faculty. But Americans habitually and justifiably ask two questions of any program—"How much will it cost?" and "Where is the money coming from?"

In this final volume of policy statements the Commission offers its answers to both of these questions. But one fundamental thought underlies all of this Commission's pronouncements on fiscal policy. Expenditures for education cannot be regarded as costs in the usual accounting sense. These outlays are both investments in and insurance for the democratic future of a free people. Freedom is above price, and without knowledge there can be no freedom.

Higher education is a national service; the colleges and the universities are national in scope. The national character of these institutions must be recognized in their financial programs. By the same token, provision for adequate financing is a shared responsibility—shared by private initiative and by Government at all levels, local, State and Federal.

The four preceding volumes of the report, *Higher Education for American Democracy* are:

Volume I, "Establishing the Goals," issued on December 15, 1947.

Volume II, "Equalizing and Expanding Individual Opportunity," issued on December 22, 1947.

Volume III, "Organizing Higher Education," issued on January 12, 1948.

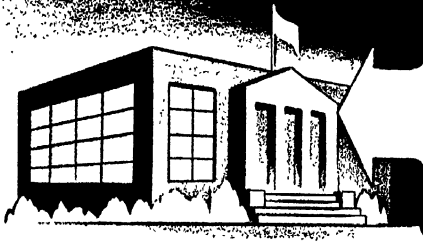
Volume IV, "Staffing Higher Education," issued on January 26, 1948.

The policy statements will be followed by Volume VI, "Resource Data," which will be a compilation of some of the essential materials used by the Commission as a basis for its findings and recommendations.

Higher Education in 1960

RECOMMENDATIONS

OF THE PRESIDENT'S COMMISSION
ON HIGHER EDUCATION



ENROLLMENTS - 4,600,000

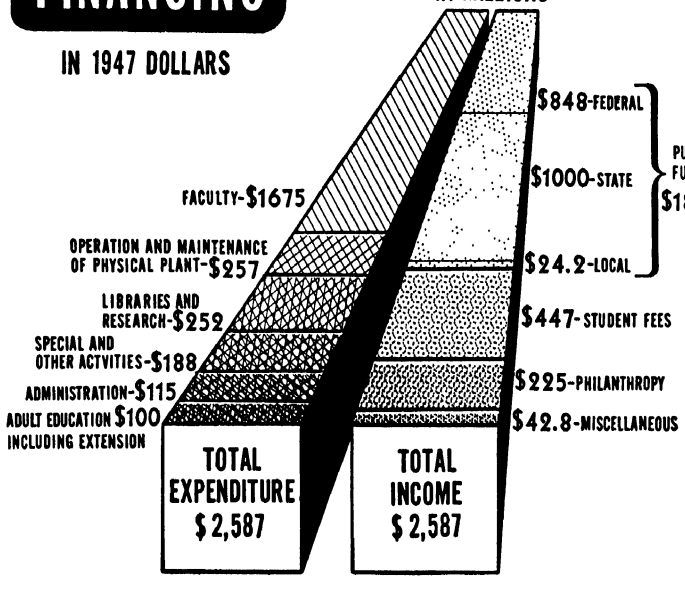
FACULTY - 350,000

PHYSICAL PLANT - 713,000,000 SQ.FT.

EDUCATIONAL EXPENDITURES - $2,587 MILLION

FINANCING

IN 1947 DOLLARS



Needed: A Strong Financial Structure

The President's Commission on Higher Education was given the task of staking out the goals toward which America should move in meeting the needs for higher education of a nation dedicated to democracy. This assignment has been accepted as embracing both a quantitative and qualitative assessment of higher education as it should be in 1960.

The first four volumes of this Commission's report have been devoted to an examination of needs and issues and the presentation of broad proposals for coping with the problem of providing America with a quality program of higher education. In some instances, these proposals simply extend the statesmanlike efforts at improvement which are present in many of our institutions of higher education. In other areas, the proposals go beyond most current thinking. At all times, the suggestions and planning are founded upon the conviction that the strength and endurance of American democracy are inextricably identified with the existence of a broadly accessible, richly diverse, and soundly conceived program of education.

Free men in a free society must be morally and intellectually competent to make the judgments required by self-government. This is one of the great objectives of an educational system. Fundamental in American political philosophy is the thought that "Ye shall know the truth and the truth shall make you free."

It is not reassuring to learn that there is a dangerously large segment of the population still inadequately prepared to assume the full obligations of democratic citizenship in this country. The 1940 census revealed more than 10 million persons in the United States with less than a fourth-grade education. Of the American population 25 years of age and over in 1940, 60 percent had only an eighth-grade education or less. Fewer than one-fourth had completed 4 years of high school or more; only 10 percent had gone to college or beyond; and less than 5 percent had finished 4 or more years of college. And in 1947, there were about 41 million adults, about half of those 25 years of age

and over, who had not gone beyond the eighth grade. There has never been a year when as much as 16 percent of the college age population (18–21 years of age) was enrolled in institutions of higher education.

This unsatisfactory record of educational attainment must be viewed in terms of the pressing needs for more and better trained individuals to assume leadership in all phases of the nation's cultural, economic, scientific, and political life. The United States Bureau of Labor Statistics has estimated that the number of persons needed in professional and semiprofessional occupations probably will increase from 3.3 million in 1940 to 5.1 million in 1960. The administrative occupations, in which 3.7 million people were employed in 1940, are expected to require between 5.3 million to 5.8 million by 1960. For the field of education alone, it will be necessary to recruit and train more than 1 million new teachers between 1950 and 1960.

This Commission is convinced that the lack of adequate financial resources, on the part of individuals and institutions alike, represents the major barrier to the achievement of a desirable program of higher education aimed at meeting our national needs.

There is no dearth of potential talent to be developed: The volume of the Commission's report, "Establishing the Goals," showed that at least 49 percent of the population of college age could profit from and could complete 2 years of the current type of college education; and that at least 32 percent could profit from and could complete 4 years of college. There is no dearth of personal, social, or vocational activities which require training at the college level.

The major barrier arises from the fact that hundreds of thousands of the Nation's talented youth come from families too poor to enable them to undertake the task of getting a college education. This great waste can no longer be tolerated in a country whose Constitution affirms belief in equality of opportunity.

It is the conviction of this Commission that the needs, based on population trends and the individual and social requirements for higher education, noted above and described more fully in other volumes of the Commission's report, demand that the Nation begin at once to plan for a minimum college and university enrollment of 4,600,000 students by 1960. This is approximately twice the number of students enrolled in 1946–47. The volume of the Commission's report, "Staffing Higher Education," reveals that a total of 350,000 faculty members—more than double the present number—will be needed to provide effective instruction for this enrollment. This great expansion will require the closest attention to the maintenance of high standards of scholarship and the building of soundly conceived curricula. There must be unprecedented expansion of physical facilities and equipment.

The area of need is vast. The effort required to meet the need is equally great. This Commission believes that the American people will make that effort when they fully understand the stake involved.

A PROGRAM FOR ACTION

To meet the needs and demands for higher education in America, the President's Commission recommends that immediate steps be taken to put the following program into effect:

1. Public education through the fourteenth year of schooling be made available, tuition free, to all Americans able and willing to receive it, regardless of race, creed, color, sex, or economic and social status

For this purpose the Commission recommends that the program of education at this level be expanded and improved, so as to provide opportunities for a wide variety of general and vocational education for post-high school youth and adults. This should be done both in existing institutions and through much more extensive development than at present of strategically located community colleges and technical institutes with soundly conceived curricula. These proposals are discussed in detail in the volumes of the Commission's report "Establishing the Goals" and "Organizing Higher Education."

2. Student fees in publicly controlled institutions be reduced

Many young people with the ability to profit from higher education are denied the opportunity to receive it because of low family income. One-half of the children under 18 years of age in 1945 were in families whose money income was $2,530 or less in that year, and more than a third were in families with incomes of less than $2,000.

Low family income coupled with steadily rising educational costs presents a well-nigh insuperable barrier to many qualified students. By 1946 the average increase in fees over the 1938–39 level totalled almost 30 percent and other costs, such as board and room, had advanced even more sharply.

Since the Commission believes this trend must be reversed if the educational needs of the Nation are to be met, it is recommended that the publicly controlled institutions, at the earliest possible time, eliminate all tuition and other instructional fees in the thirteenth and fourteenth year and reduce their fees for instruction beyond the fourteenth year to the level for the academic year 1938–39. The Commission is particularly concerned with the high charges assessed in certain professional schools operated under public control. While the Commission does not recommend that fees be eliminated beyond the fourteenth year in the publicly controlled institutions, it does

believe strongly that they should be leveled off at a point which does not raise unduly an economic barrier to study.

It is recommended, therefore, that the publicly supported institutions maintain a fee beyond the fourteenth year adequate only to insure on the part of the student a sense of meaningful personal participation in the cost of his education.

While recognizing the necessity for the privately controlled institutions to maintain a balanced budget, the Commission is disturbed by the high fees assessed by such institutions and the continuing tendency toward further increases. The fees, in many instances, are so high as to eliminate almost completely the enrollment of students from low-income families, unless the institution accompanies such practices by a wide and generous program of scholarships and grants-in-aid to competent and needy students. The serious political, social, and educational implications of the economic barrier created by student fees are discussed in detail in the volume of this Commission's report "Equalizing and Expanding Educational Opportunity."

3. Immediate steps be taken to establish a national program of Federally financed scholarships and fellowships as a means of removing further the economic barrier and enabling our most competent and gifted youth to obtain for themselves and for society the maximum benefits to be gained from higher education

Not only is it important for the welfare of the Nation that adequate low-cost opportunities for higher education be made available to all the people of America, but it is of utmost importance that the Nation's most-talented youth be encouraged and given the opportunity to continue their education to the fullest extent possible. For this reason the Commission advocates: (1) that a continuing Federal appropriation for undergraduate scholarships be established beginning with $120,000,000 in 1948–49 and continuing each year for the succeeding five years in an amount sufficient to provide scholarships for 20 percent of the nonveteran undergraduate enrollment; (2) that in addition to existing Federal fellowship program a new program be established for graduate students through the appropriation of sufficient funds to provide 10,000 grants of $1,500 each in 1948–49, 20,000 grants in 1949–50, and 30,000 grants in 1950–51, 1951–52, and 1952–53; and (3) that before 1953–54 the program of scholarships and fellowships be reexamined with a view to expanding it.

On the basis of the anticipated enrollment in 1948–49, the granting of scholarships to 20 percent of the nonveteran undergraduate enrollment would provide assistance to some 300,000 students. This would be in addition to the 10,000 fellowships also proposed for the first year of the program.

As described in volume II, the Federal Government has already initiated a number of scholarship and fellowship programs. This Commission recommends that at the earliest possible time, the administration of all such programs be unified under a single agency; and that grants for scholarships and fellowships be made generally available rather than for study in specified areas. It should be emphasized, however, that the program of aid recommended by this Commission is to be in addition to all funds appropriated and available under existing legislation for scholarships and fellowships.

4. **Federal aid for the current operating costs of higher education be provided, beginning with an appropriation of $53,000,000 in 1948–49 and increasing annually by $53,000,000 through 1952–53, for the purpose of assisting the States in maintaining and expanding publicly controlled institutions of higher education in accordance with the program recommended by this Commission** [1]

This Commission estimates that the cost of its recommended potential program for higher education if fully realized will be $2,587 million in 1960. Assuming that privately controlled colleges and universities will maintain in the future a total enrollment about equal to their enrollment in 1946–47, it is estimated that the cost of the proposed program to be financed in institutions under public control will be $2,081 million in 1960. On the basis of estimated income available from local governments, greatly expanded appropriations by State governments, reduced student fees, and miscellaneous sources, it must be planned to meet a deficit of $638 million in 1960.

To erase this deficit by that date and to move immediately toward the full realization of the proposed program, this Commission recommends that the Federal Government appropriate for the fiscal year 1948–49 an amount equal to one-twelfth of the deficit to be planned for, and that the appropriation be increased each year by $53,000,000 until and including 1952–53.

It is recommended that the Federal appropriations be allocated to the States on an equalization basis, in accordance with an objective formula designed to take account of the relative needs of the States for higher education and their relative abilities to finance those needs.

Prior to 1953–54 the amount of Federal aid needed and the method of allocation should be reexamined and, if necessary, expanded and revised.

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[1] The following Commission members wish to record their dissent from the recommendation of the Commission that public funds for operating costs and capital outlay be made available only to publicly controlled institutions: Msgr. Frederick G. Hochwalt and Martin R. P. McGuire. The statement of dissent appears on p. 65 ff. of this volume.

5. Federal aid for capital outlay be provided through an annual appropriation of $216,000,000, beginning with the fiscal year 1948–49 and continuing through 1952–53, for the purpose of assisting the States to meet the needs for adequate physical facilities for instruction in institutions under public control

To provide adequate plant facilities for instructional purposes for the program of higher education recommended by this Commission the additional physical plant will cost about $8,064 million by 1960 (1947 dollar values and price levels), $7,758 million of which is for institutions under public control. On the basis of a 12-year building program, the average annual cost for publicly controlled institutions would be $647,000,000. The foregoing recommendation calls for one-third of this amount to be provided by the Federal Government, the remainder to be provided by State and local governments.

It is recommended that the Federal aid for capital outlay be allocated on an equalization basis, in a manner similar to that proposed for current operating purposes.

6. Adult education be extended and expanded, and the colleges and universities assume responsibility for much of this development

The financing of adult education is a part of the total financial program, since it must be an integral part of the total educational services of colleges and universities.

GUIDING PRINCIPLES IN FINANCING THE PROPOSED PROGRAM OF HIGHER EDUCATION

In arriving at the recommended program for financing higher education, this Commission has been guided by certain fundamental principles. These basic principles are:

1. The program of financing higher education should presuppose a sound and effective system of education for all youth at the elementary and secondary school level.

2. The plan of finance should recognize the social importance of higher education and the Nation's interest in such a program.

3. The funds provided for the support of higher education should be adequate. All elements and all levels of the program should be supported adequately, or at best the program will meet with limited success.

4. The plan of finance should assure equality of opportunity. Economic barriers to equal opportunity should be nullified in favor of making ability and interest the only criteria for admission to an institution of higher education.

5. All of those responsible for higher education—individuals, communities, States, and the Nation—should bear an equitable share of the financial burden.

6. The plan of finance should recognize State responsibilities for higher education. It should encourage the States to plan and direct education in accordance with the best interests of the individual, the State, and the Nation.

7. The plan should encourage the free flow of private funds to the support of higher education. The Commission does not contemplate complete public support of higher education, but rather it believes that the welfare of the Nation can best be served by the continuance and vigorous expansion of private as well as public support of institutions of higher education.

8. The program of finance should emphasize the need for partnership between the Federal Government, the States, and the local communities in the support of an adequate program of higher education. The role of each partner should be established in terms of the social, economic, and educational welfare of the nation. Objectives in fiscal policy should be correlated with objectives in social and educational policies.

The purpose of this volume is to examine the conditions underlying the Commission's recommendations for financing higher education outlined in this chapter and to discuss the problems and issues involved in arriving at these recommendations. In the chapters which follow, consideration will be given to the cost of the proposed program of higher education, the sources of income available to finance that program, and the role which the Federal Government should play in financing higher education.

The Cost of Higher Education

The amount to be spent for higher education in America depends entirely on the program to be conducted. The number of students, the breadth of functions and services to be provided, the quality of the program, are the most important factors in determining cost.

Prior to World War II enrollment in institutions of higher education has been steadily increasing, both in total number of students and in relation to youth of college age. But even so the 1½ million students enrolled in 1939–40 was equivalent only to less than 16 percent of the population 18–21 years of age.

Could it be that this percent represented the maximum proportion of the population that could profitably benefit from post-secondary school education? The answer to this question is "no." The results of the Army General Classification Test, given during World War II to about ten million men representing a broad cross section of the American population, demonstrate that a minimum of 49 percent of the people could profit from at least 2 years of college work, and that at least 32 percent have the ability to complete 4 years of higher education. On the basis of these findings, this Commission concludes that during 1960 at least 4,600,000 students could profit from appropriate opportunities for higher education.

The functions of higher education are multiple and varied. In general, they fall into two main categories: teaching and research. But under each of these there exists a highly diversified list of purposes and practices. These include instruction in the arts, humanities, and the social and natural sciences. They include general education common to the needs of all individuals and specialized education designed for the interests and abilities of the relatively few but equally important to the welfare of all. They include training in scores of fields of professional and vocational service. They include the search for greater knowledge and understanding in all areas of our national and international affairs, and for better ways of applying knowledge and understanding to the business of everyday living.

WAYS OF CONSIDERING THE COST

There are several ways of considering the cost. The two which have the greatest significance with respect to planning for the future are: the class of expenditure and the type of institutional control. The latter is of particular importance in considering the means of financing the cost. In this chapter, the recommendations of the Commission will be presented in terms of their cost by class of expenditure. In the chapter which follows, the financing of the cost will be treated by type of institutional control.

There are three major classes of expenditures: (1) current educational expenditures, often called general and educational expenditures; (2) capital outlay; and (3) expenditures for auxiliary enterprises and other noneducational purposes. Current educational expenditures include expenditures for faculty salaries, libraries, research, operation and maintenance of the educational plant, administration, extension services, and organized activities related to instruction such as clinics associated with medical and dental schools, demonstration schools and similar activities. Capital outlay includes expenditures for land, the construction of new buildings and the major renovation or repair of old buildings. Expenditures for auxiliary enterprises are in a separate category since these activities usually are self-maintaining and sometimes, self-liquidating or even profit-making operations such as book stores, university presses, dormitories, and residence halls. Other noneducational expenditures include scholarships and other forms of student aid and interest on institutional indebtedness.

Research in educational finance has shown that the quantity and quality of the educational program are closely related to the level of expenditures. In general, though not always, low expenditures per student indicates poor quality of education: less competent instructional staff, meager curriculum, poor and insufficient equipment. On the other hand, high levels of expenditure are usually associated with competent instruction: a well-rounded curriculum, good equipment and library facilities, and, in general, a high-quality program of education.

The level of the educational program offered will occasion wide variation in costs. Junior college education, for example, is generally less expensive to provide than advanced or professional training. The kinds and extent of services offered such as counseling, health activities, and testing of students are other variable factors. The quality of the grounds, plants, and buildings, as well as the standards for their operation and maintenance are still another set of variables.

In estimating costs, as well as income (considered in the next chapter), it is necessary to determine the proportion of the load privately

and publicly controlled institutions each will carry in providing for the needs of higher education. In making that determination this Commission has assumed that whatever the distribution, the prime objective is to assure in all institutions the best possible program of education which available money can buy, regardless of the form of control. In other words, the quality of the program should not be sacrificed for increased enrollment. It follows, therefore, that the load to be borne by privately controlled institutions should not exceed that which these institutions can support adequately with the potential yield of the sources of income available to them.

With this in mind, and after considering the enrollments in privately controlled institutions just prior to and after World War II, the potential income available, as well as the cost of the recommended program, it is the considered opinion of this Commission that in the future, certainly up to 1960, the privately controlled institutions will be able to serve each year about 900,000 students. Although individual institutions may increase their enrollment, it is believed that the total number of students in all these institutions will remain at about this number. And 900,000 is approximately the total number enrolled in all these institutions during 1946–47.

Thus, it is concluded that the great expansion in numbers to be served by higher education will of necessity be borne by institutions publicly controlled.

The problem then, is to determine the cost of the recommended program of higher education for the number of individuals who should be served in both publicly and privately controlled institutions.

CURRENT EDUCATIONAL EXPENDITURES

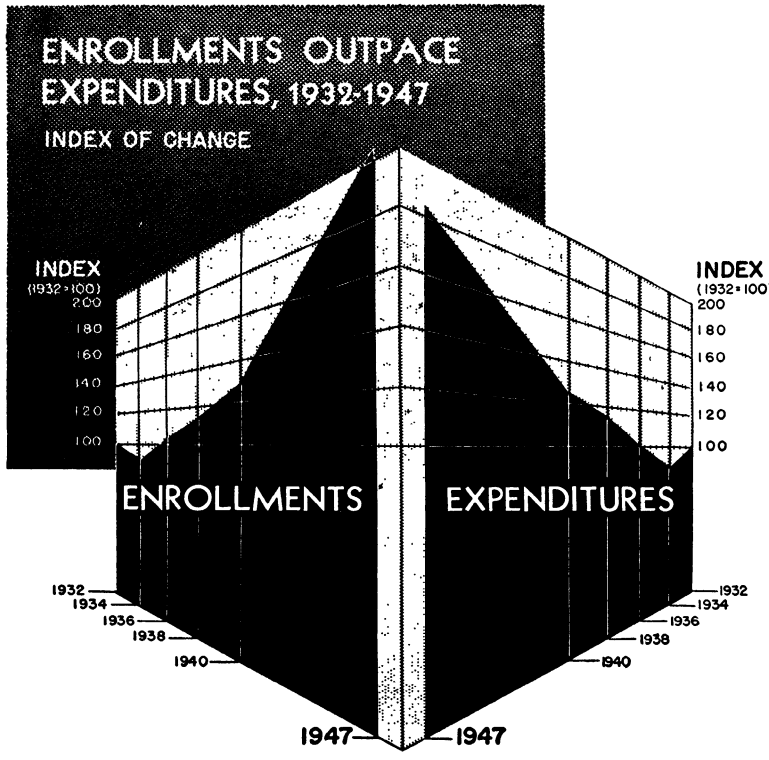
Current educational expenditures are the basis for the day-by-day operation of the educational program. The construction of new buildings may be delayed, or the expenditures for such capital needs may be spread over a period of time. But expenditures for instruction and its related activities, and for the operation and maintenance of the buildings and ground cannot be delayed or prorated. They must be met on a current financial basis.

The operating or current educational expenditures for all institutions of higher education totaled over one billion dollars in the fiscal year ending June 30, 1947, and were nearly double the amount spent in the fiscal year 1940. This tremendous increase was due in part to a decline in the purchasing power of the dollar; but in large measure it was due to the rapid rise in enrollment at the conclusion of World War II.

Over the period 1932 to 1940, the rate of rise in expenditures closely paralleled that in enrollments, with a slight but significant tendency

for expenditures to lag behind. The World War II years (1941–46) represented an abnormal period for colleges and universities due to the sharp decrease in civilian enrollment and the increase of short-term military students on many campuses; therefore, the relationship between enrollment and expenditures during that period cannot be compared fairly with those for more normal times. In 1947, the relationship changed markedly, occasioned by the impact of the veterans program. (See chart 2.)

Chart 2



SOURCE: U.S. OFFICE OF EDUCATION
"ENROLLMENTS" ARE RESIDENT ENROLLMENTS. "EXPENDITURES" ARE CURRENT (EDUCATIONAL) EXPENDITURES BY INSTITUTIONS, FOR FISCAL YEAR ENDING JUNE 30.
1947 EXPENDITURES EQUATED TO AVERAGE 1932–1940 EDUCATIONAL DOLLAR

The figures for 1947 reflect the overcrowded conditions on campuses throughout the country, due to the sudden return of servicemen; they reflect the large classes, shortage of teachers, double and triple shifts in the use of buildings, overcrowded libraries and laboratories—all of

which have reduced the level of expenditures in relation to enrollment. *Yet even prior to World War II the slight downward trend in the ratio of expenditures to enrollments evidenced an unfortunate tendency during a period when America was in the greatest need of trained leaders and a highly informed citizenry. The task ahead is to reverse that tendency and to place expenditures upon a level commensurate with the responsibilites of higher education in a democracy.*

Looking to the future, the current education program required to provide the quantity and quality of higher education envisioned as desirable by this Commission calls for much larger sums of money, namely, $2,587,000,000 by 1960 as well as expanded Federal scholarship and fellowship programs and large sums for capital outlay. But the numbers to be educated are also large, and only by raising the level of expenditures to these levels can America fulfill its obligation to the youth of the nation and to society in general.

(In order to establish comparable data in this report, all fiscal estimates for future years are presented in terms of the average value of the dollar during the fiscal year ending June 30, 1947.)

The expenditures for publicly and privately controlled institutions may be estimated separately on the basis of the number of students to be served by each, assuming that the cost of a type or given level of education should be the same per student whether that education is offered under public or private auspices. For purposes of estimation it is assumed that in the future the distribution of enrollments by year levels will be similar in both types of institutions, although there is reason to expect that the great expansion at the thirteenth- and fourteenth-year levels will be found largely in institutions under public control. Table 1 gives the recommended expenditures for 1952 and 1960 by type of control of the institution. The data for 1952 are shown only as a point of interest.

TABLE 1.—*Recommended potential enrollments and expenditures in 1952 and 1960 by type of institutional control*

[Based on Commission's appraisal of needs]

	Publicly controlled institutions		Privately controlled institutions	
	1952	1960	1952	1960
Enrollment	2, 985, 000	3, 700, 000	900, 000	900, 000
Expenditures for current educational purposes (1947 dollars)	$1,675,000,000	$2,081,000,000	$506, 000, 000	$506, 000, 000

In determining the amounts needed for the total current expenditures in 1960, separate consideration has been given to each of the major subcategories included under current educational expenditures. Consider, first, the needs for faculty salaries and other costs of instruction.

Faculty Salaries and Other Costs of Instruction

High quality instruction is the number one requisite of higher education. Unless there is an adequate number of competent faculty members in our colleges and universities, the best in higher education cannot be attained.

In the volume of its report "Staffing Higher Education" this Commission found that a total of 300,000 teaching faculty members would be needed by 1960 to serve the enrollments recommended by this Commission. In addition, there would be required for administrative and special services 50,000 staff members. These faculty personnel are needed to give the quality and quantity of education deemed necessary for the minimum numbers who should receive higher education.

But more than an adequate number of teachers is needed to assure high quality of instruction. Faculty salaries in colleges and universities in the spring of 1947 had increased on the average less than 30 percent since the fall of 1940. This is in contrast to an increase from October 1940 to June 1947 of 88 percent in wages of manufacturing employees. For the same period the cost-of-living index had risen 57 percent. Contemplated salary increases for the fall of 1947 averaged only 8 percent, according to a survey of 30 representative institutions made for the Commission.

It was pointed out in "Staffing Higher Education" that to bring faculty salaries up to a standard comparable with nonacademic schedules that have been established, with professional earnings in other fields, and with salaries and wages in general calls for at least a 50-percent increase above the 1946–47 salary level.

Other important factors in providing high quality instruction are an adequate quantity of appropriate, up-to-date instructional aids and supplies and additional clerical services to aid the teaching and administrative faculty. Such materials and personnel are indispensable aids to good instruction. They must be adequately provided for in the budget for instruction.

Complete achievement of this Commission's recommendations would mean that in terms of 1947 dollars an expenditure of almost 1½ billion dollars for faculty and instruction will be necessary annually by 1952; and by 1960, $1,675,000,000 will be required.

Libraries

The library is second only to the instructional staff in its importance for high quality instruction and research. Almost every top

ranking college and university is noted for the quantity and quality of its library books and facilities.

According to a report of the Association of College and Reference Libraries, American institutions of higher education contained in their libraries in 1940 approximately 72,000,000 volumes. The expansion of enrollment and the more diverse curricula recommended by this Commission will require a great increase in library books, materials, and equipment. At the higher levels of the educational program there is need for more research materials in all fields. With the development and expansion of programs in such areas as adult education, a still larger number of books and materials will be required.

In a special report to the Commission, the American Library Association stated that $18 to $25 per student, depending upon the size of enrollment, is the minimum annual expenditure required to operate and maintain efficiently a college library. In 1940, institutions of higher education spent, on the average, only $13 per student for libraries. This means that $19,500,000 was spent for libraries in 1940. Considering $20 per student to be a reasonable national average, $78,000,000 would be needed by 1952, and $92,000,000 by 1960.

Operation and Maintenance of Physical Facilities

Shortages and uncertainties in institutional income have forced many colleges and universities to restrict the amounts spent on buildings, grounds, and equipment, to make temporary repairs, and, in general, to maintain low standards of operation and maintenance. Eventually, such apparent economy is paid for at a high cost as buildings deteriorate and require renovation or replacement. World War II exaggerated this long-standing practice. The lack of materials and equipment, as well as the high cost and shortage of labor, have added further to the tremendous needs for repair and maintenance of physical facilities.

Substandard practice in this area seriously interferes with the quality of instruction and research. Timely replacements, repair of equipment, and continuous upkeep and modernization of the educational plant are direct assets to high quality performance, as well as absolute essentials to sound economy.

An annual expenditure equivalent to 2 percent of the replacement value in educational buildings and equipment is deemed by authorities in plant management to be a fair standard for efficient operation and maintenance of the educational plant. Evidence at hand indicates that in recent years most institutions have been unable to approach this standard.

The amounts needed for the operation and maintenance of the physical plant bear direct relationship, then, to the current replacement

value of that plant. Later in this chapter the value of the plant will be discussed. But here it need only be said that, on the basis of this Commission's estimate of the plant size required for the achievement of its recommendations, the amounts required to operate and maintain the plant facilities needed by 1952 and 1960 will be $217,000,000 and $257,000,000, respectively.

Other Educational Expenditures

In addition to the three items to which specific mention is made above, funds are needed for research, adult education (including extension), general administration, and the manifold other activities related to instruction.

Research. Research is an integral part of the activities of the higher-education system. Its importance and the need for its expansion, development, and strengthening in the institutions has been stressed in other reports of this Commission. The President's Scientific Research Board has considered in detail nation-wide research activities in the natural, biological, and medical sciences and the part institutions of higher education should take in such a national program. The estimates of expenditures for research made herein, therefore, are based in part on the report of that Board.

It is difficult to estimate the amounts of their own funds the universities will spend for this activity: some portion of the research personnel will be on the faculty conducting and supervising research as a part of the teaching function and, therefore, their salaries would not be charged against "Research"; some of the research will undoubtedly be done under direct grants from the Federal Government or other interested groups; some will be possible through special grants from foundations. Of the amount recommended by the President's Scientific Research Board as necessary for basic research in the natural, biological, and medical sciences ($400,000,000 in 1957) it cannot be expected that institutions of higher education will be able to absorb, as a portion of their operating budgets, more than 25 percent of the total. This 25 percent would be in addition to any grants made in accordance with the Scientific Research Board's recommendation "That the Federal Government support basic research in the universities and nonprofit research institutions at a progressively increasing rate, reaching an annual expenditure of at least $250,000,000 by 1957."

It is recognized that research in the social sciences and other fields, while certainly as important as that in the fields considered by the Board, is less expensive to conduct. The estimated cost, based in part on the findings of the President's Scientific Research Board, of a desirable level of institutionally supported research is:

	1952	1960
Natural, biological, and medical sciences	$60,000,000	$100,000,000
Social sciences, the humanities and other fields	40,000,000	60,000,000

Adult education (including extension). Again this is an area in great need of development, expansion, and strengthening. The exact amount now being spent by institutions of higher education for adult education is not known. Under the classification of "Extension," which includes certain activities properly defined as adult education, the United States Office of Education reported that all institutions spent in 1939–40 approximately $35,300,000. From this it would appear that the amount spent for adult education is, indeed, small.

The problem of adult education has been given extended attention by this Commission. A group of specialists in this field was called together by the Commission to discuss the organization and special techniques of adult education. On the basis of the evidence which this group presented, it is recommended that a total annual expenditure of at least $100,000,000 be provided, including that now expended, to launch properly the full-scale program envisoned as the responsibility of institutions of higher education. Proposals for this program are discussed in greater detail in the volume of the Commission's report on "Equalizing and Expanding Individual Opportunity."

Special services. These include central services for personnel testing, evaluation services for the improvement of instruction, educational and vocational guidance services, instructional laboratories, and similar activities necessary in any sound educational program. The vast needs for these services have been described in the volumes "Equalizing and Expanding Individual Opportunity" and "Staffing Higher Education." The cost of these services is meager in comparison with the gains which accrue to the quality of instruction. Furthermore, as the number of students becomes larger, the cost per student of such services becomes smaller. The absolute amounts, however, should never be niggardly. It is estimated that $75,000,000 by 1952 and $90,000,000 by 1960 are the minimum amounts needed for these important services.

General administration. As a rule of thumb, based on general practice, expenses of general administration should not exceed more than ten percent of the current operating budget. In this budget for the future needs of higher education, the salaries of the professional members of the administrative staff have been included under "Faculty," above. In addition to these amounts, however, should be added $95,000,000 by 1952 and $115,000,000 by 1960 for the salaries of the clerical staff and the other expenses of administrative operation.

Other activities related to instruction. Demonstration or model schools, medical clinics, and other appropriate activities associated with an adequate program of instruction in professional schools are included in this category. Based on past experience, it is estimated that $80,000,000 by 1952 and $98,000,000 by 1960 should be provided for the support of these activities.

Summary of current educational expenditures

The foregoing estimates of the amounts needed in the various categories of current expenditures have been arrived at on the basis of the Commission's recommended program for the future of higher education. This program includes a broad expansion of appropriate educational programs at the thirteenth- and fourteenth-year levels; it includes the expansion and strengthening of higher education at the more advanced levels, part of which is the program of professional and graduate study; it takes account of the needs for research and adult education. Underlying the whole of the estimates given is the basic conclusion by this Commission that the needs and demands for higher education, as well as the potential numbers in the population who can profit from it, are such that the enrollment goal should be at least 4,600,000 in 1960.

The amounts needed for the current educational program in 1960, the size of the faculty, and the enrollment upon which they are based are summarized in table 2.

TABLE 2.—*Enrollment, faculty, and current educational expenditures for higher education in 1960 for the program recommended by the President Commission*

	Recommended for 1960
Resident enrollment	4,600,000
Faculty	350,000
Current educational expenditures (1947 dollar values)	$2,587,000,000
Faculty	$1,675,000,000
Libraries	92,000,000
Operation and maintenance of educational plant	257,000,000
Organized research	160,000,000
Adult education (including extension)	100,000,000
Special services	90,000,000
Administration (other than salaries of administrative faculty which are in "Faculty")	115,000,000
Other activities related to instruction	98,000,000

CAPITAL OUTLAY

The replacement value of the physical plant used for instructional purposes by America's colleges and universities in 1947, was estimated to be 4 billion dollars. This did not include the value of extensive

additional facilities devoted to housing and other noneducational purposes.

The large post-World War II enrollment in the colleges and universities of the country has severely taxed the present physical facilities. Temporary and emergency buildings have had to be erected on almost every campus to meet the unprecedented situation. ***A major building program of tremendous proportions must be undertaken immediately to provide adequate educational and noneducational or housing facilities of a permanent type for the present and anticipated enrollments in higher education.*** Many colleges and universities have already embarked upon extensive building programs.

Instructional Plant

The crowded conditions on the nation's campuses in 1946–47 reduced the available gross floor space to a national average of less than 110 square feet per student, as compared with an average of about 155 square feet before World War II. The gross square feet per student is a standard measure of adequacy of the educational plant. Gross floor space includes classrooms, laboratories, libraries, and the like, as well as space not available for instructional use such as corridors, closets, basements, and furnace rooms.

Even a pre-World War II average of 155 square feet per student did not provide adequate floor space in all cases. While there is some evidence that a national average of 175 square feet might be desirable, this Commission believes that with maximum utilization of plant facilities, the future needs of higher education can be satisfied effectively with a return to the prewar average of 155 square feet per student. The maintenance of this average for the number of students for whom higher educational opportunities should be provided, will require a vastly expanded plant and large capital outlays.

The United States Office of Education, on the basis of a survey made in the spring of 1947, estimates that the Nation's institutions of higher education at that time had a gross floor capacity of 222 million square feet. This amounted to less than 110 square feet per student, far too low for efficient college work. Based on reports received from institutions of higher education, as part of that survey, it appears that there is assured by 1950 an additional 12 million square feet of temporary space and 31 million square feet of permanent space. Much of this temporary space will be converted into permanent structures, and cannot be disregarded in estimating the available space. The size of the plant needed by 1960 to take care of the program recommended by this Commission is vastly larger than that available or assured, and the gap to be filled requires the immediate initiation of a huge building program.

TABLE 3.—*Size of educational plant needed in 1960 to fulfill program recommended by the President's Commission on Higher Education*

	Gross floor space (million square feet)
Space available in the spring of 1947 [1]	222
Additional space assured by 1950 [1]	43
Additional space needed by 1960 to fulfill Commission's recommended program	448
Total space needed in 1960	713

[1] Source: U. S. Office of Education.

Replacement or current construction cost of buildings is a sound measure of the value of an educational plant. Market or resale value is inadequate since such structures rarely have any value in the open market because of their specialized nature; the original value less standard depreciation fails as a sound measure because it does not consider changes in the value of money nor the fact that the level of maintenance and repair is presumed to keep the plant in good, modern condition.

In 1946–47 the estimated cost of constructing and equipping a building for college or university purposes, based upon data provided by the Federal Works Agency, varied from about $18 to $20 per square foot, depending upon the type of building, type of equipment, and the area in which it was erected. This does not include the cost of land. Considering $18 per square foot as a reasonable estimate of the replacement or current (1946–47) construction cost, **the plant needed by 1960 will be one with a value of about $12,800,000,000.**

TABLE 4.—*Estimated value of educational plant needed in 1960 to fulfill recommended program (1946–47 replacement costs)*

	Value (in millions)
Spring 1947 plant	$3,996
Additional space assured by 1950	774
Additions needed by 1960 to fulfill Commission's recommended program	8,064
Total value of educational plant needed by 1960	12,834

As stated before, it is assumed that the publicly controlled institutions will of necessity bear the major part of the needed expansion, and that the privately controlled institutions will stabilize their enrollments at about 900,000 students. On the basis of these assumptions, the replacement value of the facilities needed by the privately controlled group would be $2,520,000,000. Data from the United States Office of Education show that in the spring of 1947 a little less than half of the space was in the privately controlled institutions; however, data are not available at the time of the writing of this report on the breakdown of assured space by 1950 as between publicly and privately

controlled institutions. Assuming that the 43 million square feet assured by 1950 might be allocated upon the basis of existing space in the spring of 1947, the privately controlled institution would still require an additional 17 million square feet, with a 1947 replacement value of $306,000,000.

The size and cost of the educational plant facilities required for both privately and publicly controlled institutions to provide for an enrollment of 4,600,000 students in 1960 are shown in table 5.

TABLE 5.—*Size and value of educational plant needed in 1960 to fulfill recommended program, by type of institutional control*

[In millions]

	Total	Publicly controlled institutions	Privately controlled institutions
Total recommended:			
Floor space	713 square feet	573 square feet	140 square feet.
Replacement value (1947 dollar value).	$12,834	$10,314	$2,520.
Additions needed beyond that available or assured by 1950:			
Floor space	448 square feet	431 square feet	17 square feet.
Replacement value (1947 dollar value)	$8,064	$7,758	$306.

Noninstructional Plant

The amount of residential or housing space required is subject to much discussion and interpretation. The United States Office of Education estimates that there were about 120 million square feet of such institutional space in the spring of 1947, with an additional 35 million square feet assured by 1950. That amount of space is supplemented by noninstitutional housing in rooming houses, private clubs, and off-campus residences. Of the institutions in existence in that year, about 15 percent did not provide housing space. It is to be expected that as the proposed community college program expands, increasing proportions of students will live off-campus in their own homes.

Noninstructional or housing space provided by institutions is generally self-supporting, and in some instances self-liquidating. It may even produce income in excess of operating cost. Prior to 1930, the construction of most dormitory facilities was financed out of philanthropic gifts or direct appropriation in the same manner as the instructional plant was financed. The great impetus toward the self-liquidating type of dormitory financing came during the 1930's when

funds were made available to publicly controlled institutions by the Federal Government through the Public Works Administration and the Reconstruction Finance Corporation. Privately controlled institutions, also under pressure for increased dormitory facilities, in many cases set up separate corporations which issued bonds to finance the construction. In both types of institutions, there was need for self-liquidation of the projects and rates were established accordingly.

Dormitory residence for students living away from home is generally considered the more desirable for students: it offers group living and the benefits to be derived from sharing; it gives the institutions the opportunity to guide students into adjustment to adult independent life; it affords the student clean, comfortable quarters, a factor which of itself contains a high educational value. To make these facilities self-liquidating, however, it may be necessary to establish room rates so high as to be economic barriers to many students who would otherwise take advantage of this type of housing. Self-liquidation should be minimized, therefore, in favor of assuring the advantages of dormitory life to all students requiring that type of accommodation.

Noninstructional or housing facilities should be financed, if they must be self-liquidating, at low rates of interest with long periods granted for retirement of the debt. Should private credit agencies not be able to offer such terms, the financing of dormitory and residence hall construction offers a very proper area for public financing by local, State or Federal Government. The Federal Government offers this type of financing, through the Reconstruction Finance Corporation, to publicly controlled institutions. It is not expected, however, that the need for additional dormitory facilities will be as great as it might at first appear, since a large proportion of the expansion in enrollment will take place in community colleges and other institutions students of which do not require living accommodations.

AUXILIARY ENTERPRISES AND OTHER NONEDUCATIONAL ACTIVITIES

Several items, other than those described above, help to make up the total expenditures for higher education. These items are either self-supporting or separately financed. As a rule they do not represent an added burden on the current or capital budgets of colleges and universities. In fact, they are often a source of additional income. They include such auxiliary enterprises as dining halls, student unions and book stores; also they include certain other expenditures, classified as noneducational in type, such as grants-in-aids or scholarships to students and interest on indebtedness.

In the case of scholarships, the United States Office of Education reported that in 1946–47 colleges and universities had available approximately $25,000,000 for various types of aids to students, of which the publicly controlled institutions had about 25 percent and the privately controlled institutions the remainder. In the volume of its report "Equalizing and Expanding Individual Opportunity," this Commission has recommended a vastly expanded program of aid to students, a program which in its fullest operation will approximately equal the Federal aid now being provided to veterans.

The precise amounts being expended for interest on indebtedness by institutions of higher education is not known. An informed estimate is approximately $5,000,000 per year with the privately controlled institutions paying the major proportion. The desirable situation would be, of course, for the institutions to be free of debt and for this item, therefore, to be reduced to zero. It cannot be expected, however, that this desirable situation will come about within the foreseeable future.

It is assumed that institutions will not borrow to meet current expenditures but will finance them out of current income. Thus, future expenditure for debt should be related directly to the terms underlying the financing of capital outlays. It is important that these amounts not be a drain on the income of the institutions.

As for privately controlled institutions, the stabilization of enrollment at about 900,000 students should serve to stabilize the debt and thereby the annual payments on it. In cases where the original debt was obligated for under disadvantageous terms, it is hoped that refinancing will be arranged on more generous terms in keeping with the national importance of higher education.

SUMMARY

This chapter has presented the expenditure side of America's budget for the future of higher education. The amounts are large: well over $2,000,000,000 annually for current operations; $672,000,000 on an equal annual basis for capital outlay for instructional purposes; plus additional amounts for noninstructional plant needs; and, as described in the volume "Equalizing and Expanding Individual Opportunity," $1,000,000,000 annually for the fullfilment of the recommended scholarship and fellowship programs. But if the amounts are large, so too are the needs. A possible enrollment of at least 4,600,000 is to be provided for in 1960. Only by raising the expenditures for higher education to the levels proposed can the needs be met.

Financing the Cost of Higher Education

The financing of higher education follows a complex pattern. It depends upon funds provided by private individuals and corporations, church groups, college alumni, students and their families, and government—local, State, and Federal. Institutions under private control are financed chiefly by student fees and funds received from private donors, including earnings on invested funds and annual gifts and grants. Publicly controlled institutions derive their income in the main from appropriations by State legislatures and from student fees. A few institutions, including certain municipal institutions and public junior colleges, are supported mainly by local government funds. The land-grant colleges and universities receive substantial funds each year from the Federal Government. Nearly all colleges and universities receive at the present time, on a temporary basis, substantial indirect support from the Federal Government through payments for the education of veterans.

The degree of dependency upon these various sources of income varies widely among institutions of higher education. For example, endowment earnings may provide some institutions under private control with little or no income, while more than one-half of their income may be received from this source by others. Similarly, the proportion of income received from various governmental sources differs widely among publicly controlled institutions.

Furthermore, the source of income does not too clearly distinguish the type of institutional control. Some private institutions receive support from appropriations of public monies. Many publicly controlled institutions receive some support from private sources. In the sense that all private institutions are nonprofit making, they receive indirect public subsidy through tax exemption; it has been estimated that this invisible income is equivalent to about 15 percent of the total income of all institutions of higher education.

CAN AMERICA AFFORD THE COST?

In the preceding chapter, it was estimated that the cost of an acceptable program of higher education in America in 1960 would be in the neighborhood of $2,600,000,000 This is for current educational expenditures. If the funds needed between now and that year for capital outlay, on an equal average annual basis, are added to this amount the total annual cost in 1960 would be about $3,250,000,000.

Can America afford this program? The answer is unequivocally yes. Expenditures for higher education have increased steadily and substantially throughout the years. Yet, the gross national product, which is a measure of the market value of all goods and services produced in this country during a specified period, has also increased, and at a higher rate. During the fiscal year 1932, in the midst of the depression, expenditures for current educational purposes in higher education were equivalent to 63/100 of 1 percent of the gross national product for that year. In 1947, when expenditures for higher education were more than twice those for 1932, these expenditures were only 46/100 of 1 percent of the gross national product for that year, or only a little more than two-thirds as much as 15 years earlier: The amount spent for current purposes in higher education has been declining consistently in relation to the gross national product over the last 15 years for which comparable data are available. This Commission considers the trend unfortunate; and recommends that as the gross national product increases, the percentage made available for higher education also increase.

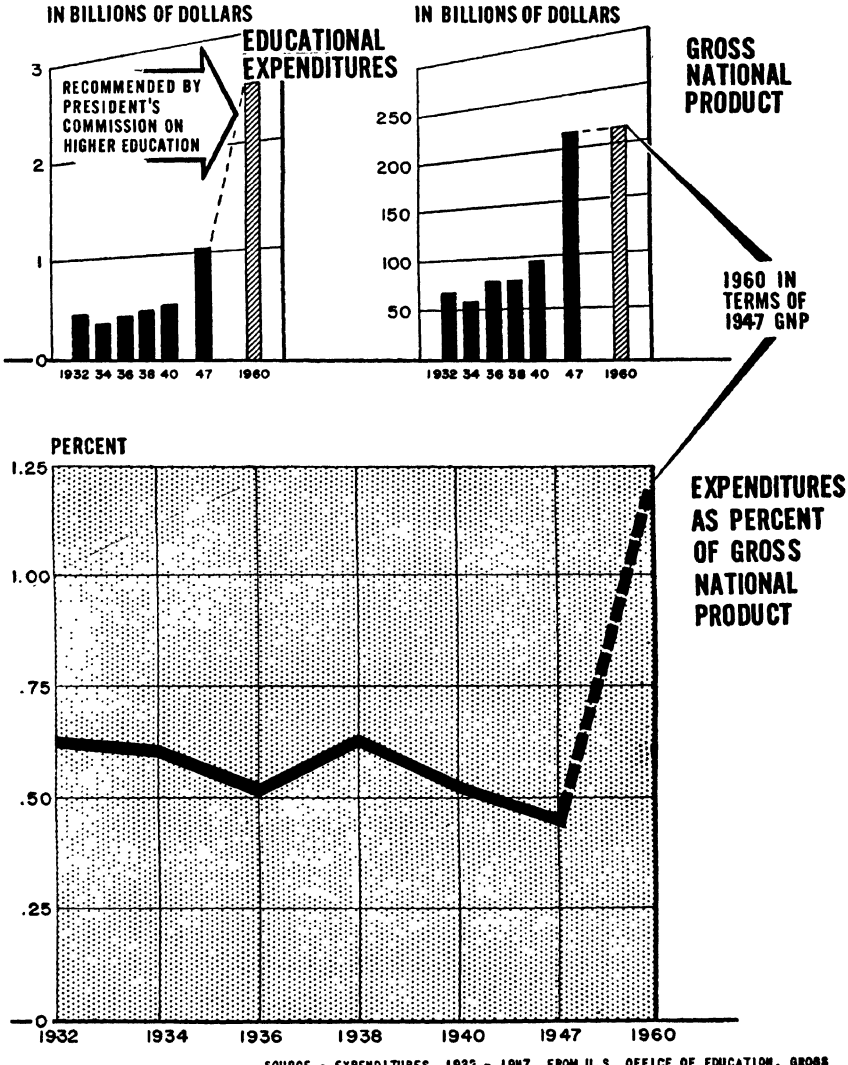
In terms of 1947 dollar values and the 1947 gross national product, the proposed 1960 current expense budget of $2,587,000,000 for the complete fulfillment of the Commission's recommended program would require 1.19 percent of the 1947 gross national products. (See chart 3.)

This Commission believes the Nation can well afford to have 1.19 percent of the national production invested in higher education. If the $672,000,000, representing the annual average cost of the needed capital outlay, is added, the percentage is 1.50—still a small figure.

If the position is taken that the national economy is fixed and that expenditures for higher education are expenditures for consumption purposes only, then the view that America cannot afford the cost of the proposed program might appear justified. But such a position cannot be justified. *Higher education is an investment, not a cost. It is an investment in free men. It is an investment in social welfare, better*

EXPENDITURES
FOR HIGHER EDUCATION IN RELATION TO GROSS NATIONAL PRODUCT

1932 - 1960



SOURCE - EXPENDITURES, 1932 - 1947, FROM U.S. OFFICE OF EDUCATION. GROSS NATIONAL PRODUCT FROM U.S. BUREAU OF FOREIGN AND DOMESTIC COMMERCE. DATA FOR FISCAL YEAR ENDING JUNE 30, 1960 IN TERMS OF 1947 DOLLARS.

living standards, better health, and less crime. It is an investment in higher production, increased income, and greater efficiency in agriculture, industry, and government. It is an investment in a bulwark against garbled information, half truths, and untruths; against ignorance and intolerance. It is an investment in human talent, better human relationships, democracy, and peace.

The true answer, therefore, to the question "can America afford the recommended program?" is: America cannot afford *not* to pay the cost of a strong program of higher education.

The real question then, is not *can* we pay the cost, but rather—*how* shall we pay it? In terms of past standards the task is indeed great. It will demand the concerted effort of our total resources, both private and public. It will require the establishment of a strong plan of support, carefully developed and equitably executed. It will involve the cooperation of the colleges, government at all levels, and of every citizen.

As stated in the preceding chapter, there are two major types of expenditures in higher education: current educational expenditures and capital outlays. The problem of financing these expenditures involves a consideration of the various present and potential sources of income, and a determination of the relative adequacies of these sources. It involves also major questions of policy with respect to the role which these sources of income should play in the support of higher education, and the purposes for which they should be used.

FINANCING CURRENT EDUCATIONAL EXPENDITURES

The sources of income available for the financing of current educational expenditures may be classified under four main headings: philanthropy or private sources, student fees, public sources or government appropriation, and miscellaneous, including receipts from sales and services of organized institutional activities.

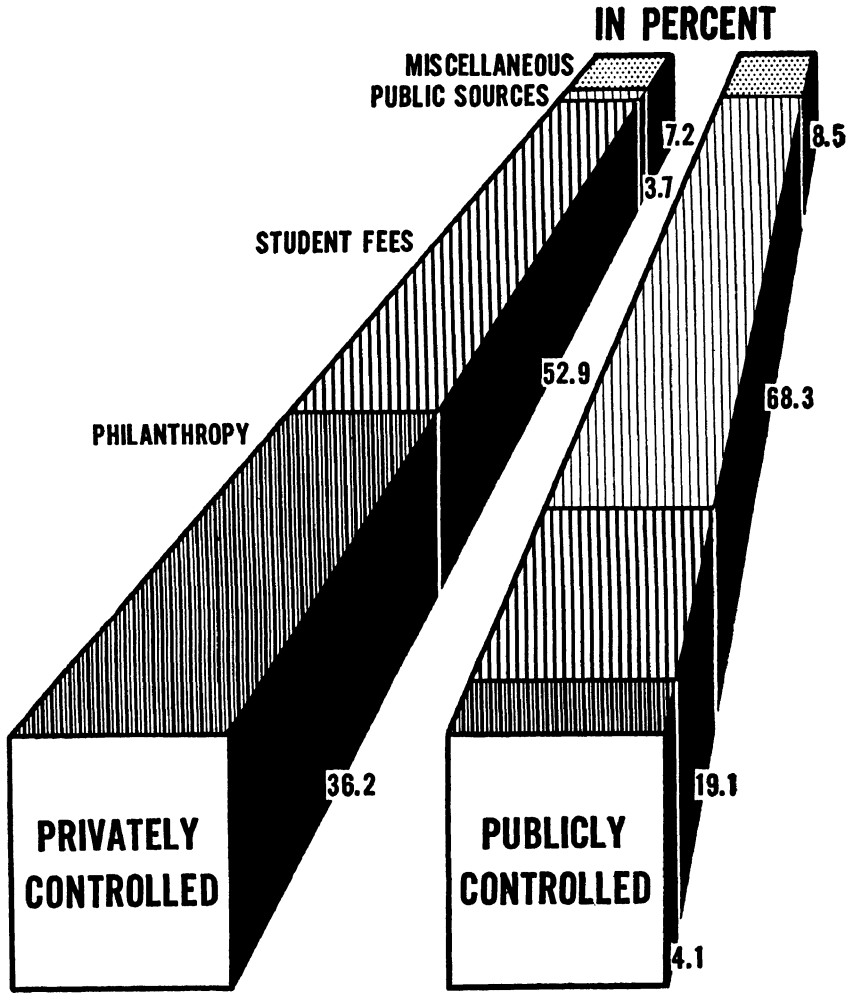
Chart 4 shows the percentage distribution of income available for current educational purposes by source and type of institutional control for 1940. This distribution is substantially the pattern that existed in the years from 1932 until the beginning of World War II. The war distorted the normal financial picture, thus invalidating any conclusions based on more recent data.

Private Contributions

Progress in higher education may be attributed in no small degree to the loyalty and faith of the friends and benefactors of America's colleges and universities. The American people, individually, and through corporations and foundations, traditionally have given generously to the support of institutions of higher education. A principal fund of more than $1,750,000,000, including endowment, annu-

PRE-WAR PATTERN

INCOME OF INSTITUTIONS OF HIGHER EDUCATION



SOURCE - U.S. OFFICE OF EDUCATION.
DATA ARE FOR FISCAL YEAR, 1940,
WHICH IS TYPICAL OF PERIOD 1932 - 1940.

ity, and loan funds, was held by the Nation's colleges and universities in the fiscal year 1940. Earnings on these invested funds in that year brought over $70,000,000 into the current operating fund of all institutions of higher education. Eighty-eight percent of the endowment and other invested funds were held by institutions under private control. In addition to these invested funds, private gifts and grants for current or undesignated purposes amounted to about $40,000,000 in 1940. In that year, the amount of private contributions reached a new peak, but the total needs of higher education expanded even more with the result that this source provided only 19.9 percent of current incomes for all institutions; endowment earnings accounted for 12.7 percent, and gifts and grants for 7.2 percent.

As previously stated, it is natural that the major proportion of these contributions is received by privately controlled institutions, many of which rely heavily upon this source of income. In 1940 private philanthropy contributed 36 percent of the income of privately controlled institutions and 4 percent of those under public control. Yet one fact which cannot be ignored is the tendency of these private gifts to flow increasingly to institutions under public control. In 1920, publicly controlled institutions received only 3 percent of all philanthropic contributions to higher education; in 1940 they received 14 percent. In 1940, 12 percent of all endowment funds was held by publicly controlled institutions, and several of these institutions annually received substantial income from investments based on such gifts.

Since 1936, higher education has tended to receive a steadily diminishing share of the total contributions of private philanthropy. Private contributions for all purposes, including domestic and foreign relief and social and welfare services have increased both in absolute amount and in proportion to the national product. This reflects the success of organized efforts to raise funds.

The percentage distribution of philanthropic contributions according to purpose changed markedly between 1920 and 1940. In 1920 less than 11 percent of the contributions received by all institutions of higher education was used for current operating purposes; 78 percent was used to increase endowments; and 11 percent was designated for capital outlay. In 1940 the proportion devoted to current operations had increased to 41 percent; the proportion for endowment had declined to 36 percent; and the proportion for capital outlay had risen to 23 percent. These changes reflect the increasingly heavy need on the part of privately controlled institutions for current operating funds.

Endowment. Funds designated for endowment are those funds the principal of which is to be invested as wisely as possible and from which the interest is available to the institution.

Endowment funds built up rapidly during the first three decades of the century; they increased more than sevenfold, an average of $500,000,000 each decade. But for the decade 1930 to 1940, the increase was only $250,000,000. The income from endowment earnings, however, has not kept pace with the expanding needs of higher education. Accumulation of endowment capital has never increased as rapidly as enrollments. From 1920 to 1940, endowment income as a percentage of current income for all institutions declined from 15.4 percent to 12.5 percent. For privately controlled institutions the decline in percent was from 29.8 in 1920 to 23.4 in 1940. These relative declines in income from endowment were occasioned to a considerable extent by a gradual falling off of the rate of returns on invested funds.

The value of endowment in the support of an expanding program of higher education is further narrowed by the factor of distribution. Of the amount held by privately controlled institutions in 1940, more than two-thirds was held by only 46 of the 1,000 institutions of this type; these same institutions before World War II enrolled less than 15 percent of all college and university students.

Private gifts and grants. Contributions for current operating expenses of institutions of higher education increased more than sixfold between 1930 and 1940; and, like endowment, they have continued to increase substantially. But, relatively speaking, private gifts for current or undesignated purposes have not been a major source of income for American higher education. In relation to total income, however, they increased somewhat during the 20-year period preceding the recent war. In 1920, private gifts and grants to all institutions constituted only 4.5 percent of the total income; by 1930 the percentage had increased to 5.0 and by 1940 to 7.2. In the same years, comparable percentages for institutions under public control were 2.1, 0.8, and 1.8; for those under private control percentages were 9.6, 9.1, and 12.8. By 1944, however, due to the changed pattern of college financing, this source of income amounted to only 5.8 percent of total operating income of all institutions, 1.9 percent in those publicly controlled, and 10 percent in those privately controlled.

Potential of private contributions. Experience shows that philanthropists prefer to give to capital projects rather than to current expenditures; also that they tend to concentrate their gifts in a comparatively small number of large and well-established institutions.

Even if there were a substantial increase in the absolute amount of gifts, it does not seem reasonable to expect income from endowment to increase sufficiently to support the proposed expenditures for higher education in the same proportion as prior to World War II. To pro-

vide the necessary income, assuming a return on invested funds of 3 percent, would require an endowment of more than $10,000,000,000, or about six times the amount now held by colleges and universities.

A more hopeful picture with respect to increased support from philanthropy is in the form of annual gifts and grants for current expense purposes. In the past decades, tremendous gains have been made in this field by local, national, and international welfare agencies. Institutions of higher education have not demonstrated the need, the appeal, or the organized fund-raising efforts comparable with those of these agencies; hence, they have not kept pace in the competition for these funds.

The President's Commission is confident that if more intensive and better organized appeals are made by colleges and universities, substantial increases in gifts and grants can be obtained for endowment, as well as for immediate expenditure. Many factors point in this direction. First, the present high and increasing income level of many individuals and corporations offers a fertile field for potentially larger philanthropic contributions. Second, present Federal and State tax policies provide liberal exemptions from income taxes for gifts to educational and other nonprofit institutions as defined by law. Federal policy includes: (1) exemption of charitable gifts from the gift tax, (2) exemption of charitable bequests from the estate tax, and (3) exemption of as much of the adjusted gross income of the individual, not exceeding 15 percent, and of corporate net income, not exceeding 5 percent, as is contributed for educational, religious, and charitable purposes. According to *Higher Education, Philanthropy, and Federal Tax Exemptions* by J. Harold Goldthrope, philanthropic contributions for the 10-year period 1930–39 amounted to an average of less than 2 percent of the total income reported by individuals on Federal tax returns for that period. If this average had been even 5 percent, or one-third of the total rate of exemption permitted, approximately $6,000,000,000 additional income would have been available to educational institutions and other recipients.

Increasingly larger proportions of all contributions are coming from individuals in the lower income groups. For example, in *Financing the Future of Higher Education*, Thad L. Hungate showed that in 1941–42, 72 percent of all contributions for educational and philanthropic purposes came from donors with incomes of less than $5,000, as compared with an average of 51 percent in the period 1930–39 for the same income group. This fact is of great importance to colleges and universities in planning their appeals for increased gifts and grants from private sources.

But in spite of encouraging increases in gifts and of more effective appeals, it does not seem reasonable to expect that much more

than a doubling of income from this source will be available in the immediate years ahead. Thus, a maximum of $225,000,000 in private contributions might be counted on by 1960, on a continuing annual basis, with $200,000,000 going to the support of the privately controlled institutions. In terms of the proportion of the total proposed program expected to be borne by privately controlled institutions, this anticipated income would account for 40 percent of their share of the cost, as compared with 36 percent of total income realized from this source before World War II.

Student Fees

America has always depended, heavily upon the student and his family for the support of institutions of higher education through the payment of tuition and other required student fees. Before World War II, student fees (i. e. tuition and other required fees) amounted to more than a third of the current educational expenses in all institutions; in private institutions the percentage was 60 and in those under public control it was about 19. Chart 5 shows the relationship between student fees and educational expenditures in the fiscal years ending June 30, 1932, 1940, and 1947, for all institutions, for all publicly and all privately controlled institutions, and for two selected types of institutions; namely, universities and junior colleges.

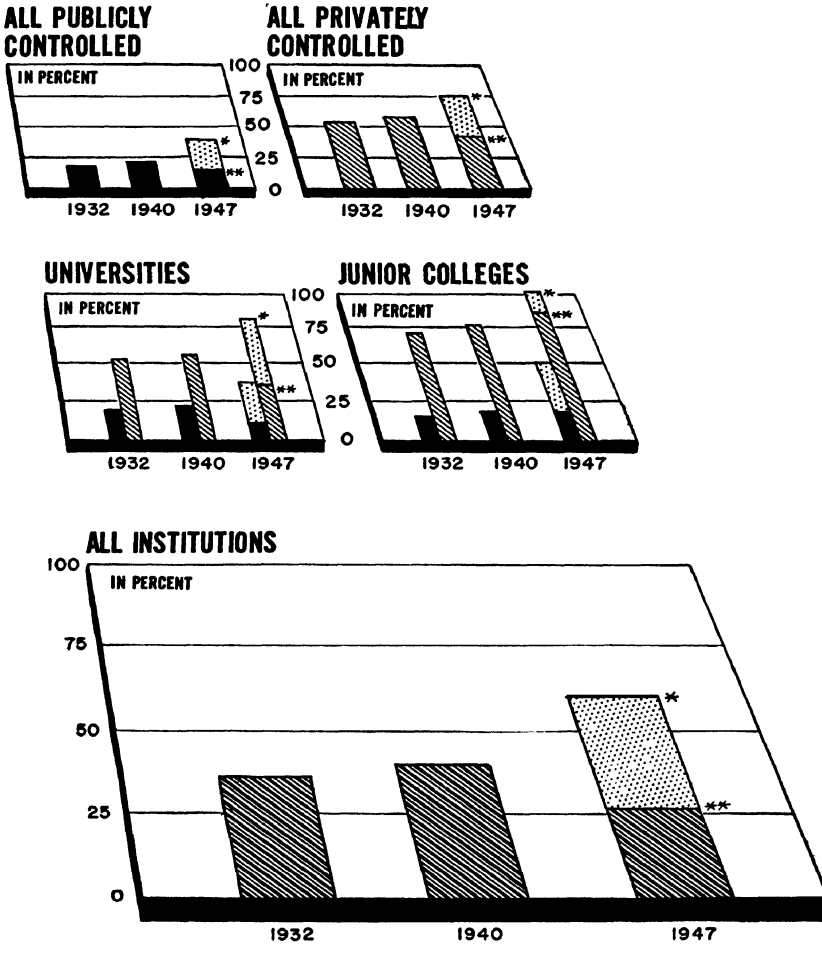
Publicly controlled institutions generally have relatively lower fees than privately controlled colleges and universities. State teachers colleges commonly charge lower fees than State universities. In some States, the junior colleges that are under public control are as free as the public high schools; in others, the publicly controlled junior colleges are supported largely by student fees, and the amount of the charge approaches or equals that in comparable private institutions. The separation of publicly and privately controlled institutions on the basis of student fees is not sharp; some publicly controlled institutions charge tuition and other fees at higher rates than those charged in some privately controlled institutions of similar type.

Student fees are a flexible means of increasing income. This fact, in addition to the increasing pressure for more adequate funds, has undoubtedly been a major cause in the continuing and recently sharp increase in the rate of dependence of institutions upon funds from this source for financing operating expenditures. It is significant that, percentage-wise, the upward trend in this dependence has been more rapid in recent years in publicly controlled institutions than in those under private control, even though fees in the former still average much less than those in private institutions. This should be a matter of serious concern in a democracy devoted to the principle of equality of educational opportunity. It has been discussed in detail in the volume

HOW STUDENT FEES PAY THE WAY

INCOME FROM STUDENT FEES

PERCENT OF EDUCATIONAL EXPENDITURES



* G.I. FEES PAID BY FED. GOVT.
** FEES PAID BY STUDENTS

SOURCE - U. S. OFFICE OF EDUCATION.
STUDENT FEES DATA DO NOT INCLUDE PAYMENTS FOR ROOM AND BOARD, STUDENT SUPPLIES, ETC.

of this Commission's report " Equalizing and Expanding Individual Opportunity."

Furthermore, the levels of fees differ in the various parts of the country. Colleges and universities located in the eastern States have, in general, a much higher schedule of fees than those located in the Middle West and in the South.

To what extent should the cost of higher education be financed by student fees? The answer to this question involves major questions of policy. What fees, if any, can students or their families afford to pay? Does the individual gain moral advantages from the payment of fees for the benefits of a college education? What are the advantages and disadvantages to society in general? These and other issues relating to this problem are discussed in Volume II and can be briefly summarized here. Measures for reducing the inequalities of educational opportunity occasioned by the economic barriers to higher education proposed in that volume include: (1) an extension of tuition-free education through the fourteenth year; (2) reduction of student fees above the fourteenth year and in graduate and professional schools in publicly controlled colleges and universities; and (3) broad national scholarship and fellowship programs for qualified students, the former based on the individual's ability and needs, the latter on ability only.

In addition to the recommendation that student fees be eliminated for grades 13 and 14 in publicly controlled institutions of higher education, this Commission recommends that the fees for the upper grades in such institutions be rolled back at the earliest opportunity to the level prevailing in 1939. It is realized, of course, that economic conditions and other factors relating to income may make this move difficult immediately, but the urgency of such an adjustment is clear.

If about one-third of those paying fees in publicly controlled institutions are "out-of-area" students, the average annual fee in 1939 is estimated at $105. With about 1,690,000 students above the fourteenth year in publicly controlled institutions envisioned for 1960, fees would provide in that year an income of $177,000,000 for these institutions.

The effect of high fees upon equality of opportunity in higher education is not a concern wholly of publicly controlled institutions. Institutions under private control also must avoid excessive fees if their contribution to higher education is to be of greater benefit. While most of these institutions of necessity must depend heavily upon fees as a source of financial support, they cannot be unaware at all times of the effect which high fees may have in limiting the advantages of their services largely to students from families in the upper-income brackets. It is important, therefore, that they maintain their fees at

the lowest level possible commensurate with their needs for adequate funds.

As a means only of estimating the probable income from fees in privately controlled institutions, it is assumed that these institutions will stabilize their fees about midway between the 1939 and the 1947 level, at an average of about $300 per student per academic year. Based on an estimate of 900,000 students enrolled in private institutions in 1960, the income from student fees would be $270,000,000 or about 53 percent of the total amount needed to finance current educational expenditures in these institutions.

Public Funds

Appropriations by government—Federal, State, and local—provided $206,000,000 for the support of current educational expenditures in institutions of higher learning in 1940; this was 36.6 percent of the total current income. Public appropriation included about $30,500,000 for the Federal Government, $151,000,000 from State governments and a little over $24,000,000 from county, city, and district governments.

Before World War II, the trend in public funds had been steadily rising both in amount and in relation to total income. During the war, the trend rose much more sharply and by 1944 this source of income amounted to more than $500,000,000 and constituted nearly 60 percent of total current income. This sharp rise was due, of course, to the large allocations of Federal funds to colleges and universities for the war-connected instructional and research activities of both publicly and privately controlled institutions.

Although publicly controlled institutions are naturally the main beneficiaries of continuing public appropriations, there has long been a tendency for many institutions under private control to receive increasingly larger sums of money for current educational purposes from this source. While State governments have contributed in some measure to this trend, most of the increase has been the result of Federal policy. The implications of this trend and the basic issues involved are presented in Chapter IV.

It has been said that the needed expansion of higher education must of necessity be financed largely by public funds. The question then arises as to the relative role each level of government—local, State, and Federal—should play in meeting the cost. The answer to this question involves matters of principle as well as those of practical consideration.

Although higher education is a function which by established practice and in the interest of efficient control and administration belongs primarily to the States, it is an activity of national concern. Its benefits are not confined by State or even regional boundaries, but affect

the welfare of the Nation as a whole. All of the people then have a direct concern for its adequate support. The various levels of government should contribute in a manner which will most effectively and economically promote the national goals. The fiscal relationship, therefore, in the support of higher education among local, State, and Federal Governments should be one of partnership, although the nature of the partnership will vary from State to State because of economic and other practical considerations.

Because of the importance of these considerations, the current and future role of each level of government in financing higher education will be considered separately. They can be appraised only in the light of the total tax structure.

Local government. While local government has long been the main support of elementary and secondary education, it has not, in general, been a significant source of income for higher education. In the past few decades there has been a general tendency in most States for local taxing units to bear a smaller proportion of the total support of education and for the States to bear a larger proportion.

A number of factors account for this situation. Foremost among them is the inflexible nature of the tax structure of most local governments. A second is the fact that approximately four-fifths of all local revenue is raised from property taxes. A third factor is the inequitable and long out moded assessment procedure which prevails in many States and localities. Finally, constitutional or statutory tax limitations upon property exist in a number of states which in effect impose ceilings, already reached in many cases, upon the amounts available from property tax levies.

It is not surprising, therefore, that in many communities property has become heavily burdened by taxation. Relief has been sought through shifting a larger share of the cost of education and other functions of government to the State level. Furthermore, property valuations or changes in the tax rates respond but slowly to economic conditions. Thus, property taxes are usually a heavy burden in depressed times and lag behind rising prices and incomes in periods of prosperity.

In 1946, the gross national product had risen 28 percent over that for 1942, while receipts of local government for the same period, exclusive of intergovernmental aid, rose only 17 percent. These figures reflect the relative inability of local government to capture gains made in the national economy. It is true that some communities are able to provide sufficient funds with reasonable tax effort to support the types of community colleges proposed by the President's Commission. Others are able to do so with assistance from the State.

It is evident, therefore, that local government, with its restrictions, both legal and economic, on its taxing powers, and contributing heavily to the support of elementary and secondary school systems, cannot carry any large added burden for higher education. In 1939–40, local governments contributed $24,000,000 to finance publicly supported institutions and $250,000 to those privately controlled. It appears doubtful that these amounts could be much exceeded by 1960.

State government. The tremendous shift of the taxing activities of government to the Federal level during recent years, has had its effects also upon the flexibility of State tax structures. Thus, during the period from 1942 to 1946 when the gross national product increased 28 percent, State revenues, exclusive of intergovernmental aid, rose only 22 percent.

The States differ widely in their efforts as well as their abilities to support education. Some States spend annually for higher education from public funds eight to nine times as much per youth of college age (18–21) as do other States. In 1940, for example, Georgia and Massachusetts spent only $9 per youth of college age, while Nevada spent $78; the average for all States was $21. Many of the wealthier States (i. e., those with the higher per capita incomes) make the least effort, as measured by percentage of State income devoted to the support of publicly controlled institutions; in contrast, many of the poorest States make the greatest effort. One of the major reasons for the poorer showing on the part of many of wealthier States, is that they tend to rely more heavily than the others upon privately controlled institutions for the services of higher education.

The wide variation in the ability of the various States to support higher education makes a program of equalization imperative if a defensible minimum program of higher education is to be provided on a Nation-wide basis. Geography of State boundaries should not be the major factor in determining either the rate of tax funds levied for the support of colleges and universities nor the level of expenditure for higher education per youth of college age. This does not imply, however, that each State should not carry its fair share of the cost of meeting the total national needs for higher education.

Determining the States' fair share of the estimated cost of the proposed program of higher education is not easy. Averages of past experience do not provide proper measures because of the fact that many States have not fully assumed responsibility for the needed higher education. State programs are being rapidly developed, and it is reasonable to assume that as the needs of higher education become more apparent the efforts of the States to support colleges and

universities will resemble their efforts to support elementary and secondary education.

At best it can be assumed that all States in the future will make as great an effort to support higher education as that made by the States making the greatest effort before World War II, in the year 1939–40. Effort in this case is being measured by the percentage of the total income of all the people of a State devoted to the support of higher education through public appropriation. On the basis of this assumption, the States would be expected to spend on the average about 0.5 percent of the total of all income received by persons within each State as their fair share of the cost of higher education in 1960. It is recognized, of course, that in actual practice the percentage figure would vary among the States, as it does now, due to the variation in the share of their respective programs of higher education which are borne by privately controlled institutions. In terms of the total of income payments during the fiscal year 1947 ($200,000,000,000), the assumed average would amount to $1,000,000,000 or about one-half of the funds required for the proposed program in publicly controlled institutions.

Federal Government. In the years prior to World War II, the Federal Government provided a relatively small proportion of the total income of institutions of higher education. In 1940 the institutions received Federal funds totaling $30,500,000, an amount equivalent to 5.4 percent of the current income. Well over 90 percent of that amount went to institutions under public control; of this, more than four-fifths went to the 69 land-grant colleges and universities. In addition, the Federal Government provides continuing support to the United States Military and Naval Academies and for certain institutions in the District of Columbia and in outlying possessions.

During the war years, Federal payments, including those under contracts with educational institutions for instructional and research services, made the proportion supplied by the United States Government rise sharply. It might be expected that the bulk of these Federal payments would go to publicly controlled institutions, as had been the practice before 1940. However, in 1944 this amount was divided about evenly between the privately and publicly controlled groups. This division emphasizes the widespread utilization of the facilities of all higher education institutions in the war program.

Under the two basic laws authorizing the training and education of veterans—Public Law 346, the GI Bill, and Public Law 16, Vocational Rehabilitation of Veterans—in the fiscal year 1947, institutions of higher education received $301,000,000 as payment of tuition and other required fees for veterans. This was over one-half of the income received in that year as "student fees." In addition to these payments,

the Congress appropriated about $275,000,000 for temporary housing, classroom, and laboratory facilities. A synopsis of the history of Federal participation in higher education is given in the following chapter.

In 1940, the continuing funds (i. e., those exclusive of temporary or emergency funds), provided by the Federal Government for higher education amounted to 9.9 percent of the current operating income of all publicly controlled institutions and less than 1 percent of the income of the privately controlled group. It is assumed that this continuing support will be extended in relation to enrollment and that the prewar proportion will be forthcoming in the future as a recurring governmental appropriation. Then by 1960, publicly controlled institutions could expect about $206,000,000 from this source and those under private control might expect $4,000,000.

Sales and Services of Organized and Miscellaneous Activities

Many colleges and universities receive sums of money from sales and services of organized subsidiary activities. In 1940, for example, a total of $44,000,000 was reported from such sources, which amount represented 7.2 percent of the operating income in that year for the publicly controlled institutions and 8.5 percent for those institutions under private control.

Such income includes, for example, receipts from the sales of livestock or dairy products produced as part of the program of education in agricultural schools, charges for transcripts of credits from registrars' offices, library fines, and the like. Many of these activities are closely related to the educational program while others are inextricably intertwined with the function of institutional management. Included in the sales and services are many activities such as those relating to the sale of tests and test services, the provision of management advice, personnel services, and industrial research, all of which represent extensions of institutional service beyond the confines of the campus itself.

Recently, there has developed a tendency to raise questions relative to such operations on the part of colleges and universities. This is done under the assumption that these activities and others such as the ownership and management of office buildings or the operation of other types of business enterprises offer unfair competition to private industry. Such questions usually grow out of the fact that institutions of higher learning operate under a program of tax exemption, particularly from the Federal tax on corporate income. It would appear that ordinarily such questioning not only fails to recognize the fundamental contribution of the colleges and universities to the Nation but also grows out of a basic misunderstanding of fact.

While recognizing that education in this country is a function of the various States, the Federal Government through the years has pro-

vided substantial aid to the States for education. In addition, to direct grants described elsewhere in this report, the Federal Government has utilized the principle of tax exemption to provide further assistance and otherwise to encourage and promote education at all levels. The exemption from corporate income taxes has been conceived as covering all the activities in which the institutions engage, recognizing that income from all sources is used by the colleges and universities to extend the services of the institutions in the interest of the public welfare since, "no part of the net income [accrues] . . . to the benefit of any private stockholder or individual." This policy has continuously operated to exempt from taxation the income of privately controlled institutions as well as those managed publicly, thus recognizing that the former are rendering the same kind and quality of national service as are the publicly operated colleges and universities.

Further, tax exemption has been based upon the use made of income by the institution rather than upon the activities through which such income is derived. The sole purpose of any income to educational institutions is further to increase the effectiveness of their services to their students and the Nation, and what otherwise might be considered as profits are used to supplement income and to pay current operating costs, and never for distribution to individuals. Thus, the competitive value of the right to retain in the operations concerned that portion of the income which otherwise would be payable to the Government in taxes is illusory. The earnings represented by tax savings will almost always be taken out of the institution's "business" enterprise to meet current educational needs. While it is true that the tax exemption does reduce somewhat the income of the Federal Government, at the same time such funds serve to lessen the burden on the States and the general public in the support of higher education.

The Commission recommends, therefore, that the long-term policy of the Federal Government to assist and encourage higher education through a program of tax exemption be retained.

For purposes of this volume, it is estimated conservatively that income from all sales and services of organized and miscellaneous activities will not be more than $42,750,000 in 1960 and that of this amount $25,000,000 will accrue to the publicly controlled institutions and $17,750,000 to the privately operated colleges and universities.

Summary

In chapter II it is estimated that in 1960, the current operations of a program of higher education commensurate with the complete fulfillment of the needs in America would cost $2,587,000,000. This is exclusive of capital outlay, scholarships, and fellowships. It was further estimated that $506,000,000 of this amount would be the cost

of the program to be provided in institutions under private control; and that the remainder, or $2,081,000,000, would of necessity be the part to be provided in publicly controlled institutions.

In this chapter it has been estimated that with a doubling of fund-raising efforts, a leveling off of income from student fees, and a continuance of funds from other income sources, privately controlled institutions could meet their share of the 1960 cost and provide high quality education for 900,000 students.

On the basis of greatly increased support from State governments, the continuation at the prewar rate of existing Federal funds, and the elimination of student fees for the thirteenth and fourteenth years in publicly controlled institutions, as recommended by this Commission, it has been estimated that $1,443,000,000 would be available in 1960 for the support of the proposed program which must be provided under public auspices. This leaves a deficit in the proposed budget for publicly controlled higher education of $638,000,000, which must somehow be provided if the budget for 1960 is to be balanced.

The summary of estimated income for 1960, the amounts and percentages from each source, and the deficit to be planned for are shown in table 6.

TABLE 6.—*Estimated income for support of current educational activities and possible deficit, by type of institutional control: 1960*

	Publicly controlled institutions		Privately controlled institutions	
Recommended enrollment (based on appraisal of needs)	3,700,000		900,000	
	Amount (in millions)	Percent	Amount (in millions)	Percent
Current educational expenditures	$2,081	100	$506	100
Estimated income:				
Philanthropy (endowment earnings, gifts and grants)	25	1	200	40
Student fees	177	9	270	53
Public funds:				
Local	24	1	.2	4
State	986	47	14	
Federal	206	10	4	
Miscellaneous	25	1	17.8	3
Total	1,443	69	506	100
Possible deficit	638	31	—	—

There is but one source capable of providing the funds needed to avoid a deficit and to balance the operating budget for higher education: the Federal Government. Only if the Federal Government becomes a strong, permanent partner in the system of financing higher education can the needs of a greatly expanded enrollment be provided.

FINANCING CAPITAL OUTLAYS

Capital outlays include the acquisition and improvement of land, construction and equipment of new buildings, major repair and renovation of existent structures, replacement of equipment, and purchase of new equipment. These are the expenditures which increase or enhance the value of the physical plant, as distinguished from current expenditures for running expenses, maintenance, and the purchase of expendable supplies. The amounts set forth in the preceding chapter for capital outlays are predicated upon replacement value in terms of 1947 costs, and are exclusive of any outlays which might be needed for land.

There are two different types of capital outlays which require financing: those for instructional plant, and those for the noninstructional plant.

Instructional Plant

The needs for appropriate capital facilities for instructional use to provide for the numbers who should be served by higher education in America were described in the preceding chapter of this report. After considering the facilities available in the spring of 1947 and the additions assured by 1950, as reported to the United States Office of Education by colleges and universities, it is estimated that the replacement value (1947 costs) for the additional facilities needed by 1960 will be $8,064,000,000.

It is obvious that this amount cannot be expended in any 1 year or other short period. A building program of the extent needed must and should be planned to take place in an orderly fashion over a period of time. To provide this over a period of 12 years—so that it is completed in 1960—would require an average annual expenditure of $672,000,000 beginning July 1, 1948. This annual amount is equivalent to 0.31 percent of the 1947 gross national product. Thus higher education's annual expenditures for current educational purposes and for capital outlay on the average would be equivalent to 1.50 percent of the 1947 gross national product during the period of heaviest expenditures: while the building program is in process and the current educational program for higher education is being developed to accomplish the objectives proposed by this Commission.

The problem of financing these outlays must be considered separately for publicly controlled and privately controlled institutions.

Capital outlays by privately controlled institutions. This Commission assumes that the enrollment in privately controlled institutions of higher education will be stabilized near the 1947 level of about 900,000 students. Even with this limitation on enrollment, however, it is assumed that an additional capital outlay of $666,000,000 is necessary to bring the instructional plant to the level recommended by the Commission. Of that amount, $360,000,000 was assured in the spring of 1947 for construction by 1950, leaving a total of $306,000,000 to be secured if the necessary amount of space is to be provided.

Obviously, it is necessary to contemplate heavy expenditures for physical plant additions in the next few years if this problem is to be met in a satisfactory fashion, even though the privately controlled institutions as a group are today instructing as many students as it is assumed they will handle in 1960, their facilities are taxed to the maximum. If adequate physical facilities are to be continuously available, considerable sums must be devoted to new construction and to rehabilitation of plant before 1960.

The Commission recognizes that securing the necessary funds represents a very serious problem for privately controlled institutions. It is believed, however, as emphasized elsewhere in this report, that much of this need can be met, through concerted and effective efforts, from private sources.

Capital outlays by publicly controlled institutions. Funds for capital outlay on instructional plant should be made available to the publicly controlled institutions by the local and State governments to the fullest extent of their ability; but an expenditure of $7,758,000,000 of new funds, in addition to the $414,000,000 assured by 1950, is a tremendous sum. On an equal annual basis for a 12-year period it amounts to $647,000,000 per year. This represents expenditures beyond the present financial abilities of most State and local governments.

It is recommended that the Federal Government aid in the building program through grants to the various States on an equalization basis, the States being required to supplement these grants in terms of their relative abilities to do so. This proposal is outlined in detail in the next chapter.

Noninstructional Plant

As was discussed in Chapter II, there is at the time of writing this report no basis for estimating the needs for noninstructional plant, although it is clear that additions will be required for at least dormitories and residence halls.

Publicly controlled institutions are in many instances in the same position with respect to the financing of these additions as the privately

controlled institutions. In some States, public monies are not available for this purpose. In States where public monies may be used, it is expected that as the need arises the publicly controlled institutions will receive grants for construction of these buildings in as generous amounts as the States may be able to provide.

However, as discussed previously this portion of the plant is generally self-maintaining. It is possible for it to be self-liquidating if the interest rates are low enough and the period for liquidation sufficiently long. It can hardly be expected that private credit agencies would provide funds under these terms. **Therefore, it seems perfectly reasonable that the Federal Government should finance capital outlays for noninstructional purposes, in both publicly and privately controlled institutions, on a loan basis, either through an agency created for that purpose or through an existing agency under the following general terms:**

(a) Low interest on the unpaid balance.

(b) A period of at least 30 years for retirement of the debt.

(c) Regular annual payments, by the institution for reduction and eventual retirement of the debt.

If building costs remain so high that it is unwise to charge student rates high enough to make housing projects self-liquidating, it will be necessary to seek additional funds from private sources.

In any program of this kind, care must be taken to avoid "forgiveness" on the part of the Federal Government of any part of such contracted debts. Failure of an institution to repay in full the amount of the loan would result in a direct subsidy to the institution by the Federal Government in the amount of the unpaid balance on the loan and would, in the opinion of this Commission, be a violation of sound fiscal relationships between the Government and higher education.

The temporary housing erected by the Federal Government for veteran students should be donated to the educational institutions now utilizing them. Some are such as could be reconstructed for permanent use; others will need to be replaced by permanent dormitories as soon as those can be constructed.

BALANCING THE BUDGET FOR HIGHER EDUCATION

The Cost of Closing the Educational Gap in 1960

The current operating cost of the complete program recommended by this Commission in 1960 was estimated in Chapter II to be $2,587,000,000. This is the amount required to provide a high quality program of education appropriate to the needs of 4,600,000 students, the number who should be served by higher education in that year. This number of students exceeds by 1,676,000 the number that would be enrolled in 1960 if no positive program were undertaken to increase

enrollments; in other words, on the basis of a projection of the pre-World War II trends, 2,924,000 students would be expected to be enrolled in institutions of higher education in 1960. Thus, a gap of 1,676,000 remains which must be closed in that year to attain the enrollment proposed by this Commission.

The cost of the proposed current educational program required totally to close this educational gap in 1960 is $943,000,000, or approximately 36 percent of the total cost of the program for the 4,600,000 enrollment. To provide only a partial closing of this gap would, of course, reduce proportionately the cost involved. It is assumed that the expansion will occur in the publicly controlled institutions, and that the privately controlled group will remain stabilized at an enrollment of 900,000. Thus, it is believed that the educational gap will be closed through expansion in the publicly controlled group. The costs of closing various portions of the gap are shown in table 7.

TABLE 7.—*The cost of closing various portions of the educational gap in 1960*

Portion of gap closed	Number of students involved [1]	Cost of current educational activities (1947 dollars) [2]
	(In thousands)	*(In millions)*
10%	168	$94
25%	419	236
35%	587	330
50%	838	471
75%	1,257	707
90%	1,508	848
100%	1,676	943

[1] Assumes that in accordance with the projection of pre-World War II trends, 2,924,000 students would be enrolled in 1960 without any positive program to increase enrollments and that 1,676,000 is the educational gap.

[2] Applies only to publicly controlled institutions, under the assumption that privately controlled institutions will remain stabilized at 900,000 students annually. These amounts are in addition to $1,644,000,000, the cost of the proposed program for 2,924,000 students.

Balancing the Budget in Privately Controlled Institutions

Although the financial program for the future of higher education outlined in this chapter contemplates a balanced budget for the privately controlled institutions, this Commission is fully aware of the serious financial problems facing many of these institutions. The Commission is also aware of the fact that its proposals for a great expansion of higher education in publicly controlled institutions may make it extremely difficult for many private institutions to survive. A system of tuition-free education up through the fourteenth year and relatively low fees above the fourteenth year and in graduate and professional schools of publicly controlled institutions will undoubtedly force many of the weaker private schools out of existence

and profoundly affect the whole pattern of private institutional support. Furthermore, the strengthening of publicly supported institutions, as recommended by this Commission, may have the effect of further increasing the gradual upward trend in the flow of private benefactions to State institutions.

In spite of these problems, however, it is believed that most private colleges and universities will be able to secure adequate financial support from private sources. Current reports from many institutions which inaugurated postwar fund-raising drives indicate that larger sums than ever before are being sought and obtained. Alumni fund campaigns, likewise, are running ahead of previous years. Alert institutions are taking advantage of rising individual incomes to increase their income from such sources. In spite of inflationary conditions in 1947, many of these institutions are meeting with unusual success in their fund-raising appeals.

The situation facing the privately enrolled institutions is twofold: (1) they should confine their enrollments as well as their programs to levels which they can support on a high-quality basis with the funds in sight; (2) they should take all the steps necessary within reason to expand and strengthen their methods of appealing for contributions. It was in line with the first point that this Commission based its estimate of the future cost of higher education in privately controlled institutions upon an enrollment of 900,000 students.

Private colleges and universities have yet to attempt large scale group drives for support such as those organized in recent years by numerous local, State, and national relief and welfare agencies. The success of these highly developed group appeals is well known. The failure of institutions of higher education to strengthen their own efforts through similar tactics may account, in some degree, for the fact that higher education has not kept pace in the competition for private funds.

A move in the direction of cooperative fund appeals in higher education which promises considerable success is the United Negro College Fund, an "educational community chest" for 33 private, accredited Negro colleges. Under the plan established for the Fund, solicitation on a national level has been organized within 5 major campaign divisions to reach the following prospective donors: philanthropic foundations; business corporations; individuals; special groups such as labor and alumni; and community organizations of a social, educational, and religious nature. In all, between 1,500 and 2,000 persons serve voluntarily on the fund-raising committee. The net proceeds from the annual campaigns are distributed to the cooperating colleges in accordance with an objective formula adopted by the board of directors of the fund.

Administrators and specialists in college financing agree that it is becoming increasingly difficult to secure large donations for endowments. Although many institutions are working hard to increase permanent funds, it appears that the accumulation of larger endowments does not offer much hope for private institutions in meeting today's pressing needs. A more favorable approach lies in the area of annual gifts and grants from established philanthropic foundations and business corporations and in developing a broad base of support by individuals in the middle- and lower-income brackets. Such an approach, however, will require more effective methods of appeal, more businesslike organization, and more cooperative efforts on the part of colleges and universities than have been used in the past. With greater attention to these needs, this Commission is thoroughly convinced that the privately controlled institutions may expect at least $200,000,000 in 1960 or a doubling of pre-World War II income from private sources on an annual basis.

Balancing the Budget in Publicly Controlled Institutions

It has been shown in this chapter (see table 6) that after local and State governments have made the maximum effort that could reasonably be expected of them, a deficit of $638,000,000 remains in current operating income. In order to realize the *complete* program of higher education recommended by this Commission in 1960, plans are needed to meet this deficit. The amounts involved in meeting various proportions of the educational gap planned for in the complete program are shown in table 7.

It was stated that the Federal Government is the only source capable of providing the funds needed to meet these deficits. In addition to the needs for the current operating budget, it has been shown that $7,758,000,000, or an average annual expenditure of $647,000,000, is needed by 1960 for capital outlay on instructional facilities of publicly controlled institutions, and that the Federal Government would have to assist the States in substantial amounts to finance this capital program. Further, expanded Federally supported scholarships and fellowships are part of the recommended program. Thus, it is clear that the role of the Federal Government in financing higher education must be greatly expanded.

The case for a permanently expanded role of the Federal Government in the support of higher education is extremely strong. But it does not rest solely upon financial reasons. The Nation depends upon institutions of higher education for an intelligent citizenry, and for the training of leaders in all areas basic to the national welfare. The services provided by the colleges and universities, such as research, library facilities, and adult education are indispensable to effective government at the Federal level. Money

invested in higher education yields high dividends in greater production, higher income, increased tax potential, and human well-being. It is evident, therefore, that higher education not only needs help from the Federal Government but that the Federal Government, seeking to assure the welfare of the Nation, needs the help of higher education.

The Role of the Federal Government

The two preceding chapters have presented the expenditures and income of higher education. They have been shown in terms of their past and present relationship; they have been projected to 1960 in terms of the numbers to be served and the kind and quality of higher education which, in the judgment of this Commission, the needs of the nation and its people fully justify.

As the total sources of income are appraised against expenditures, a number of conclusions become evident—conclusions that are extremely important for arriving at sound policies for financing higher education over the years ahead.

1. This Commission believes that the potentialities of income from private sources are such that the annual additional funds needed to maintain a high-quality program of education and research in privately controlled institutions can be obtained if they will maintain their total enrollment at about 900,000—which is approximately their 1946–47 level. *The belief that the additional funds can be secured rests on the ability of the privately controlled institutions themselves to work out and to adopt appropriate and concerted fund-raising methods and appeals. It is the conclusion of the Commission, however, that the additional cost of the expanded program and enrollments for higher education which have been recommended must of necessity be borne by public funds.*

2. The elimination of student fees for the thirteenth and fourteenth grades and the reduction in fees above the fourteenth grade in publicly controlled institutions recommended by this Commission, will require that a large part of the income derived presently from such sources be secured from public appropriations.

3. Large amounts of additional funds may be expected from the States with the help of local governments. As repeatedly emphasized in the preceding chapter, the States should continue their present proportion of the cost of colleges and universities and, where their resources permit, substantially increase their appropriations for

higher education, *But even with a great increase in effort, as pointed out in Chapter III, the States will not be able alone to meet the expanding needs of the nation for college and university education.*

4. On the basis of these conclusions, and with a continuance of the present federal assistance, exclusive of the funds provided under the GI Bill and other temporary appropriations, it has been shown that to serve 4,600,000 students, additional funds of more than $600,000,000 annually will be required by 1960 for educational and general expenditures—the day-to-day operation of the system of higher education. When the needed expansion in capital outlay is taken into account, the unbalance reaches a figure of far greater proportion.

This unbalance, large and serious as it is, can be eliminated and the budget balanced in 1960 if the American people are willing to value higher education in its true worth, and provide the financial support which its value both to the individual and to the nation more than justifies. To do so, however, will require that the role of the Federal Government, as a partner with the States in the support of higher education, be greatly strengthened and expanded. That role must be based upon sound principles of Federal-State relationships, carefully planned and geared to the needs and responsibilities of higher education in a democracy.

HISTORICAL DEVELOPMENT

From the very earliest period of American history, the Federal Government has given financial assistance to colleges and universities. Such assistance was intermittent and granted for individual institutions. The ordinances of 1785 and 1787 gave one section of each township in the Northwest Territory "for the maintenance of public schools within such township," and 80,000,000 acres of land were actually granted under those ordinances.

It was not until 1862, with the passage of the Morrill Act, that the Federal Government initiated a program of subsidizing specific areas of interest. This Act, which gave each State specific grants of land, provided that the income from the lease or sale of such land should be used to develop and expand education in "agriculture and mechanic arts." Later, by legislation supplementing the Morrill Act, other fields were added to those subsidized and provided through the land-grant colleges. Since 1890, a continuing proportion of the current operating budget of these institutions, now totaling 69 in number, has come from the Federal Government.

As was indicated earlier in this volume, the Federal Government has made a substantial although indirect subsidy to all nonprofit making colleges and universities by exempting them from certain Federal taxes commonly paid by industrial establishments. As their opera-

tions have expanded, this assistance has been of corresponding importance.

Prior to 1935, however, the total proportion of the current cost of higher education in America borne by Federal funds amounted annually to less than 5 percent. This included the aid for land-grant institutions and the special institutions, referred to in the preceding chapter, supported wholly or in part by the Federal Government.

The depression years of the 1930's marked the beginning of a sharp upward swing in Federal funds for higher education. In order to cope with the social and economic problems of that period, the Federal Government expanded its relatively small financial role in higher education through new developments: (1) the granting of funds for the construction of buildings for tax-supported institutions, under the Work Projects Administration and Public Works Administration construction programs; (2) the support and control of the educational programs of the Civilian Conservation Corps; (3) the provision of work scholarships for needy students under the program of the National Youth Administration.

Although the National Youth Administration grants were a subsidy to individuals, most of these funds ultimately went to the institution in which these individuals enrolled, in the form of tuition fees or payments for board and room. In addition, the institutions received, in many cases, the benefit of the services rendered by the recipients. Federal funds received by institutions of higher education under these emergency acts ran into hundreds of millions of dollars.

Although these emergency programs all ended before or soon after the beginning of World War II, they left their mark on the pattern of financing higher education.

The fiscal relationships between the Federal Government and the colleges and universities were further expanded during World War II. This relationship was largely in the form of contractual arrangements for the training of military and civilian personnel, for research, and for other specific wartime needs and services. These contracts made it possible for many colleges to continue in operation during a critical time when other sources of income were temporarily reduced.

Since the end of World War II, the emergency role of the Federal Government in financing higher education has taken on a new and vastly larger aspect. Under the educational provisions of the GI Bill and the Rehabilitation Act, the Federal Government makes payments to nearly every institution of higher education in the country in the form of tuition and other fees for veterans. These payments totaled about $301,000,000 in 1947 alone. Including this emergency income and the continuing forms of Federal aid, on the average all institutions of higher education, publicly and privately controlled, received

well over one-third of their current operating income during that year from the Federal government. In addition, the Federal government has provided invaluable assistance to colleges and universities in the form of capital additions through provisions for temporary housing, classroom, and laboratory facilities for the use of veterans. This assistance was made available to both privately and publicly controlled institutions. Like the aid under the GI Bill it does not, however, involve a continuing federal relationship with higher education.

In the fiscal year ending June 30, 1947, the Federal Government expended $1,772,000,000 in connection with post-high school education. (See chart 6.)

These recent developments in Federal support of higher education emerged for the most part to meet specific needs affecting the national welfare—needs which extended beyond the bounds of State responsibilities. They could not have been met without the fiscal assistance of the Federal Government. They arose in times of national crisis. On each occasion, Federal policy was formulated and action was taken on the basis of temporary expediency. In the case of the emergency programs of the war and depression, they ended soon after the emergencies were past. The post-war program is scheduled to end when the educational entitlements of the veterans have been fulfilled. Nevertheless, each of these temporary programs has involved major changes in policy affecting Federal-State-institutional relationships. These changes, regardless of their origin, tend to have enormous influence for future action. It is extremely important, therefore, to be aware of them and their implications in any consideration of permanent policy for financing the future program of higher education.

BASIC PRINCIPLES OF FEDERAL RELATIONSHIPS TO HIGHER LEARNING

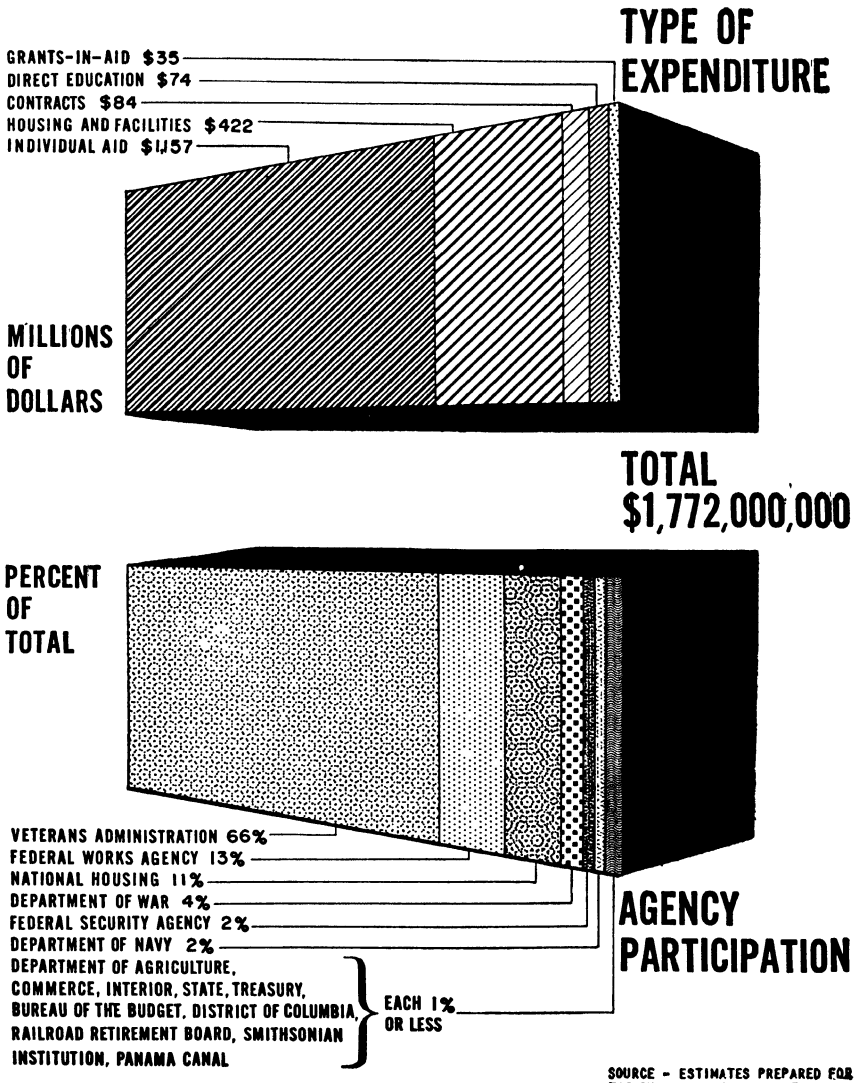
The relationship of the Federal Government to higher education is of vital concern not only to the colleges and universities, but to the Nation. Neither the earlier assistance based on special interest, nor the emergency appropriations of the depression and of the war periods offer a general pattern for the future.

The time has come for America to develop a sound pattern of continuing Federal support for higher education. The analyses presented in the preceding chapter show that the Federal Government must assume a large and important role in financing higher education.

The following basic principles are those which this Commission believes should guide the development and expansion of Federal financial relationship with higher education.

FEDERAL EXPENDITURES
IN CONNECTION WITH POST-HIGH SCHOOL EDUCATION

FISCAL YEAR - 1947



SOURCE - ESTIMATES PREPARED FOR THE BUREAU OF THE BUDGET

1. **In its relationships to higher education, the Federal Government should recognize the national importance of a well-rounded and well-integrated program of education for all citizens, regardless of age, sex, race, creed, or economic and social status**

Hereafter, Federal funds appropriated for education should not be used to promote one phase or level of education at the expense of another. It is in the interest of the national welfare that all levels and phases of education from the nursery school to the post-graduate school be of high quality. This means, therefore, that ***Federal support for higher education should presuppose a strong and effective system of elementary and secondary education.***

Federal support for higher education should assist the States and localities to provide equality of educational opportunity for each individual able and willing to receive it.

2. **Federal funds for the general support of institutions of higher education should be distributed among the States on an equalization basis**

The plan of Federal aid should take proper account of the relative needs of the States for higher education, and of their varying economic abilities to meet these needs. It should provide that all States participate in the allocation of Federal equalization funds, each in proportion to its relative need. *It is important for the Federal Government to give some aid and encouragement in the development and improvement of higher education in the wealthier States, but its primary responsibility is to insure the maintenance of an acceptable minimum program in the poorer States.*

3. **Federal appropriations for the general support of higher education should clearly recognize the responsibility of the States for the administration and control of the education programs**

Federal funds for the development and general support of higher education should be paid to the States, not directly to the colleges and universities themselves. This procedure is necessary to insure coordination of State programs, and to avoid duplication, overlapping, and dual control by government. Federal assistance should supplement, but never supplant, the maximum effort of each State to carry the cost of its system of higher education. *The role of the Federal Government should be that of a partner with the States in their joint concern for those outcomes of education vital to national interests and to the rights of all American citizens under the Constitution.*

4. **Adequate safeguards should be established by the Federal Government to assure the full realization of the purposes for which aid is to be granted**

These safeguards should include the requirements of a post-audit and the publication of adequate reports by the States and institutions

participating in Federally sponsored programs. They should include authority for the Federal agency administering the law to withhold funds from any State or local agency which fails to meet the prescribed provisions.

Any Federal measure intended to achieve equal opportunity for all American youth should contain provisions to insure, that in sections of the country where separated systems of education are maintained on a basis of race, sufficient regulatory powers are vested in the Federal Government to permit withholding of appropriations whenever it is established that racial or minority groups are being discriminated against by the disbursement of such funds. Full implementation of the recommendations of this Commission for the equalization of educational opportunity for all youth is not possible otherwise.

5. Federal funds for the general support of current educational activities and for general capital outlay purposes should be appropriated for use only in institutions under public control

A prime responsibility of government in a democracy is to provide equal opportunities for all its citizens to receive a high quality education. This is implied in the "general welfare clause" of the Federal Constitution. It has been recognized by the people of almost every State in the form of specific constitutional mandates to the State legislatures.

To discharge this responsibility, it is thus the fundamental obligation of government to establish a sound system of public education and to support it to the fullest extent possible. It is a denial of this responsibility when at any time the chosen representatives of all the people neglect to meet fully this basic obligation.

The responsibility for providing a strong system of public education does not, however, deny in any way to any individaul or group of individuals the right to attend, or to establish and support in addition to public schools, a private or denominational institution for the purpose of providing, within limits prescribed by law, a kind of education which such individuals or groups deem more suitable to their particular needs and beliefs. It is just as undemocratic for the government to restrict in any way this fundamental right, as it is for government to fail to meet its prime responsibility for a strong system of public education. Nevertheless, any diversion by government of public funds to the general support of nonpublicly controlled educational institutions tends to deny the acceptance of the fundamental responsibility and to weaken the program of public education.

Sound public policy demands, furthermore, that State and local public educational bodies be able to exercise at all times the right to review and control educational policies in any institution or agency for which public monies are appropriated and expended. Public responsibility for support of education implies public responsibility for the policies which are supported. It follows, therefore, that the acceptance of public funds by any institution, public or private, should carry with it the acceptance of the right of the people as a whole to exercise review and control of the educational policies and procedures of that institution. Such acceptance by privately controlled institutions would, in the opinion of this Commission, tend to destroy the competitive advantages and free inquiry which they have established and which are so important in providing certain safeguards to freedom. It would be contrary to the best interests of these institutions as well to those of society in general.

It has long been an established principle in America that the responsibility for education resides with the States. This principle stems from the clause in the Federal Constitution which provides that all functions of government not specifically allocated to the Federal Government by the Constitution shall be left to the States. The Commission believes, therefore, that the determination of what institutions or systems of education are publicly controlled and thus eligible to receive public funds for the support of higher education, as recommended by this Commission, should be left to the States.

6. Federal funds provided for scholarships or grants-in-aid for the purpose of helping individuals of ability and fellowships for those of special talent to obtain equality of opportunity in education should be paid directly to the qualifying individuals

It is in keeping with the principles of democracy that each individual should have as free choice as facilities permit in determining the educatonal institution which he deems most suitable to his needs and interests, regardless of whether that institution is under public, private, or church control. That choice can be fully protected only if scholarships or fellowships, such as those proposed by this Commission in Volume II, "Equalizing and Expanding Individual Opportunity," are paid directly to the qualifying individuals.

7. As is deemed necessary, the Federal Government should make contracts with individual institutions, publicly or privately controlled, for specific services authorized by national legislation

It is in the best interests of the national welfare that the Federal Government be able to contract for services authorized by national legislation with whatever institution or agency can most efficiently and economically provide the kinds of services needed. These serv-

ices may include projects for research or training. In order to insure the protection of the public interest, such contracts should express explicitly the terms under which the services are to be provided, including the capital outlay essential to conduct them.

A PROGRAM OF FEDERAL FINANCIAL ASSISTANCE TO HIGHER EDUCATION

Although the urgent needs for higher education in America fully justify and demand that immediate steps be taken toward the realization of the complete program recommended by the President's Commission, the Commission is well aware of certain practical problems involved in attaining the goals. These problems demand that the approach to the proposed program be gradual and that appropriate account be taken of the needs of education at all levels.

More of the Nation's youth must find it possible and profitable to remain in high school through graduation. Elementary and secondary schools must be improved and greater equality of educational opportunity provided at these levels. Frequent studies have shown convincingly that Federal financial assistance is necessary in accomplishing these objectives. Such assistance should be provided at these levels concurrently with any assistance at the higher-education level.

Appropriate and readily accessible programs of higher education must be developed. Adequate physical facilities must be constructed. Greater awareness on the part of youth and adults of the importance of further education will need to develop. These things will take time—sufficient time to allow for sound planning and development.

Nevertheless, there should be no delay in moving immediately toward the ultimate attainment of the proposed program. Planning and development should begin at once. With this in mind, the President's Commission recommends that the following program of Federal aid for higher education be adopted and put into action in the fiscal year 1948–49.

A National Program of Scholarships and Fellowships

To establish greater equality of educational opportunity for those able and interested in continuing their education beyond high school, the Federal Government, as previously stated, should appropriate for the fiscal year 1948–49 the sum of $120,000,000 for a national program of scholarships to be administered by the States in accordance with general standards established by the Federal Government. This appropriation should be increased annually through 1952–53 in an amount sufficient to provide scholarships for 20 percent of the nonveteran enrollment. This appropriation

is in addition to the programs already established by the Federal Government for scholarships in special fields. It is recommended that all Federally financed scholarships and fellowships be unified into one generally available program.

To develop and encourage youth of special talent to rise to the top level in the professions, research, and instruction the Federal Government should provide 10,000 fellowships in 1948–49, 20,000 in 1949–50, and 30,000 in 1950–51, 1951–52, and 1952–53. This program calls for an appropriation of $15,000,000 in 1948–49, $30,000,000 in 1949–50, and $45,000,000 each year thereafter through 1952–53. These amounts should be in addition to those now available from the Federal Government in special fields.

Prior to 1953 the scholarship and fellowship program should be reexamined with a view to expanding it. Further details regarding the distribution and administration of these funds are described in Volume II of this report "Equalizing and Expanding Individual Opportunity."

Federal Aid for Educational and General Purposes

Amounts. **Federal aid to the States for educational expenditures by publicly controlled institutions of higher education should be initiated with an appropriation for the fiscal year 1948–49. This should be an amount equal to one-twelfth of the $638,000,000 possible deficit in realizing the complete program of higher education recommended by this Commission for 1960. This appropriation should be increased each year thereafter by one-twelfth of the original amount until 1952–53 when the program should be reexamined in terms of the progress made by that time toward realizing the goals proposed for 1960. This means that the appropriations should be as follows:**

1948–49	**$53,000,000**
1949–50	**106,000,000**
1950–51	**159,000,000**
1951–52	**212,000,000**
1952–53	**265,000,000**

These amounts are in addition to the continuing appropriations of the Federal Government referred to in Chapter III, which are expected to be about $210,000,000 in 1960.

Basis of allocation. **It is recommended that all States share in the appropriations for educational and general aid, and that this aid be apportioned among the States on an equalization basis, each State's share being determined in accordance with an objective formula designed to measure the State's relative need for higher education and its relative ability to finance an adequate program.**

The development and application of such a formula involves the use of technical measurements. It should be formulated and frequently reviewed on the basis of studies made of the cost of various levels and types of an adequate program of higher education, of the relative needs of the population for higher education at the various levels, of the relative abilities of the States to support education, and of the fair share of the burden of cost which should be borne by State and local governments.

Federal Aid for Capital Outlay

Appropriations. The total additional amounts needed by publicly controlled institutions to expand their physical plant to the recommended size by 1960 is $7,758,000,000. *Under the plan envisioned by this Commission, the Federal Government would provide one-third of the total amount of the expansion. The remaining two-thirds would then be provided by the States, with whatever assistance local governments can give.*

This building program should be initiated as soon as possible, and proceed at a rapid pace toward completion. Only if the physical facilities are available can expanded educational opportunity exist for the youth of this Nation. Yet, there are good reasons for not advocating an extensive building program in the immediate future. The scarcity of labor and materials in the building industries, the desperate national need for more housing, and the high prevailing costs are among these reasons.

It is to be understood, that a building program of the size recommended cannot be undertaken and completed in a short time, and, because of its magnitude, must be integrated with other building programs of national importance. To start the program, therefore, it is recommended that in 1948–49 there be appropriated a sum equal to one-twelfth of the total amount this Commission deems suitable for Federal participation, or $216,000,000. In the years from then through 1952–53, it is suggested that at least that same amount be appropriated annually. After 1952–53, the program should be reviewed with the idea of establishing a flexible pattern of appropriations consistent with the needs as they appear at that time and in the light of potential developments beyond that date.

Basis of allocation. It is recommended that Federal aid for capital outlay be apportioned among the States on an equalization basis, similar to that proposed for general aid. The allocation should be determined through the use of an objective formula based on building needs in the States, variations in building costs, and the relative abilities of the States to finance necessary construction. Provision should be made for frequent review of the formula in the light of fluctuating costs and changing educational needs.

Conditions Governing State Participation in Federal Aid for Higher Education

A State's participation in Federal funds for educational and general purposes or for capital outlay should be conditioned upon:

(1) Designation by State legislation of an official body to have jurisdiction over higher education and act as the agency to represent the State in matters pertaining to the allocation of the Federal funds within the State.

(2) Requiring by State law that the Federal funds be expended within the State in a manner which will provide for equality of individual opportunity for higher education.

(3) Assuring within the State an equitable expenditure of Federal funds between white and Negro institutions, in case the State maintains separate institutions for whites and Negroes, without reduction of the proportion of State and local funds spent for the higher education of Negroes.

(4) Requiring the designated official State body to establish for itself and the institutions of higher education under its jurisdiction procedures for compliance with Federal requirements on statistical reporting, record keeping, and post-auditing.

A FINAL WORD

In this chapter the President's Commission has recommended the basis for a strong continuing role of the Federal Government in financing higher education. It has proposed a role commensurate with the responsibilities of higher education in a democracy; a role which, when accepted in full, will make college and university education equally available to all Americans without regard to race, creed, sex, national origin, or economic status.

The proposed role, however, is not entirely a new one. For more than a century and a half the Federal Government has encouraged and supported specific fields of higher education and research. In times of national emergency it has expanded its support to give heightened recognition of the indispensable services which can be rendered to the Nation by the colleges and universities. But aid for a few specific needs and temporary action in times of crisis are not enough. *The time has come when the Federal Government must concern itself with the total and long-time needs for higher education. These needs are ever present and ever increasing. Higher education is no less important to the Nation in calmer times than in periods of national crisis.*

Although major emphasis in this volume has been given to the role of the Federal Government, this emphasis does not in any sense lessen the responsibility of local and State governments and of private interests in financing an adequate program of higher education. In-

deed it is the firm conviction of this Commission that every effort must be exerted by the States and their subdivisions. The Commission is equally firm in its conviction, however, based on its study, that these needs are so great and so important that the maximum effort which may be reasonably expected from local and State governments will not be sufficient to provide all of the funds required to realize the complete program of higher education which the times demand. The role, therefore, proposed for the Federal Government is that of a partner—a partner jointly responsible with the States and localities for attaining the goals for higher education in a democracy.

The development of a carefully planned, well conceived, and cooperatively evolved program of higher education will entail a continuing study of national needs and resources and the relative role of both governmental and nongovernmental sources of income.

Statement of Dissent

This statement of dissent is concerned primarily with the unqualified recommendation of the Commission that Federal funds for current expenditures and capital outlay be appropriated for use in publicly controlled institutions of higher education only. A careful review of the Commission's report as a whole has convinced us that this particular recommendation is inconsistent with other policies and proposals advocated by the Commission. Furthermore, the reasons proposed by the majority of the Commission in support of this recommendation are really nothing more than declarations that public colleges and universities must have a priority for Federal funds and that private institutions would be subjected to governmental control if they should accept Federal funds. These declarations do not furnish any valid support for the statement of a principle that, under no circumstances and regardless of State policies and practices, may Federal funds for current expenditures and capital outlay be provided to privately controlled institutions of higher education as such. Nowhere in the report are any sound reasons given on the basis of which privately controlled colleges and universities, which have had long and distinguished records of service to our Nation in peace and war, should be disqualified from the benefits of a Federal-aid program.

Before presenting in detail the reasons for our position, we wish to stress the point that our dissent is not a mere personal plea for the special interests of private education. A recent poll conducted by the American Council on Education revealed that 241 members, about half of those replying to the Council's questionnaire, voted in favor of the proposition that Federal funds be made available "to nonprofit private as well as to public education," including, therefore, privately and publicly controlled institutions of higher learning. And these votes, we have every reason to believe, were cast in the best interests of the general welfare. In light of this fact, we, as members of the Commission, are convinced that it is our duty to state to the President of the United States and to the American public that this drastic recommendation to bar private colleges and universities from receiving Federal funds does not reflect the thinking of the most representative cross section of American college and university leaders and will certainly have dangerous implications for the future welfare of both public and private higher education.

This recommendation, as we understand it, is based on a theory of educational finance which asserts that "public control" rather than "service to the public" shall be the sole criterion of a school's eligibility to receive public funds. Underlying this theory is the assumption that American democracy will be best served by a mighty system of public higher education to be financed by local, State, and Federal taxes, and to be controlled, managed, and supervised by governmental agencies. Accordingly, the Commission's report predicts—and without regrets—the gradual elimination of those private colleges and universities which are unable to keep pace with their publicly endowed competitors. The report also envisions the development of a Nationwide system of higher education in which private colleges and universities will play an increasingly minor role.

We believe it is timely in this connection to call attention to the dangers of a higher educational system largely or completely dominated by the State. Exclusive control of education, more than any other factor, made the dictatorships of Germany, Italy, and Japan acceptable to an ever-increasing number of their populations. The question immediately comes to mind whether American education can continue to withstand the modern social trend toward governmental domination of the educational process. We confess definite misgivings on this point, now that the Commission has so decisively recommended a monopoly of tax funds for publicly controlled colleges and universities. We fear that legislation implementing the Commission's recommendation would go a long way toward establishing an administrative structure for higher education whereby Government in the United States might easily use the Nation's public colleges and universities to promote its political purposes.

With respect to the report itself, we are unable to determine why the Commission recommended in such an unqualified fashion that no Federal funds for current expenditures and capital outlay be given to private institutions of higher learning. Throughout the report there are frequent references to the quasi-public functions performed by private colleges and universities, and repeatedly these institutions are praised for their achievements in serving the public welfare. We note also that the Commission had no hesitancy in recommending that private institutions should lower their fees, adopt certain personnel practices, accept contracts from the Government for specialized research, admit students who receive national scholarships and fellowships, and follow a policy of nondiscrimination in admitting members of minority groups. In the Commission's own words:

". . . It is becoming generally acknowledged that, despite a large measure of private control and private support, these institutions are vitally affected with the public interest. Not only is this reflected

in the privilege of tax exemption which they are accorded, but also in the process of State accreditation in certain States, and in the recognition that they constitute part of a program of higher education dedicated to the Nation's welfare. They are thus genuinely vested with a public interest and as such are morally obligated to abandon all restrictive policies. . . ."

The Commission accordingly has decided that, although private institutions must render the same public service as do public schools. they shall receive none of the funds appropriated by Government as compensation for the public service rendered. This decision would appear to us as arbitrary, to say the least.

In making this recommendation, the Commission apparently lost sight of its primary purpose which was to propose ways and means of equalizing educational opportunity for higher education on a much broader basis than ever before in history and to provide for the expansion and development of educational facilities at the higher levels to meet the needs of a vastly increased number of students. In the light of this purpose, nothing could be more untimely, nothing more futilely doctrinaire than for this Commission to adopt a recommendation which would, in effect, destroy the happy balance and cordial relations which now exist in higher education, and which would cause many of our great private institutions to curtail expansion of facilities at a time when such expansion is absolutely necessary in terms of the general welfare.

We now turn our attention to the specific reasons allegedly supporting the recommendation to which we object. In our opinion, these reasons are either gratuitous or specious. The report declares that Government has "a prime responsibility" to provide opportunities for higher education and has a "fundamental obligation . . . to establish a sound system of public education and to support it to the fullest extent possible." The report also states that the discharge of this responsibility "does not deny in any way" the right of individuals to have and to support their own schools. We fail to see how it follows from these "reasons" that private institutions which are, as a matter of fact, cooperating with the Government by providing a "high quality" education for thousands of young men and women should be disqualified from receiving Federal aid.

We are not impressed by the Commission's admonition that the acceptance of Federal funds would expose private education to Federal control. The very same admonition might be directed to publicly controlled colleges and universities. As the report clearly indicates, it is the policy of the Commission that Federal aid to education must not impose upon the institutions assisted any form of Federal control over their academic or personnel practices. Furthermore, it is the con-

sidered judgment of the Commission that publicly controlled colleges and universities may accept Federal aid without submitting to any Federal dictation on their academic policies. There appears to be no reason why Federal aid to privately controlled institutions would entail a greater risk of Federal control than would similar aid to publicly controlled institutions. In practice, the amount of Federal aid to any institution would not be large enough to expose the institution to Federal control as ordinarily understood.

We submit that the criterion of a school's eligibility to receive Federal funds should be its "service to the public" and not "public control." Our position is based upon our conviction that American democracy will be best served if higher education in the future, as in the past, will continue to be regarded as a responsibility to be shared by public and private colleges and universities. This American tradition of democratic school administration suggests that the Government should be disposed to aid any qualified college or university, regardless of whether it is administered by a quasi-public body, like a board of trustees appointed by the State officials or elected by the people, or whether it is managed by a private nonprofit corporation. In no case should Government be conceded the right to measure its financial aid to an institution by the degree of control which it exercises over its administration. In the matter of control, the Government must be neutral. Its standard is "service to the public" and this standard squares with the American tradition of democracy in education.

That private colleges and universities do perform a public service is a fact beyond dispute. We see no reason why they should not continue and be helped to continue this service.

Msgr. Frederick G. Hochwalt.
Martin R. P. McGuire.

VOLUME SIX

Resource Data

PREFACE

This is the sixth volume in the Report of the President's Commission on Higher Education. It presents the more important historic and statistical data used by the Commission in arriving at its recommendations.

No conclusions or interpretations appear in this volume. The conclusions drawn from these data are reflected in the recommendations of the Commission which appear in the five policy volumes of its Report.

Some of the materials appearing in this volume have already been published although not necessarily in the same form. This is particularly true of certain data from the U. S. Bureau of the Census. The material is presented here again, however, because of its importance to the work of the Commission, and in view of the continuing implications these data have for educational planning. Most of the data from the U. S. Office of Education are new tabulations and presentations which were prepared at the request of the Commission. Other summaries were prepared for the Commission or were compiled by the staff. Tables contained in their entirety in other volumes have not been republished herein.

When data are given by geographic area, unless otherwise noted, major break-downs used and the political subdivisions in each are as follows:

New England and Middle Atlantic:
Maine
New Hampshire
New Jersey
New York
Pennsylvania
Vermont
Massachusetts
Rhode Island
Connecticut

North Central:
Ohio
Indiana
Illinois
Michigan
Wisconsin
Minnesota
Iowa
Missouri
North Dakota
South Dakota
Nebraska
Kansas

South Central:
Kentucky
Tennessee
Alabama
Mississippi
Arkansas
Louisiana
Oklahoma
Texas

South Atlantic:
Delaware
Maryland
District of Columbia
Virginia
West Virginia
North Carolina
South Carolina
Georgia
Florida

Mountain and Pacific:
Montana
Idaho
Wyoming
Colorado
New Mexico
Arizona
Utah
Nevada
Washington
Oregon
California

Outlying Territories:
Alaska
American Samoa
Canal Zone
Guam
Hawaii
Philippine Islands*
Puerto Rico
Virgin Islands

*For periods prior to July 4, 1946.

A total of six volumes have been issued by the Commission, under the general title, "Higher Education for American Democracy."

Volume I. "Establishing the Goals," issued on December 14, 1947.

Volume II. "Equalizing and Expanding Individual Opportunity," issued on December 22, 1947.

Volume III. "Organizing Higher Education," issued on January 12, 1948.

Volume IV. "Staffing Higher Education," issued on January 26, 1948.

Volume V. "Financing Higher Education," issued on February 2, 1948.

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SECTION I

National Background

TABLE 1.—*Median years of school completed by persons 20 years old and over, for the United States, by color and by sex, and for urban and rural areas: 1940*

Age	United States					Urban	Rural-nonfarm	Rural-farm
	Total	Male	Female	White	Nonwhite			
Total, 20 and over	8.8	8.7	8.8	8.9	6.0	9.0	8.7	8.2
20 to 24 years	11.2	10 9	11.5	11.7	7.4	12.0	10.7	8.8
Total, 25 and over	8.6	8.6	8.7	8.7	5.7	8.8	8.6	8.1
25 to 29 years	10 3	10.1	10.5	10.7	7.1	11.0	10.0	8.6
30 to 34	9.5	9 2	9.9	10.0	6.7	10.3	9.3	8.4
35 to 39	8.8	8.7	8.9	8.9	6.2	9.0	8.8	8.2
40 to 44	8 6	8.6	8.7	8.7	5.8	8.8	8.6	8.2
45 to 49	8 5	8 4	8.5	8.6	5.5	8.6	8.5	8.1
50 to 54	8.4	8 3	8.4	8.4	5.0	8.5	8.4	8.0
55 to 59	8 3	8.2	8.4	8.4	4.8	8.4	8.3	7.9
60 to 64	8 3	8 2	8.3	8.3	4.4	8.4	8.3	7.7
65 to 69	8 2	8 1	8.2	8.2	3.7	8.3	8.1	7.1
70 to 74	8 1	8.0	8.2	8.2	2.9	8.3	8.1	7.0
75 years and over	8.0	7.7	8.1	8.1	1.0	8.2	8.0	6.5

Source: U. S. Bureau of the Census.

TABLE 2.—*Percent of youth enrolled in school by years of age: 1910–47*

Year	6–13 years of age	14–17 years of age	18–24 years of age
	Percent	*Percent*	*Percent*
1910	81.5	58.9	9.1
1920	87.0	61.6	8.9
1930	91.6	73.1	16.1
1940	92.0	79.3	13.3
1946 [1]	97.7	80.1	13.1
1947 [1]	92.8	81.2	15.2

[1] Based on sample survey; subject to sampling variability.

Source: U. S. Bureau of the Census.
NOTE.—Data used in preparing chart 1, vol. II of Report of the President's Commission on Higher Education.

TABLE 3.—*Percent of high school and college age youth enrolled in school, for urban and rural areas: 1940, 1945, 1947*

Age and year [1]	Urban areas	Rural nonfarm areas	Rural farm areas
	Percent	*Percent*	*Percent*
14–17 years of age:			
1940	85.0	78.9	69.3
1945	83.2	80.0	68.6
1947	84.3	79.5	76.5
18–19 years of age:			
1940	31.7	27.5	23.9
1945	(2)	(2)	(2)
1947	27.8	27.7	27.6
20–24 years of age:			
1940	7.8	5.2	4.6
1945	(2)	(2)	(2)
1947	12.5	8.8	6.5

[1] Data are for April 1940, October 1945, and April 1947. The last 2 were sample surveys and the results are subject to sampling variability.
[2] Not shown since World War II violently distorted the situation for this age group.

Source: U. S. Bureau of the Census.
NOTE.—Data used in preparing chart 6, vol. II of Report of the President's Commission on Higher Education.

TABLE 4.—*Years of school completed by the civilian population 20 years old and over, by age and sex, for the United States: April 1947*

Age and sex	Total	Years of school completed								Median years of school completed
		Elementary school			High school		College		School years not reported	
		Less than 5 years [1]	5 and 6 years	7 and 8 years	1 to 3 years	4 years	1 to 3 years	4 or more years		
Total, 20 years and over	94,326,000	8,980,000	7,844,000	26,679,000	16,394,000	21,645,000	6,691,000	4,716,000	1,377,000	9.5
20 to 24 years	11,748,000	369,000	554,000	1,661,000	2,907,000	4,719,000	1,158,000	292,000	88,000	12.1
25 to 29 years	11,554,000	489,000	539,000	1,921,000	2,618,000	4,200,000	1,057,000	641,000	89,000	12.0
30 to 34 years	11,073,000	526,000	582,000	2,481,000	2,379,000	3,430,000	851,000	737,000	87,000	11.4
35 to 44 years	19,983,000	1,280,000	1,446,000	6,037,000	3,748,000	4,283,000	1,591,000	1,409,000	189,000	9.9
45 to 54 years	16,734,000	1,923,000	1,754,000	5,947,000	2,563,000	2,432,000	1,031,000	812,000	272,000	8.5
55 to 64 years	12,643,000	2,099,000	1,506,000	4,726,000	1,355,000	1,544,000	628,000	471,000	314,000	8.1
65 years and over	10,591,000	2,294,000	1,463,000	3,906,000	824,000	1,037,000	375,000	354,000	338,000	7.7
Male, 20 years and over	46,136,000	4,843,000	3,988,000	13,277,000	8,075,000	9,345,000	3,184,000	2,588,000	836,000	9.2
20 to 24 years	5,653,000	228,000	287,000	892,000	1,540,000	1,992,000	559,000	110,000	45,000	11.7
25 to 29 years	5,540,000	256,000	270,000	893,000	1,352,000	1,828,000	559,000	319,000	63,000	11.9
30 to 34 years	5,354,000	288,000	282,000	1,220,000	1,142,000	1,509,000	434,000	419,000	60,000	11.3
35 to 44 years	9,826,000	703,000	768,000	3,045,000	1,822,000	1,848,000	728,000	792,000	120,000	9.6
45 to 54 years	8,339,000	975,000	890,000	3,062,000	1,280,000	1,059,000	440,000	466,000	167,000	8.5
55 to 64 years	6,368,000	1,147,000	791,000	2,358,000	596,000	694,000	300,000	277,000	205,000	8.0
65 years and over	5,056,000	1,246,000	700,000	1,807,000	343,000	415,000	164,000	205,000	176,000	7.5
Female, 20 years and over	48,190,000	4,137,000	3,856,000	13,402,000	8,319,000	12,300,000	3,507,000	2,128,000	541,000	9.9
20 to 24 years	6,095,000	141,000	267,000	769,000	1,367,000	2,727,000	599,000	182,000	43,000	12.2
25 to 29 years	6,014,000	233,000	269,000	1,028,000	1,266,000	2,372,000	498,000	322,000	26,000	12.1
30 to 34 years	5,719,000	238,000	300,000	1,261,000	1,237,000	1,921,000	417,000	318,000	27,000	11.5
35 to 44 years	10,157,000	577,000	678,000	2,992,000	1,926,000	2,435,000	863,000	617,000	69,000	10.2
45 to 54 years	8,395,000	948,000	864,000	2,885,000	1,283,000	1,373,000	591,000	346,000	105,000	8.6
55 to 64 years	6,275,000	952,000	715,000	2,368,000	759,000	850,000	328,000	194,000	109,000	8.2
65 years and over	5,535,000	1,048,000	763,000	2,099,000	481,000	622,000	211,000	149,000	162,000	7.8

[1] Includes persons reporting no school years completed.

Source: U. S. Bureau of the Census.
NOTE.—Data used in preparing chart 7, vol. II of Report of the President's Commission on Higher Education.

TABLE 5.—*School enrollment of the civilian population 5 to 29 years old, by veteran status, age, and sex, for the United States: April 1947*

Age and veteran status	Both sexes			Male			Female		
	Total	Enrolled in school		Total	Enrolled in school		Total	Enrolled in school	
		Number	Percent		Number	Percent		Number	Percent
Total, 5 to 29 years	56,683,000	26,679,000	47.1	27,864,000	13,985,000	50.2	28,819,000	12,694,000	44.0
5 years	2,628,000	136,000	5.2	1,342,000	54,000	4.0	1,286,000	82,000	6.4
6 years	2,446,000	1,644,000	67.2	1,247,000	834,000	66.9	1,199,000	810,000	67.6
7 to 9 years	6,915,000	6,643,000	96.1	3,521,000	3,372,000	95.8	3,394,000	3,271,000	96.4
10 to 13 years	8,562,000	8,354,000	97.6	4,347,000	4,245,000	97.7	4,215,000	4,109,000	97.5
14 to 17 years	8,689,000	7,057,000	81.2	4,377,000	3,538,000	80.8	4,312,000	3,519,000	81.6
18 and 19 years	4,141,000	1,148,000	27.7	1,837,000	565,000	30.8	2,304,000	583,000	25.3
Nonveteran	(1)	(1)	(1)	1,509,000	495,000	32.8	(1)	(1)	(1)
Veteran	(1)	(1)	(1)	328,000	70,000	21.3	(1)	(1)	(1)
20 to 24 years	11,748,000	1,262,000	10.7	5,653,000	993,000	17.6	6,095,000	269,000	4.4
Nonveteran	(1)	(1)	(1)	1,435,000	116,000	8.1	(1)	(1)	(1)
Veteran	(1)	(1)	(1)	4,218,000	877,000	20.8	(1)	(1)	(1)
25 to 29 years	11,554,000	435,000	3.8	5,540,000	384,000	6.9	6,014,000	51,000	0.8
Nonveteran	(1)	(1)	(1)	1,196,000	31,000	2.6	(1)	(1)	(1)
Veteran	(1)	(1)	(1)	4,344,000	353,000	8.1	(1)	(1)	(1)

[1] Data not available.

Source: U. S. Bureau of the Census.

TABLE 6.—*School enrollment of persons 6 to 24 years old, by age and sex, for the United States, urban and rural: Civilian noninstitutional population: April 1947, October 1946, October 1945, and April 1940*

Urban and rural residence, age, and sex	1947			1946			1945			1940		
	Total	Enrolled in school		Total	Enrolled in school		Total	Enrolled in school		Total	Enrolled in school	
		Number	Percent		Number	Percent		Number	Percent		Number	Percent
UNITED STATES												
Total, 6 to 24 years	42,501,000	26,108,000	61.4	41,528,000	26,294,000	63.3	37,472,000	25,003,000	66.7	44,209,508	26,373,939	59.7
6 years	2,446,000	1,644,000	67.2	2,360,000	2,213,000	93.8	2,322,000	2,165,000	93.2	2,054,385	1,420,051	69.1
7 to 9 years	6,915,000	6,643,000	96.1	6,812,000	6,687,000	98.2	6,678,000	6,558,000	98.2	6,487,830	6,119,026	94.3
10 to 13 years	8,562,000	8,354,000	97.6	8,422,000	8,282,000	98.3	8,357,000	8,184,000	97.9	9,340,205	8,915,669	95.5
14 to 17 years	8,689,000	7,057,000	81.2	8,914,000	7,139,000	80.1	9,085,000	7,163,000	78.8	9,720,419	7,708,871	79.3
18 and 19 years	4,141,000	1,148,000	27.7	3,753,000	840,000	22.4	3,019,000	623,000	20.6	5,018,834	1,449,485	28.9
20 to 24 years	11,748,000	1,262,000	10.7	11,267,000	1,132,000	10.0	8,010,000	310,000	3.9	11,587,835	760,837	6.6
Male, 6 to 24 years	20,982,000	13,547,000	64.6	20,185,000	13,674,000	67.7	16,194,000	12,419,000	76.7	22,155,886	13,423,743	60.6
6 years	1,247,000	834,000	66 9	1,202,000	1,121,000	93.3	1,183,000	1,102,000	93.2	1,041,757	710,525	68.2
7 to 9 years	3,521,000	3,372,000	95.8	3,466,000	3,400,000	98.1	3,396,000	3,316,000	97.6	3,289,255	3,096,174	94.1
10 to 13 years	4,347,000	4,245,000	97.7	4,272,000	4,186,000	98.0	4,233,000	4,138,000	97.8	4,734,213	4,510,906	95.3
14 to 17 years	4,377,000	3,538,000	80.8	4,528,000	3,608,000	79.7	4,541,000	3,575,000	78.7	4,902,896	3,869,470	78.9
18 and 19 years	1,837,000	565,000	30.8	1,505,000	436,000	29.0	800,000	173,000	21.6	2,495,373	769,773	30.8
20 to 24 years	5,653,000	993,000	17.6	5,211,000	924,000	17.7	2,041,000	114,000	5.6	5,692,392	466,895	8.2
Female, 6 to 24 years	21,519,000	12,561,000	58.4	21,344,000	12,620,000	59.1	21,278,000	12,584,000	59.1	22,053,622	12,950,196	58.7
6 years	1,199,000	810,000	67.6	1,158,000	1,092,000	94 3	1,139,000	1,063,000	93.3	1,012,628	709,526	70.1
7 to 9 years	3,394,000	3,271,000	96.4	3,346,000	3,287,000	98.2	3,282,000	3,242,000	98.8	3,198,575	3,022,852	94.5
10 to 13 years	4,215,000	4,109,000	97.5	4,150,000	4,096,000	98.7	4,124,000	4,045,000	98.1	4,605,992	4,404,763	95.6
14 to 17 years	4,312,000	3,519,000	81 6	4,386,000	3,502,000	80.5	4,544,000	3,588,000	79.0	4,817,523	3,839,401	79.7
18 and 19 years	2,304,000	583,000	25.3	2,218,000	405,000	18.0	2,219,000	450,000	20.3	2,523,461	679,712	26.9
20 to 24 years	6,095,000	269,000	4.4	6,056,000	208,000	3.4	5,969,000	196,000	3.3	5,895,443	293,942	5.0
URBAN												
Total, 6 to 24 years	23,337,000	13,908,000	59.6	23,506,000	14,486,000	61.6	20,474,000	13,308,000	65.0	23,189,430	13,932,346	60.1
6 years	1,257,000	887,000	70.6	1,271,000	1,225,000	96.4	1,169,000	1,119,000	95.7	954,448	760,354	79.7
7 to 9 years	3,465,000	3,351,000	96.7	3,445,000	3,426,000	99 4	3,343,000	3,320,000	99.3	3,130,899	3,028,339	96.7
10 to 13 years	4,394,000	4,311,000	98 1	4,365,000	4,336,000	99 3	4,210,000	4,184,000	99.4	4,612,650	4,522,237	97 4
14 to 17 years	4,497,000	3,789,000	84.3	4,918,000	4,106,000	83.5	4,884,000	4,059,000	83.1	4,978,067	4,232,034	85.0

18 and 19 years	2,333,000	648,000	27.8	2,221,000	531,000	23.9	1,772,000	397,000	22.4	2,727,989	865,320	31.7
20 to 24 years	7,391,000	922,000	12.5	7,286,000	862,000	11 8	5,096,000	228,000	4 5	6,755,377	524,062	7 8
Male, 6 to 24 years	11,091,000	7,197,000	64.9	11,250,000	7,634,000	67 9	8,193,000	6,504,000	79 4	11,324,949	7,088,579	62.6
6 years	635,000	439,000	69.1	664,000	637,000	95 9	626,000	596,000	95 2	482,546	381,774	79.1
7 to 9 years	1,730,000	1,665,000	96.2	1,753,000	1,738,000	99 1	1,672,000	1,652,000	98.8	1,579,991	1,526,826	96.6
10 to 13 years	2,196,000	2,151.000	98.0	2,185,000	2,164,000	99.0	2,041,000	2,027,000	99.3	2,331,595	2,270,485	97.4
14 to 17 years	2,211,000	1,892,000	85.6	2,472,000	2,116,000	85.6	2,391,000	2,027,000	84.8	2,466,424	2,119,932	86.0
18 and 19 years	927,000	306,000	33.0	816,000	271,000	33.2	368,000	112.000	30.4	1,295,683	464,905	35.9
20 to 24 years	3,392,000	744,000	21.9	3,361,000	708,000	21.1	1,095,000	90,000	8.2	3,168,710	324,657	10.2
Female, 6 to 24 years	12,246,000	6,711,000	54.8	12,255,000	6,851,000	55.9	12,281,000	6,803,000	55.4	11,864,481	6,843,767	57.7
6 years	622,000	448,000	72.0	607,000	588,000	96 9	544,000	523,000	96.1	471,902	378,580	80.2
7 to 9 years	1,735,000	1,686,000	97.2	1,692,000	1,689,000	99 8	1,670,000	1,668,000	99.9	1,550,908	1,501,513	96.8
10 to 13 years	2,198,000	2,160,000	98.3	2,181,000	2,171,000	99 5	2.169,000	2.157.000	99.4	2,311,055	2,251,752	97.4
14 to 17 years	2,286,000	1,897,000	83.0	2,446,000	1,989,000	81.3	2.493,000	2,032,000	81 5	2,511,643	2,112,102	84.1
18 and 19 years	1,406,000	342,000	24.3	1,404,000	260,000	18 5	1,404,000	285,000	20.3	1,432,306	400,415	28.0
20 to 24 years	3,999,000	178,000	4.5	3,925,000	154,000	3.9	4,001,000	138,000	3.4	3,586,667	199,405	5.6
RURAL-NONFARM												
Total, 6 to 24 years	9,601,000	5,991,000	62.4	8,649,000	5,703,000	65.9	7,970,000	5,612,000	70.4	9,245,287	5,572,593	60.3
6 years	593,000	361,000	60.9	566,000	527,000	93.1	527,000	503,000	95.4	476,098	306,940	64.5
7 to 9 years	1,687,000	1,616,000	95.8	1,609,000	1,584,000	98 4	1,608,000	1,586,000	98.6	1,463,200	1,384,927	94.7
10 to 13 years	2,016,000	1,961,000	97.3	1,838,000	1,819,000	99.0	1,844,000	1,818,000	98.6	2,003,999	1,920,074	95.8
14 to 17 years	2,013,000	1,600,000	79.5	1,797,000	1,448,000	80.6	1,938,000	1,545,000	79.7	1,982,966	1,564,933	78.9
18 and 19 years	863,000	239,000	27.7	727,000	166,000	22 8	545,000	110,000	20 2	999,714	275,212	27.5
20 to 24 years	2,429,000	214,000	8.8	2,113,000	159,000	7.5	1,596,000	50,000	3.3	2,319,310	120,507	5.2
Male, 6 to 24 years	4,742,000	3,088,000	65.1	4,154,000	2,947,000	70.9	3,442,000	2,752,000	80.0	4,638,757	2,838,524	61.2
6 years	307,000	177,000	57.7	298,000	276,000	92.6	253,000	242,000	95.7	241,944	153,380	63.4
7 to 9 years	874,000	837,000	95.8	850,000	837,000	98.5	819,000	799,000	97.6	742,425	701,159	94.4
10 to 13 years	1,010 000	988,000	97.8	906,000	895,000	98.8	926.000	914,000	98.7	1,015,554	971,548	95.7
14 to 17 years	990,000	802,000	81.0	904,000	726,000	80.3	953,000	759,000	79.6	992,440	789,010	79.5
18 and 19 years	376,000	119,000	31.6	287,000	87,000	30.3	126,000	27,000	21.4	500,927	147,859	29.5
20 to 24 years	1,185,000	165,000	13.9	910,000	126,000	13.8	365,000	11,000	3.0	1,145,467	75,568	6.6
Female, 6 to 24 years	4,859,000	2,903,000	59.7	4,495,000	2,756,000	61.3	4,528,000	2,860,000	63.2	4,606,530	2,734,069	59.
6 years	286,000	184,000	64.3	268,000	251,000	93.7	274,000	261,000	95.3	234,154	153,560	65.6
7 to 9 years	813,000	779,000	95.8	759,000	748,000	98 6	789,000	787,000	99.7	720,775	683,768	94 9
10 to 13 years	1,006,000	973,000	96.7	932,000	923,000	99 0	919,000	904,000	98.4	988,445	948,526	96 0
14 to 17 years	1,023,000	798,000	78.0	893,000	723,000	81.0	985,000	786,000	79.8	990,526	775,923	78.3
18 and 19 years	487,000	120,000	24.6	440,000	78,000	17.7	419,000	83,000	19.8	498,787	127,353	25.5
20 to 24 years	1,244,000	49,000	3.9	1,203,000	33,000	2.7	1,141,000	39,000	3.4	1,173,843	44,939	3.8

TABLE 6.—*School enrollment of persons 6 to 24 years old, by age and sex, for the United States, urban and rural: Civilian noninstitutional population: April 1947, October 1946, October 1945, and April 1940*—Continued

Urban and rural residence, age, and sex	1947			1946			1945			1940		
	Total	Enrolled in school		Total	Enrolled in school		Total	Enrolled in school		Total	Enrolled in school	
		Number	Percent		Number	Percent		Number	Percent		Number	Percent
RURAL-FARM												
Total, 6 to 24 years	9,563,000	6,209,000	64.9	9,374,000	6,105,000	65.1	9,029,000	6,082,000	67.4	11,774,791	6,869,000	58.3
6 years	596,000	396,000	66.4	523,000	461,000	88.1	625,000	543,000	86.9	623,839	352,757	56.5
7 to 9 years	1,763,000	1,676,000	95.1	1,758,000	1,676,000	95.3	1,727,000	1,651,000	95.6	1,893,731	1,705,760	90.1
10 to 13 years	2,152,000	2,082,000	96.7	2,219,000	2,128,000	95.9	2,302,000	2,182,000	94.8	2,693,556	2,473,358	91.8
14 to 17 years	2,179,000	1,668,000	76.5	2,200,000	1,586,000	72.1	2,266,000	1,558,000	68.8	2,759,386	1,911,904	69.3
18 and 19 years	945,000	261,000	27.6	806,000	143,000	17.7	702,000	116,000	16.5	1,291,131	308,953	23.9
20 to 24 years	1,928,000	126,000	6.5	1,868,000	112,000	6.0	1,408,000	31,000	2.2	2,513,148	116,268	4.6
Male, 6 to 24 years	5,149,000	3,262,000	63.4	4,780,000	3,092,000	64.7	4,560,000	3,162,000	69.3	6,192,180	3,496,640	56.5
6 years	305,000	218,000	71.5	241,000	208,000	86.3	304,000	265,000	87.2	317,267	175,371	55.3
7 to 9 years	917,000	870,000	94.9	863,000	826,000	95.7	905,000	865,000	95.6	966,839	868,189	89.8
10 to 13 years	1,141,000	1,106,000	96.9	1,181,000	1,126,000	95.3	1,266,000	1,197,000	94.5	1,387,064	1,268,873	91.5
14 to 17 years	1,176,000	844,000	71.8	1,153,000	765,000	66.3	1,198,000	788,000	65.8	1,444,032	960,528	66.5
18 and 19 years	534,000	140,000	26.2	402,000	77,000	19.2	306,000	35,000	11.4	698,763	157,009	22.5
20 to 24 years	1,076,000	84,000	7.8	940,000	90,000	9.6	581,000	12,000	2.1	1,378,215	66,670	4.8
Female, 6 to 24 years	4,414,000	2,947,000	66.8	4,593,000	3,013,000	65.6	4,469,000	2,920,000	65.3	5,582,611	3,372,360	60.4
6 years	291,000	178,000	61.2	283,000	252,000	89.0	321,000	278,000	86.6	306,572	177,386	57.9
7 to 9 years	846,000	806,000	95.3	895,000	850,000	95.0	822,000	787,000	95.7	926,892	837,571	90.4
10 to 13 years	1,011,000	976,000	96.5	1,038,000	1,002,000	96.5	1,037,000	984,000	94.9	1,306,492	1,204,485	92.2
14 to 17 years	1,003,000	824,000	82.2	1,047,000	820,000	78.3	1,068,000	770,000	72.1	1,315,354	951,376	72.3
18 and 19 years	411,000	121,000	29.4	403,000	66,000	16.4	396,000	81,000	20.5	592,368	151,944	25.7
20 to 24 years	852,000	42,000	4.9	928,000	22,000	2.4	827,000	19,000	2.3	1,134,933	49,598	4.4

Source: U. S. Bureau of the Census. Data for April 1947, October 1946, and October 1945 from sample surveys; for April 1940, from complete enumeration.

TABLE 7.—*Wage or salary income in 1939, for males 25 to 64 years old without other income by color, years of school completed, and age, for the United States, urban and rural-nonfarm: 1940*

[Statistics based on a 5 percent sample]

Color, area, years of school completed, and age	Total	Wage or salary income in 1939									
		None	$1 to $499	$500 to $999	$1,000 to $1,499	$1,500 to $1,999	$2,000 to $2,499	$2,500 to $2,999	$3,000 to $4,999	$5,000 and over	Not reported
A. NATIVE WHITE MALES											
UNITED STATES											
25 to 64 years old	16,019,280	1,386,660	2,381,120	3,283,940	3,378,760	2,565,840	1,369,920	517,480	582,880	180,400	372,280
No school years completed	185,300	44,340	70,880	36,280	15,220	7,320	2,360	1,000	720	300	6,880
Grade school:											
1 to 4 years	872,920	133,260	319,100	213,540	101,440	49,360	17,640	5,480	3,600	900	28,600
5 and 6 years	1,447,060	170,280	377,540	380,540	253,980	141,900	55,080	17,100	11,040	1,820	37,780
7 and 8 years	5,857,560	545,460	960,780	1,353,720	1,290,860	873,280	409,000	139,340	117,960	20,980	146,180
High school:											
1 to 3 years	3,042,480	198,260	348,860	636,480	748,300	562,980	284,480	98,420	89,900	20,700	54,100
4 years	2,602,000	157,140	194,680	436,460	624,540	534,420	311,300	116,160	135,160	42,560	49,580
College:											
1 to 3 years	967,740	63,160	56,360	131,840	191,480	207,960	134,180	56,120	79,260	27,540	19,840
4 years or more	924,300	60,660	31,480	71,880	131,580	172,820	148,560	80,360	142,000	64,300	20,660
School years not reported	119,920	14,100	21,440	23,200	21,360	15,800	7,320	3,500	3,240	1,300	8,660
URBAN											
25 to 64 years old	10,483,900	663,880	975,720	1,999,880	2,470,820	1,999,600	1,129,720	437,020	502,520	154,220	150,520
No school years completed	72,260	13,820	19,280	18,340	10,020	5,800	1,880	840	500	260	1,520
Grade school:											
1 to 4 years	356,580	39,400	88,000	104,860	63,040	34,840	13,820	4,420	2,760	640	4,800
5 and 6 years	758,980	67,160	128,900	208,040	172,740	104,880	43,700	13,740	9,140	1,320	9,360
7 and 8 years	3,676,760	248,900	388,460	812,360	927,960	673,140	337,240	118,420	102,940	17,640	49,700
High school:											
1 to 3 years	2,129,340	107,780	175,620	410,140	558,860	439,060	234,100	83,180	77,560	17,980	25,060
4 years	1,960,680	95,180	109,560	294,800	484,240	431,640	261,740	99,380	118,440	36,920	28,780
College:											
1 to 3 years	731,480	39,860	35,260	86,820	145,580	162,700	110,280	47,520	67,980	23,700	11,780
4 years or more	728,140	46,220	23,200	50,780	93,300	135,740	121,440	66,700	120,400	54,740	15,620
School years not reported	69,680	5,560	7,440	13,740	15,080	11,800	5,520	2,820	2,800	1,020	3,900

TABLE 7.—*Wage or salary income in 1939, for males 25 to 64 years old without other income, by color, years of school completed and age, for the United States, urban and rural-nonfarm: 1940*—Continued

[Statistics based on a 5 percent sample]

Color, area, years of school completed, and age	Total	Wage or salary income in 1939									
		None	$1 to $499	$500 to $999	$1,000 to $1,499	$1,500 to $1,999	$2,000 to $2,499	$2,500 to $2,999	$3,000 to $4,999	$5,000 and over	Not reported
A. NATIVE WHITE MALES—Continued											
RURAL-NONFARM											
25 to 64 years old	3,679,140	249,620	752,700	964,240	760,940	498,960	215,680	73,740	73,340	23,780	66,140
No school years completed	57,420	10,560	25,580	13,780	4,420	1,200	420	140	140	20	1,160
Grade school:											
1 to 4 years	281,340	27,200	116,480	83,040	32,100	11,940	3,380	1,000	680	220	5,300
5 and 6 years	413,180	31,620	129,680	131,900	66,940	31,680	9,720	2,960	1,620	360	6,700
7 and 8 years	1,390,340	91,840	302,940	399,820	300,360	173,840	63,080	18,580	13,120	2,920	23,840
High school:											
1 to 3 years	660,920	34,920	100,460	171,740	160,800	110,220	45,380	14,200	11,240	2,420	9,540
4 years	491,360	28,440	51,540	107,400	120,060	92,240	45,520	15,740	15,500	5,180	9,740
College:											
1 to 3 years	183,880	11,480	13,120	33,360	37,980	40,680	21,540	7,660	10,320	3,420	4,320
4 years or more	170,020	9,880	5,900	16,340	33,240	33,740	25,040	12,880	20,320	9,000	3,680
School years not reported	30,680	3,680	7,000	6,860	5,040	3,420	1,600	580	400	240	1,860
B. NEGRO MALES											
UNITED STATES											
25 to 64 years old	1,900,340	192,200	809,100	610,360	191,280	38,280	13,760	1,920	1,540	660	41,240
No school years completed	159,020	25,580	88,760	32,800	6,760	880	120	60	80	20	3,960
Grade school:											
1 to 4 years	616,600	72,480	324,560	162,920	33,760	4,720	720	160	160	100	17,020
5 and 6 years	410,320	39,300	175,700	141,120	38,680	6,040	1,120	260	60	80	7,960
7 and 8 years	396,100	30,840	131,600	152,620	58,900	11,920	2,640	360	280	200	6,740
High school:											
1 to 3 years	157,900	12,380	49,540	62,040	24,280	5,220	2,140	180	180	20	1,920
4 years	78,100	5,080	18,320	32,260	14,640	3,720	2,760	180	160	120	860
College:											
1 to 3 years	32,440	2,480	7,460	11,280	6,060	2,160	1,900	300	180	40	580
4 years or more	25,740	1,620	3,020	8,240	6,220	3,120	2,180	420	420	80	420
School years not reported	24,120	2,440	10,110	7,080	1,980	500	180	----------	20	----------	1,780

URBAN											
25 to 64 years old	1,216,540	87,900	412,200	483,260	168,420	34,900	12,920	1,820	1,260	540	13,320
No school years completed	69,520	8,060	32,880	21,940	5,200	680	100	60	80	----------	520
Grade school:											
1 to 4 years	311,340	24,700	134,060	116,460	27,520	4,180	560	140	100	80	3,540
5 and 6 years	268,440	18,020	97,200	110,440	33,560	5,440	900	260	60	20	2,540
7 and 8 years	306,180	20,000	85,120	130,020	53,540	11,000	2,520	340	220	180	3,240
High school:											
1 to 3 years	129,360	8,840	35,920	54,140	22,040	4,900	2,060	180	140	20	1,120
4 years	68,340	3,980	14,620	28,680	13,780	3,480	2,700	180	140	120	660
College:											
1 to 3 years	27,760	1,920	5,560	9,760	5,640	2,080	1,840	280	180	40	460
4 years or more	21,120	1,400	2,180	6,200	5,440	2,700	2,060	380	320	80	360
School years not reported	14,480	980	4,660	5,620	1,700	440	180	----------	20	----------	880
RURAL-NONFARM											
25 to 64 years old	356,360	21,760	199,160	106,000	20,700	3,060	620	100	200	80	4,680
No school years completed	39,700	3,920	24,640	9,180	1,340	200	20	----------	----------	----------	400
Grade school:											
1 to 4 years	143,700	8,620	88,880	38,180	5,540	500	80	20	20	----------	1,860
5 and 6 years	78,340	4,080	42,280	25,480	4,800	520	140	----------	----------	60	980
7 and 8 years	56,740	3,120	27,500	19,100	4,980	880	100	20	40	20	980
High school:											
1 to 3 years	19,440	1,120	8,900	6,760	2,080	300	40	----------	40	----------	200
4 years	7,340	400	2,680	3,160	780	180	60	----------	20	----------	60
College:											
1 to 3 years	3,160	160	1,160	1,260	380	80	60	20	----------	----------	40
4 years or more	3,440	100	520	1,620	580	340	120	40	80	----------	40
School years not reported	4,500	240	2,600	1,260	220	60	----------	----------	----------	----------	120

Source: U. S. Bureau of the Census.

TABLE 8.—*Percent distribution of "Families" [1] by money income: 1946*

Money income in 1946	Metropolitan areas [2]	Other urban areas	Rural areas [3]
	Percent	*Percent*	*Percent*
Under $1,000	10	13	29
$1,000 to $1,999	17	22	31
$2,000 to $2,999	26	29	19
$3,000 to $3,999	20	20	9
$4,000 to $4,999	10	8	5
$5,000 to $7,499	9	5	3
$7,500 and over	7	3	2
Not ascertained	1	(4)	2
Total	100	100	100

[1] "Families" means spending units of all persons living in the same dwelling unit, belonging to the same family, who pooled their incomes to meet major expenses.
[2] Metropolitan areas are the 12 largest cities in the Nation and their suburbs.
[3] Rural areas are towns with 1940 population of less than 2,500, and open country.
[4] Less than one-half of 1 percent.

Source: Board of Governors of the Federal Reserve System.
NOTE.—Data used in preparing chart 5, vol. II of Report of the President's Commission on Higher Education.

TABLE 9.—*Percent distribution of all children under 18 years of age, by total money income level of the unit,[1] for the United States, urban and rural: 1945*

[Statistics based on a sample]

Total money income level of the unit	Percent of all children under 18 years of age			
	United States	Urban	Rural-nonfarm	Rural-farm
Total	100 0	100. 0	100. 0	100. 0
Loss	.5	.2	.1	1. 6
$0 to $499	5. 7	1. 9	1. 7	16. 7
$500 to $999	8. 1	3. 4	5. 9	19. 7
$1,000 to $1,499	8. 8	5. 9	8. 7	15. 0
$1,500 to $1,999	12. 8	9. 8	16. 7	15. 8
$2,000 to $2,499	13. 4	13. 8	15. 8	10. 6
$2,500 to $2,999	13. 5	15. 7	14. 4	7. 9
$3,000 to $3,499	11. 0	13. 9	12. 1	4. 4
$3,500 to $3,999	6. 3	8. 1	6. 8	2. 2
$4,000 to $4,499	5. 5	7. 3	5. 7	1. 7
$4,500 to $4,999	3. 7	4. 5	4. 3	1. 8
$5,000 to $5,999	5. 0	7. 6	3. 5	.7
$6,000 to $9,999	4. 4	6. 1	3. 6	1. 5
$10,000 and over	1. 3	2. 0	.6	.3
Half of all children are in units with less than	$2, 530	$2, 980	$2, 537	$1, 400

[1] A unit is defined as a person living alone or with other nonrelated persons or a group of 2 or more persons related by blood, marriage, or adoption and residing in the same household. Most of the units involved in the present tabulation were units of 2 or more persons.

Source: U. S. Bureau of the Census.

TABLE 10.—*Distribution of highest school year completed by 17-year-old native white, according to monthly rental value of home, for urban and rural nonfarm areas: 1940*

Highest school year completed	Monthly rental value of home						
	Under $10	$10–$14	$15–$19	$20–$29	$30–$49	$50–$74	$75 and over
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
None	.9	.4	.3	.3	.3	.1	.2
1–7 years	28. 2	12. 9	8. 2	4. 9	2. 7	2. 0	1. 1
8 years	16. 0	13. 4	11. 9	9. 4	5. 2	3. 1	1. 9
High school:							
9 years	* 14. 1	15. 7	15. 8	13. 5	9. 9	7. 2	5. 0
10 years	17. 4	* 24. 1	* 24. 9	* 25. 0	23. 2	20. 7	17 4
11 years	18. 0	25. 6	29. 7	34. 9	* 42. 0	* 46. 8	* 47. 4
12 years	5. 0	7. 5	8. 6	11. 1	14. 8	16. 8	20. 6
College: 13 years or more	.3	.5	.6	1. 0	1. 9	3. 3	6. 4

*Group containing the median.

Source: U. S. Bureau of the Census.
NOTE.—Data used in preparing chart 3, vol. II of Report of the President's Commission on Higher Education.

TABLE 11.—*Percent distribution of Army general classification test frequencies, for highest year of school completed*

Test score	Highest school year completed (based on 2 samples of 110,959 *in toto*)																					Total	Percent distribution of A. G. C. T. results for 9,757,583 men
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21		
160–164	------	------	------	------	------	------	------	------	------	------	------	(1)	(1)	------	------	------	------	------	------	------	------	(1)	0.00
155–159	------	------	------	------	------	------	------	------	------	------	0.02	0.1	0.1	(1)	0.3	0.4	0.3	0.8	0.5	4.9	------	(1)	.04
150–154	------	------	------	------	------	------	------	0.01	0.02	0.02	.02	.2	.6	0.8	1.2	2.2	1.5	3.7	2.0	------	------	0.2	.20
145–149	------	0.32	------	------	------	------	------	.01	.02	.06	.19	.4	1.1	1.7	1.9	3.3	2.9	3.7	4.0	3.3	------	.4	.40
140–144	------	.32	------	------	------	------	0.03	.05	.04	.24	.24	1.2	2.5	3.9	5.7	7.0	6.6	4.2	9.5	13.1	------	1.0	.90
135–139	------	------	0.13	0.07	------	0.03	.01	.16	.23	.53	.99	2.5	5.2	6.8	7.0	9.7	11.1	10.8	9.0	8.2	------	1.9	1.70
130–134	------	------	------	.07	------	.11	.12	.31	.59	1.00	1.57	4.4	7.3	8.5	9.8	10.5	11.1	10.6	9.5	11.5	----	2.8	2.62
125–129	1.74	------	.13	.15	0.05	.19	.16	.84	1.39	2.52	3.67	8.7	12.4	15.3	15.6	17.3	17.5	18.2	15.9	21.3	------	5.5	4.70
120–124	------	------	.65	.45	.16	.19	.55	1.77	3.05	4.82	7.29	12.6	16.4	18.3	18.7	17.8	18.6	20.1	23.9	14.7	60.0	7.9	6.48
115–119	------	.32	1.04	.45	.26	.32	1.06	3.15	4.75	7.15	9.55	14.1	15.0	14 2	13.4	13.3	13.4	10.8	10.4	8.2	20.0	8.6	6.80
110–114	2.61	.65	.39	.60	.47	1.33	2.00	4.91	7.25	10.28	12.95	15.0	13.5	12.7	11.2	8.6	8.2	9.2	7.5	11.5	------	9.8	8.20
105–109	.87	.65	.91	.90	1.00	1.92	3.51	7.38	9.25	12.34	14.35	13.4	10.5	7.7	6.5	4.1	3.9	4.0	3.5	1.6	------	9.8	8.58
100–104	1.74	1.94	.78	.98	1.42	2.11	4.33	7.77	10.29	11.12	11.64	9.4	6.3	4.1	4.0	2.6	1.5	.5	3.5	------	20.0	8.0	8.02
95–99	3.48	1.62	1.44	2.10	2.00	4.17	6.59	9.65	12.01	11.62	11.28	7.0	4.3	2.7	1.8	1.5	2.4	1.0	.5	------	------	7.8	7.42
90–94	.87	1.94	1.96	2.70	3.62	4.75	8.04	11.16	10.59	9.96	7.97	4.3	2.2	1.6	1.5	.5	.3	.8	------	------	------	6.6	6.60
85–89	3.48	2.59	1.83	2.78	5.15	7.85	10.85	11.83	11.65	9.28	7.06	3.2	1.1	.8	.7	.6	.3	1.0	------	------	------	6.5	6.50
80–84	2.61	3.88	4.44	3.01	6.46	8.52	9.86	9.64	7.87	5.95	3.86	1.5	.5	.3	.1	.1	------	------	------	------	------	4.7	5.60
75–79	4.35	5.18	4.57	7.74	9.87	11.38	13.29	9.83	7.22	5.09	3.14	1.2	.4	.3	.2	(1)	.1	.3	------	------	------	4.8	5 20
70–74	5.22	8.09	9.27	10.97	14.81	14.80	13.19	8.64	6.22	3.82	2.04	.6	.2	.1	(1)	.2	.1	------	.5	------	------	4.4	4.72
65–69	10.43	10.36	16.32	15.48	14.60	14.13	10.26	5.36	3.25	2.18	1.10	.3	.1	.1	------	.1	.1	------	------	------	------	3.2	4.00
60–64	10.43	12.94	16.33	19.01	16.28	13.35	8.14	4.09	2.35	1.15	.59	.1	.1	(1)	(1)	------	.1	.3	------	------	------	2.7	3.40
55–59	10.43	12.94	12.66	12.32	9.98	6.12	3.70	1.70	1.02	.46	.20	(1)	(1)	------	(1)	------	------	------	------	1.6	------	1.3	2.80
50–54	9.56	11.33	9.01	6.99	6.57	4.67	2.30	.86	.51	.25	.12	(1)	(1)	------	------	(1)	.1	------	------	------	------	.8	2.00
45–49	7.83	6.15	5.48	6.09	2.84	1.74	.86	.42	.21	.09	.05	(1)	(1)	------	------	------	------	------	------	------	------	.4	1.27
40–44	24.35	18.77	12.66	7.14	4.46	2.32	1.15	.46	.22	.06	.09	(1)	(1)	(1)	------	------	------	------	------	------	------	.6	2.58

[1] Less than 0.1 percent.

Source: Adjutant General's Office, U. S. Department of the Army.

SECTION II

Number of Colleges and Schools

TABLE 12.—*Number of schools of specified types, by State*

State or District of Columbia	Public schools (excluding kindergartens), 1943–44		Private schools, 1941–42		Residential schools for exceptional children, 1939–40		Schools of nursing, 1942–43
	Elementary	Secondary	Elementary	Secondary	Public	Private	
Continental United States	**169,905**	**28,973**	**10,285**	**3,011**	**281**	**94**	**1,300**
Alabama	3,925	1,178	113	34	6	----	27
Arizona	466	67	32	13	3	----	4
Arkansas	3,894	719	61	16	5	----	9
California	[1] 4,005	588	355	161	7	5	38
Colorado	1,955	358	85	33	5	1	14
Connecticut	808	136	209	68	4	3	18
Delaware	168	49	26	10	3	1	7
Florida	1,750	674	65	42	6	----	13
Georgia	3,613	1,402	41	23	6	----	17
Idaho	1,012	192	32	8	4	----	8
Illinois	11,366	1,438	912	175	6	3	97
Indiana	2,598	936	318	39	5	----	28
Iowa	8,982	981	339	125	6	2	28
Kansas	5,653	720	229	41	5	----	30
Kentucky	5,785	907	194	73	5	1	16
Louisiana	2,521	553	219	63	7	2	16
Maine	1,704	222	78	40	4	----	17
Maryland	966	213	173	59	6	7	23
Massachusetts	1,887	547	416	190	8	7	64
Michigan	[2] 8,000	[2] 853	432	159	8	3	29
Minnesota	6,630	654	345	67	8	2	27
Mississippi	4,280	665	46	25	4	----	36
Missouri	6,675	832	442	74	8	3	30
Montana	1,611	192	37	14	5	----	8
Nebraska	5,958	628	253	48	5	----	13
Nevada	211	46	1	----	1	----	----
New Hampshire	1,584	139	66	39	2	----	14
New Jersey	1,594	330	374	119	6	3	44
New Mexico	717	152	64	20	5	----	1
New York	6,671	1,190	1,120	330	10	19	108
North Carolina	3,513	980	57	23	9	----	46
North Dakota	3,767	449	54	20	4	----	16
Ohio	4,003	1,241	584	151	8	1	67
Oklahoma	3,997	948	82	30	9	1	15
Oregon	1,376	272	73	30	5	----	10
Pennsylvania	8,579	1,272	903	228	7	19	123
Rhode Island	322	60	82	23	4	1	6
South Carolina	3,594	491	25	13	6	----	20
South Dakota	4,141	337	52	15	4	----	11
Tennessee	5,067	557	66	39	7	1	18
Texas	7,175	2,580	350	88	10	----	40
Utah	376	160	9	7	4	----	6
Vermont	1,035	90	27	19	2	1	11
Virginia	3,402	576	66	52	9	3	29
Washington	1,158	365	111	47	6	----	24
West Virginia	4,421	391	51	15	10	----	29
Wisconsin	5,733	505	563	68	6	2	24
Wyoming	[1] 1,161	103	8	2	3	----	2
District of Columbia	96	35	45	33	5	3	7
United States service schools	----	----	----	----	----	----	3

[1] Data for 1941–42.
[2] Estimated.
[3] Statistics for 1937–38.

Source: U. S. Office of Education for all data except those on schools of nursing which are from National League of Nursing Education.

TABLE 13.—*Number and classification of institutions of higher education:* [1] *1939–40 and 1941–42*

State, or outlying part of the United States	Total 1939–40	Universities, colleges, and professional schools				Teachers colleges and normal schools				All institutions, 1941–42		
		Publicly controlled		Privately controlled		Publicly controlled		Privately controlled				
		Degree-granting	Non-degree-granting [2]	Degree-granting	Non-degree-granting [2]	Degree-granting	Non-degree-granting [2]	Degree-granting	Non-degree-granting [2]	Total	Public	Private
Continental United States	1,751	141	217	853	251	165	80	21	23	1,769	619	1,150
Alabama	27	3	1	12	6	5				26	9	17
Arizona	5	1	2			2				5	5	
Arkansas	25	4	7	11	1	2				24	13	11
California	102	2	38	45	10	7				102	48	54
Colorado	19	3	4	7	2	3				16	9	7
Connecticut	27	1		11	8	4	1	1	1	28	6	22
Delaware	3	2		1						3	2	1
District of Columbia	25			14	7	2			2	22	2	20
Florida	13	3	1	5	4					14	4	10
Georgia	47	5	11	23	7	1				51	19	32
Idaho	8	1	2	2	1		2			8	5	3
Illinois	98	1	8	66	11	6	1	4	1	100	17	83
Indiana	41	3	1	29	3	2		2	1	40	6	34
Iowa	64	2	27	25	9	1				62	29	33
Kansas	45	4	15	16	8	2				44	22	22
Kentucky	40	4	2	16	13	4		1		38	10	28
Louisiana	21	5	1	10	3	1			1	19	7	12
Maine	16	1		6	3	2	4			15	6	9
Maryland	30	3	1	18	3	5				30	9	21
Massachusetts	69	2		39	10	11	1	1	5	68	14	54
Michigan	61	4	8	21	2	4	22			60	35	25
Minnesota	39	1	9	20	1	6			2	46	20	26
Mississippi	34	4	12	8	8	2				34	18	16
Missouri	56	2	9	24	13	8				56	13	43
Montana	10	3	1	2	1	1	1	1		11	8	3
Nebraska	23	2	2	11	3	4		1		22	8	14
Nevada	1	1								1	1	
New Hampshire	9	1		3	3	2				9	3	6
New Jersey	36	1	4	20	4	6		1		35	10	25
New Mexico	7	3	2			2				7	7	
New York	101	4		72	6	2	10	2	5	112	25	87
North Carolina	53	5	1	19	20	7		1		54	12	42
North Dakota	11	2	2	2		5				12	10	2
Ohio	67	8		54	3			2		66	10	56
Oklahoma	37	5	16	8	2	6				40	30	10
Oregon	20	2		11	2		3		2	20	5	15
Pennsylvania	98	1	1	75	7	14				103	16	87
Rhode Island	6	1		4		1				8	2	6
South Carolina	34	7		16	9				2	33	7	26
South Dakota	16	3		5	4	1	3			16	7	9
Tennessee	47	2		29	10	4	1	1		48	7	41
Texas	86	9	22	31	17	7				85	38	47
Utah	10	2	4	3	1					11	7	4
Vermont	11	1		5	2		3			11	4	7
Virginia	42	6		19	12	4			1	42	10	32
Washington	23	2	2	9	6	3		1		23	11	12
West Virginia	20	4	1	7	2	6				19	10	9
Wisconsin	64	1		19	4	10	28	2		66	39	27
Wyoming	1	1								1	1	
United States service schools [4]	3	3								3	3	

See footnotes at end of table.

TABLE 13.—*Number and classification of institutions of higher education:*[1] *1939–40 and 1941–42*—Continued

State, or outlying part of the United States	Total 1939–40	Universities, colleges, and professional schools				Teachers colleges and normal schools				All institutions, 1941–42		
		Publicly controlled		Privately controlled		Publicly controlled		Privately controlled				
		Degree-granting	Non-degree-granting [2]	Degree-granting	Non-degree-granting [2]	Degree-granting	Non-degree-granting [3]	Degree-granting	Non-degree-granting [3]	Total	Public	Private
Outlying parts of the United States	13	5	1	6	------	------	1	------	------	14	7	7
Alaska	1	1	------	------	------	------	------	------	------	1	1	------
Canal Zone	1	------	1	------	------	------	------	------	------	1	1	------
Hawaii	1	1	------	------	------	------	------	------	------	1	1	------
Philippine Islands	8	2	------	5	------	------	1	------	------	9	3	6
Puerto Rico	2	1	------	1	------	------	------	------	------	2	1	1

[1] This table will not check with the U. S. Office of Education, *Educational Directory, 1940*, Part III, because of the inclusion here of county normal schools and of other institutions of higher education reported since the *Directory* was compiled.
[2] Junior colleges.
[3] Normal schools.
[4] U. S. Coast Guard Academy, New London, Conn.; U. S. Naval Academy, Annapolis, Md.; and U. S. Military Academy, West Point, N. Y.

Source: U. S. Office of Education.

TABLE 14.—*Number and type of institutions of higher education: 1945–46*

Type	Number
Universities and large institutions of complex organization	131
Colleges of arts and sciences	557
Independent technical and professional schools	287
Teachers colleges and normal schools	201
Junior colleges	468
Institutions for negroes	105
All institutions	1,749

Source: U. S. Office of Education.

SECTION III

Enrollments in and Graduates of Secondary Schools

TABLE 15.—*Number of persons enrolled in secondary schools* [1] *in continental United States, by type of institution: 1900–1947*

Year (12 months ending June 30)	Continental United States	Publicly controlled high schools	Privately controlled high schools	Preparatory schools (colleges and universities)	Training schools of teacher-training institutions
1947 [2]	6,200,000	5,717,000	441,000	18,843	23,157
1946 [2]	6,140,000	5,662,110	434,400	19,540	23,950
1944	6,020,890	5,553,520	420,961	20,822	25,587
1942	6,923,538	6,387,805	483,195	39,077	13,461
1940	7,113,282	6,601,444	457,768	33,091	20,979
1938	6,736,939	6,226,934	446,833	32,874	30,298
1936	6,424,968	5,974,537	387,309	29,051	34,071
1934	6,090,749	5,669,156	360,092	24,703	36,798
1932	5,592,872	5,140,021	403,415	33,750	15,686
1930	4,799,867	4,399,422	341,158	47,309	11,978
1920	2,494,676	2,199,389	213,920	59,309	22,058
1910	1,111,393	915,061	117,400	66,042	12,890
1900	695,903	519,251	110,797	56,285	9,570

[1] Enrollment in secondary schools includes enrollment reported by 4 types of institutions: (a) publicly controlled high schools, (b) privately controlled high schools, (c) preparatory schools operated in connection with colleges or universities, and (d) secondary schools operated as part of teacher-training institutions.
[2] Estimated on basis of birth rates and school survival rates.
[3] Estimated by interpolation.

Source: U. S. Office of Education.

TABLE 16.—*Number of persons enrolled in high schools [1] in continental United States and outlying parts, by geographic area and sex: 1900–1947 [2]*

Area	1947 [3]			1946 [3]			1944 [4]			1942 [4]		
	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women
Continental United States and outlying parts							6,025,065	2,774,657	3,250,408	6,906,549	3,330,064	3,576,485
Continental United States	6,158,000	3,023,578	3,134,422	6,096,110	2,993,190	3,102,920	5,974,481	2,750,787	3,223,694	6,871,000	3,312,608	3,558,392
New England and Middle Atlantic	1,810,452	910,097	900,355	1,792,256	900,950	891,306	1,728,337	825,434	902,903	2,015,063	979,043	1,036,020
North Central	1,982,876	979,639	1,003,237	1,962,947	969,794	993,153	1,891,334	884,448	1,006,886	2,154,470	1,060,767	1,093,703
South Atlantic	732,802	338,641	394,161	725,438	335,237	390,201	728,672	311,399	417,273	859,452	387,284	472,168
South Central	936,016	444,466	491,550	926,609	439,999	486,610	923,568	398,101	525,467	1,062,120	495,935	566,185
West	695,854	350,735	345,119	688,860	347,210	341,650	702,570	331,405	371,165	779,895	389,579	390,316
Outlying parts	(5)	(5)	(5)	(5)	(5)	(5)	50,584	23,870	26,714	35,549	17,456	18,093
	1940			1938			1936			1934		
Continental United States and outlying parts	7,199,846	3,546,667	3,653,179	6,781,484	3,296,983	3,484,501	6,451,932	3,179,176	3,272,756	6,111,160	3,013,879	3,097,281
Continental United States	7,059,216	3,465,415	3,593,801	6,673,767	3,232,599	3,441,168	6,361,846	3,124,139	3,237,707	6,029,248	2,963,578	3,065,670
New England and Middle Atlantic	2,076,797	1,040,264	1,036,533	2,012,160	992,459	1,019,701	1,920,386	966,388	953,998	1,802,819	909,202	893,617
North Central	2,275,880	1,123,517	1,152,363	2,135,070	1,045,608	1,089,462	2,096,999	1,030,201	1,066,798	2,056,800	1,002,514	1,044,296
South Atlantic	837,571	388,375	449,196	768,952	349,082	419,870	710,967	331,315	379,652	653,344	300,945	352,399
South Central	1,072,132	510,779	561,353	993,506	466,585	526,921	921,201	438,797	482,404	842,345	412,168	440,177
West	796,836	402,480	394,356	764,079	378,865	385,214	712,293	357,438	354,855	673,940	338,749	335,191
Outlying parts	140,630	81,252	59,378	107,717	64,384	43,333	90,086	55,037	35,049	81,912	50,301	31,611
	1932			1930			1920			Total men and women 1910 [6]		Total men and women 1900 [6]
Continental United States and outlying parts	5,647,131	2,783,520	2,863,611	4,830,832	2,328,614	2,502,218	2,451,753	1,114,746	1,337,007			
Continental United States	5,543,436	2,722,247	2,821,189	4,740,580	2,274,717	2,465,863	2,413,309	1,090,910	1,322,399	1,032,461		630,048
New England and Middle Atlantic	1,598,179	815,942	782,237	1,280,774	641,290	639,484	662,035	312,831	349,204	330,369		210,181
North Central	1,914,019	933,337	980,682	1,670,060	803,071	866,989	848,090	378,795	469,295	424,434		276,390
South Atlantic	594,307	273,965	320,342	508,334	226,751	281,583	224,518	98,095	126,423	75,316		47,215
South Central	798,975	380,184	418,791	717,881	329,461	388,420	343,819	146,660	197,159	103,312		61,710
West	637,956	318,819	319,137	563,531	274,144	289,387	334,847	154,529	180,318	99,030		34,552
Outlying parts	103,695	61,273	42,422	90,252	53,897	36,355	38,444	23,836	14,608	(6)		(6)

[1] Includes enrollment in publicly and privately controlled high schools; excludes enrollment in preparatory departments of colleges, and secondary grades in training schools.
[2] 12 months ending June 30 of the year given.
[3] Total estimated; breakdown of total allocated to areas and sex according to 1939–1940 distribution of enrollment in publicly and privately controlled high schools.
[4] Data for privately controlled institutions not available on an area basis; total allocated according to geographic distribution of 1939–40 data of enrollment in private schools.
[5] Revised total for continental United States reported in *Statistical Summary of Education*, 1941–42, vol. II, ch. II; area breakdowns of total according to percentage distribution of original report.
[6] Data not available.

Source: U. S. Office of Education.

TABLE 17.—*Number of persons enrolled in high schools*[1] *in continental United States and outlying parts, by geographic area and sex: 1932, 1936, and 1940*[2]

Area	Total			Publicly controlled			Privately controlled		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
1940									
Continental United States and outlying parts	7,199,846	3,546,667	3,653,179	6,733,169	3,328,133	3,405,036	466,677	218,534	248,143
Continental United States	7,059,216	3,465,415	3,593,801	6,601,444	3,250,952	3,350,492	457,772	214,463	243,309
New England and Middle Atlantic	2,076,797	1,040,264	1,036,533	1,881,947	946,300	935,647	194,850	93,964	100,886
North Central	2,275,880	1,123,517	1,152,363	2,119,936	1,052,415	1,067,521	155,944	71,102	84,842
South Atlantic	837,571	388,375	449,196	804,023	372,011	432,012	33,548	16,364	17,184
South Central	1,072,132	510,779	561,353	1,032,289	491,916	540,373	39,843	18,863	20,980
Mountain and Pacific	796,836	402,480	394,356	763,249	388,310	374,939	33,587	14,170	19,417
Outlying parts	140,630	81,252	59,378	131,725	77,181	54,544	8,905	4,071	4,834
1936									
Continental United States and outlying parts	6,451,932	3,179,176	3,272,756	6,057,749	2,999,810	3,057,939	394,183	179,366	214,817
Continental United States	6,361,846	3,124,139	3,237,707	5,974,537	2,948,765	3,025,772	387,309	175,374	211,935
New England and Middle Atlantic	1,920,386	966,388	953,998	1,753,346	889,827	863,519	167,040	76,561	90,479
North Central	2,096,999	1,030,201	1,066,798	1,967,576	971,461	996,115	129,423	58,740	70,683
South Atlantic	710,967	331,315	379,652	682,922	318,603	364,319	28,045	12,712	15,333
South Central	921,201	438,797	482,404	885,536	423,313	462,223	35,665	15,484	20,181
Mountain and Pacific	712,293	357,438	354,855	685,157	345,561	339,596	27,136	11,877	15,259
Outlying parts	90,086	55,037	35,049	83,212	51,045	32,167	6,874	3,992	2,882
1932									
Continental United States and outlying parts	5,647,131	2,783,520	2,863,611	5,231,391	2,589,756	2,641,635	415,740	193,764	221,976
Continental United States	5,543,436	2,722,247	2,821,189	5,131,839	2,530,790	2,601,049	411,597	191,457	220,140
New England and Middle Atlantic	1,598,179	815,942	782,237	1,423,324	729,953	693,371	174,855	85,989	88,866
North Central	1,914,019	933,337	980,682	1,776,755	869,518	907,237	137,264	63,819	73,445
South Atlantic	594,307	273,965	320,342	562,459	259,132	303,327	31,848	14,833	17,015
South Central	798,975	380,184	418,791	766,341	365,106	401,235	32,634	15,078	17,556
Mountain and Pacific	637,956	318,819	319,137	602,960	307,081	295,879	34,996	11,738	23,258
Outlying parts	103,695	61,273	42,422	99,552	58,966	40,586	4,143	2,307	1,836

[1] Includes enrollment in publicly and privately controlled high schools; does not include enrollment in preparatory departments of colleges, and secondary grades in training schools.
[2] 12 months ending June 30 of the year specified.

Source: U. S. Office of Education.

TABLE 18.—*Number of persons graduated by public and private high schools in continental United States and outlying areas, by geographic area and sex: 1930–47* [1]

	1944 [2]			1940 [3]			1938 [2]			1930 [3]		
	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women
Continental United States and outlying parts	1,048,002	441,172	606,830	1,244,000	592,332	651,668	1,134,758	532,882	601,876	675,696	305,762	369,934
Continental United States	1,041,492	438,419	603,073	1,221,475	578,718	642,757	1,120,079	524,129	595,950	666,904	300,376	366,528
New England and Middle Atlantic	294,673	132,203	162,470	342,502	166,150	176,352	321,323	154,205	167,118	174,970	84,219	90,751
North Central	357,662	152,884	204,778	417,732	199,716	218,016	387,781	182,040	205,741	252,501	113,669	138,832
South Atlantic	123,177	46,488	76,689	133,410	57,756	75,654	118,330	50,999	67,331	64,950	26,001	38,949
South Central	145,824	56,098	89,726	175,953	80,095	95,858	154,857	70,164	84,693	91,233	38,559	52,674
West	120,156	50,746	69,410	151,878	75,001	76,877	137,788	66,721	71,067	83,250	37,928	45,322
Outlying parts	6,510	2,753	3,757	22,525	13,614	8,911	14,679	8,753	5,926	8,792	5,386	3,406

[1] 12 month period ending June 30 of year specified.
[2] Privately controlled high school data not available by area; total allocated geographically according to percentage distribution of graduates for 1939–40 and added to data for publicly controlled high schools.
[3] Area totals estimated by applying percentage distribution of originally published data, to revised nationwide totals reported in *Statistical Summary of Education*, vol. II, ch. II, 1941–42.

Source: U. S. Office of Education.

SECTION IV

College Enrollments

TABLE 19.—*Resident enrollment*[1] *in institutions of higher education in continental United States and outlying parts, by type of institutional control: 1900–1947*

Year (12 months ending June 30)	Continental United States and outlying parts	Continental United States			Outlying parts		
		Total	Publicly controlled	Privately controlled	Total	Publicly controlled	Privately controlled
1947	(2)	[3] 2,354,000	(2)	(2)	(2)	(2)	(2)
1946	(2)	[3] 1,056,000	(2)	(2)	(2)	(2)	(2)
1944 [4]	884,322	877.517	421.952	455,565	6,805	6,520	285
1942	1,411,510	1,403,990	732,111	671,879	7,520	7,130	390
1940	1,512,418	1,494,203	796,531	697,672	[5] 18,215	15,238	2,977
1938	1,365,933	1,350,905	689,483	661,422	[5] 15,028	12,501	2,527
1936	1,221,878	1,208,227	614,131	594,096	[5] 13,651	12,032	1,619
1934	1,066,645	1,055,360	529,931	525,429	[5] 11,285	11,285	----------
1932	1,164,782	1,154,117	582,168	571,949	[5] 10,665	10,665	----------
1930	1,111,571	1,100,737	537,001	563,736	[5] 10,834	10,665	169
1920	598,695	597,682	308,570	289,112	1,013	1,008	5
1910	355,328	355.213	(2)	(2)	115	115	----------
1900	237,592	237,592	91,400	146,192	----------	----------	----------

[1] Excludes: (*a*) enrollment in summer sessions, (*b*) nonresident collegiate enrollment in correspondence and extension work, and (*c*) enrollment in nurse-training institutions not affiliated with colleges and universities; excludes duplicates.
[2] Not available.
[3] Estimated from report of fall enrollment.
[4] Civilian enrollment only.
[5] Includes reports from schools in Philippine Islands.

Source: U. S. Office of Education.

TABLE 20.—*Resident enrollments in continental United States in institutions of higher education and relation to college age youth: 1900–1947*

Year (12 months ending June 30)	Enrollment [1]	As percent of college age youth (18–21) [2]
1900	237,592	4.0
1910	355,215	4.8
1920	597,682	8.1
1930	1,100,737	12.2
1932	1,154,117	12.6
1934	1,055,360	11.5
1936	1,208,227	13.0
1938	1,350,905	13.3
1940	1,494,203	15.6
1947	1,354,000	15.5
	[3] 1,000,000	----------
	2,354,000	

[1] Source: U. S. Office of Education.
[2] Based on population data from the U. S. Bureau of the Census.
[3] Older aged veterans of World War II.

NOTE.—Data used in preparing Chart 1 vol. I Report of the President's Commission on Higher Education.

TABLE 21.—*The Educational Gap: 1900–1960—Resident enrollments in thirteenth to sixteenth grades in institutions of higher education in continental United States, and number who might have enrolled under recommendations of President's Commission on Higher Education*

Year	13th–16th grades [1] enrollment	Lost leadership	Number recommended by President's Commission on Higher Education
1900	146,000	2,226,000	2,372,000
1910	[2] 345,000	2,630,000	2,975,000
1920	582,000	2,404,000	2,986,000
1930	1,053,000	2,616,000	3,669,000
1936	1,130,000	2,625,000	3,755,000
1940	1,388,000	2,586,000	3,974,000
1947	[2] 1,286,000	2,383,000	3,669,000
	Prewar trend prediction	Added number recommended	
1952	2,305,000	1,080,000	3,385,000
1960	2,704,000	1,296,000	4,000,000

NOTE.—Data used in preparing chart 2, vol. I and chart 4, vol. II, of Report of the President's Commission on Higher Education.

[1] Source: U. S. Office of Education.

[2] Estimated from total of graduate and undergraduate enrollment from same source.

TABLE 24.—*Enrollment in institutions of higher education,[1] continental United States and outlying parts, by control, type of institution, and sex: 1932–47* [2]

Type of institution	1947 [3]			1940 [4]			1936 [4]			1932 [4]		
	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women
Continental United States and outlying parts	2,078,095	1,417,595	660,500	1,512,418	904,610	607,808	1,221,878	717,955	503,923	1,164,782	673,661	491,121
Colleges and universities	1,031,430	762 423	269,007	749,930	501,107	248,823	618,777	413,006	205,771	614,018	399,629	214,389
Colleges of arts and sciences	439,449	249,738	189,711	272,623	133 559	139,064	230,010	111,163	118,847	198,744	96 522	102,222
Professional and technical institutions	210,176	178,409	31,767	129,896	104,401	25,495	97,673	77,933	19,740	83,908	72,142	11,766
Teachers colleges and normal schools	150,059	78,963	71,096	171,061	67,210	103,851	141,276	50,353	90,923	160,752	49,295	111,457
Junior colleges	188,139	121,069	67,070	147,069	80,455	66,614	101,514	51,524	49,990	85,480	46,333	39,147
Negro institutions	58,842	26,993	31,849	41,839	17,878	23,961	32,628	13,976	18,652	21,880	9,740	12,140
PUBLICLY CONTROLLED												
Continental United States and outlying parts				811,769	478,720	333,049	626,163	357,060	269 103	592,693	318,434	274,259
Colleges and universities				438,655	290,989	147,666	346,396	227,653	118,743	317,337	200,353	116,984
Colleges of arts and sciences				31,487	9,623	21,864	23,462	6,246	17,216	19,442	5,611	13,831
Professional and technical institutions	(5)	(5)	(5)	51,938	41,582	10,356	35,993	28,979	7,004	32,697	26,512	6,185
Teachers colleges and normal schools				162,685	64,901	97,784	134,361	48,705	85,656	153,875	47,844	106,031
Junior colleges				107,064	63,408	43,656	71,182	39,855	31,327	60,169	34,643	25,526
Negro institutions				19,940	8 217	11,723	14,779	5,622	9,157	9,173	3,471	5,702
PRIVATELY CONTROLLED												
Continental United States and outlying parts				700,649	425,890	274,759	595,715	360,895	234,820	572,089	355,227	216,862
Colleges and universities				311,275	210 118	101,157	272,381	185,353	87,028	296,681	199,276	97,405
Colleges of arts and sciences				241,136	123,936	117,200	206,548	104,917	101,631	179,302	90,911	88,391
Professional and technical institutions	(5)	(5)	(5)	77,958	62,819	15,139	61,690	48,954	12,736	51,211	45,630	5,581
Teachers colleges and normal schools				8,376	2 309	6,067	6,915	1,648	5,267	6,877	1,451	5,426
Junior colleges				40,005	17,047	22,958	30 332	11,669	18,663	25,311	11,690	13,621
Negro institutions				21,899	9,661	12,238	17,849	8,354	9,495	12,707	6,269	6,438

[1] Data for any type of institution are reported in the appropriate category only; types of institutions are mutually exclusive. "Colleges and universities" are institutions of complex organization. "Colleges of arts and sciences" are institutions offering liberal arts 4-year degrees "Professional and technical institutions" are those independently controlled. "Negro institutions" include institutions of all types for Negroes only. "Junior colleges" are nondegree granting institutions of higher education not elsewhere classified.

[2] 12 months ending June 30.

[3] Enrollment as reported in October 1946. These figures are less than those for resident enrollment during the academic year, generally by 10 to 15 percent. Data are estimated from sample survey.

[4] Resident enrollment does not include nonresident enrollment in correspondence and extension work, nor enrollment in schools of nursing not affiliated with colleges or universities; includes regular sessions but excludes summer sessions.

[5] Not available.

Source: U. S. Office of Education.

TABLE 25.—*Resident enrollment* [1] *in institutions of higher education, continental United States and outlying parts, by geographic area, institutional control, type of institution,* [2] *and sex: 1932, 1936, 1940* [3]

Area	Total, public and private		Publicly controlled													
			Total, public		Colleges and universities		Arts and sciences		Professional and technical		Teachers and normals		Junior		Negro	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
1940																
Continental United States and outlying parts	904,610	607,808	478,720	333,049	290,989	147,666	9,623	21,864	41,582	10,356	64,901	97,784	63,408	43,656	8,217	11,723
Continental United States	893,250	600,953	470,006	326,525	282,546	141,290	9,427	21,792	41,582	10,356	64,901	97,784	63,333	43,580	8,217	11,723
New England and Middle Atlantic	246,270	147,283	61,085	51,421	46,752	31,398	-------	-------	5,297	442	8,353	19,131	624	302	59	148
North Central	292,186	193,947	169,686	108,762	109,969	54,290	3,925	3,151	11,901	4,262	25,998	35,491	17,579	11,217	314	351
South Atlantic	95,127	72,507	47,974	34,403	20,130	5,638	3,259	11,017	14,764	505	3,095	9,394	2,584	1,688	4,142	6,161
South Central	127,770	98,287	91,151	64,724	53,284	20,276	2,243	7,624	5,343	3,879	15,140	19,800	11,439	8,082	3,702	5,063
West	131,897	88,929	100,110	67,215	52,411	29,688	-------	-------	4,277	1,268	12,315	13,968	31,107	22,291	-------	-------
Outlying parts	11,360	6,855	8,714	6,524	8,443	6,376	196	72	-------	-------	-------	-------	75	76	-------	-------
1936																
Continental United States and outlying parts	717,955	503,923	357,060	269,103	227,653	118,743	6,246	17,216	28,979	7,004	48,705	85,656	39,855	31,327	5,622	9,157
Continental United States	709,672	498,555	350,376	263,755	221,555	114,659	6,107	17,162	28,979	7,004	48,258	84,446	39,855	31,327	5,622	9,157
New England and Middle Atlantic	210,594	129,982	50,493	46,777	37,613	25,399	-------	-------	4,221	339	7,074	20,147	1,530	791	55	101
North Central	232,115	158,192	128,234	85,432	86,937	44,251	2,607	2,632	8,957	3,142	18,165	26,588	11,309	8,465	259	354
South Atlantic	74,341	57,215	35,642	25,644	16,129	3,829	2,520	8,442	10,576	283	2,424	7,688	1,411	801	2,582	4,601
South Central	95,913	82,860	65,326	52,771	39,022	15,479	980	6,088	2,990	2,603	11,848	18,215	7,760	6,285	2,726	4,101
West	96,709	70,306	70,681	53,131	41,854	25,701	-------	-------	2,235	637	8,747	11,808	17,845	14,935	-------	-------
Outlying parts	8,283	5,368	6,684	5,348	6,098	4,084	139	54	-------	-------	447	1,210	-------	-------	-------	-------
1932																
Continental United States and outlying parts	673,661	491,121	318,434	274,259	200,353	116,984	5,611	13,831	26,512	6,185	47,844	106,031	34,643	25,526	3,471	5,702
Continental United States	667,181	486,936	311,954	270,074	194,074	112,949	5,520	13,778	26,512	6,185	47,844	106,031	34,533	25,429	3,471	5,702
New England and Middle Atlantic	217,451	139,786	45,874	56,571	35,734	29,640	460	173	3,416	237	6,223	26,373	-------	-------	41	148
North Central	215,168	158,125	119,148	90,536	77,930	43,193	852	690	8,557	3,100	20,004	35,723	11,557	7,345	248	485
South Atlantic	68,717	48,845	33,950	25,174	15,822	3,723	2,341	7,824	10,640	551	2,944	9,743	580	752	1,623	2,581
South Central	79,116	74,467	53,406	49,289	29,765	12,888	1,867	5,091	1,748	1,757	11,816	21,340	6,651	5,725	1,559	2,488
West	86,729	65,713	59,576	48,504	34,823	23,505	-------	-------	2,151	540	6,857	12,852	15,745	11,607	-------	-------
Outlying parts	6,480	4,185	6,480	4,185	6,279	4,035	91	53	-------	-------	-------	-------	110	97	-------	-------

Area	Privately controlled													
	Total, private		Colleges and universities		Arts and sciences		Professional and technical		Teachers and normal		Junior		Negro	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
1940														
Continental United States and outlying parts	425,890	274,759	210,118	101,157	123,936	117,200	62,819	15,139	2,309	6,067	17,047	22,958	9,661	12,238
Continental United States	423,244	274,428	210,118	101,157	123,325	116,896	60,784	15,112	2,309	6,067	17,047	22,958	9,661	12,238
New England and Middle Atlantic	185,185	95,862	118,809	50,272	34,019	31,587	27,553	8,299	730	1,644	3,661	4,060	413	-------
North Central	122,500	85,185	50,438	32,549	46,491	40,223	20,391	4,172	902	2,068	4,278	6,173	-------	-------
South Atlantic	47,153	38,104	17,849	5,895	15,584	17,764	5,382	1,209	-------	499	3,384	5,968	4,954	6,769
South Central	36,619	33,563	10,050	5,475	15,394	16,234	2,732	658	632	1,174	3,517	4,553	4,294	5,469
West	31,787	21,714	12,972	6,966	11,837	11,088	4,726	774	45	682	2,207	2,204	-------	-------
Outlying parts	2,646	331	-------	-------	611	304	2,035	27	-------	-------	-------	-------	-------	-------
1936														
Continental United States and outlying parts	360,895	234,820	185,353	87,028	104,917	101,631	48,954	12,736	1,648	5,267	11,669	18,663	8,354	9,495
Continental United States	359,296	234,800	185,353	87,028	104,917	101,631	47,355	12,716	1,648	5,267	11,669	18,663	8,354	9,495
New England and Middle Atlantic	160,101	83,205	109,296	44,376	27,331	27,054	21,927	7,994	469	1,520	827	2,261	251	-------
North Central	103,881	72,760	41,754	26,789	41,344	35,975	16,450	2,979	699	2,086	3,302	4,590	332	341
South Atlantic	38,699	31,571	15,130	5,338	13,713	15,180	2,906	619	-------	464	2,813	5,063	4,137	4,907
South Central	30,587	30,089	8,168	4,509	13,298	14,786	1,958	562	480	936	3,049	5,049	3,634	4,247
West	26,028	17,175	11,005	6,016	9,231	8,636	4,114	562	-------	261	1,678	1,700	-------	-------
Outlying parts	1,599	20	-------	-------	-------	-------	1,599	20	-------	-------	-------	-------	-------	-------
1932														
Continental United States and outlying parts	355,227	216,862	199,276	97,405	90,911	88,391	45,630	5,581	1,451	5,426	11,690	13,621	6,269	6,438
Continental United States	355,227	216,862	199,276	97,405	90,911	88,391	45,630	5,581	1,451	5,426	11,690	13,621	6,269	6,438
New England and Middle Atlantic	171,577	83,215	119,133	52,011	26,268	23,511	24,999	4,028	574	2,288	265	1,377	338	-------
North Central	96,020	67,589	42,924	29,207	34,692	31,877	11,988	524	566	1,495	5,471	4,175	379	311
South Atlantic	34,767	23,671	16,570	3,967	10,942	13,478	2,605	380	-------	452	1,389	2,205	3,261	3,189
South Central	25,710	25,178	7,456	4,400	11,085	12,193	1,821	216	311	911	2,746	4,520	2,291	2,938
West	27,153	17,209	13,193	7,820	7,924	7,332	4,217	433	-------	280	1,819	1,344	-------	-------
Outlying parts	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------

[1] Includes graduate and undergraduate students enrolled in regular sessions only; excludes (*a*) summer session, (*b*) nonresident collegiate enrollment in correspondence and extension work, and (*c*) enrollment in nurse-training institutions not affiliated with colleges or universities.

[2] Information for any one type of institution is reported in the appropriate category only; types of institutions are mutually exclusive. "Colleges and universities" are institutions of complex organization. "Arts and sciences" are institutions offering 4-year liberal arts degrees. "Professional and technical" institutions are those independently controlled. "Negro" includes institutions of all types for Negroes only. "Junior" includes non-degree-granting institutions not elsewhere classified.

[3] 12-month period ending June 30.

Source: U. S. Office of Education

TABLE 26.—*Resident enrollment*[1] *in institutions of higher education, continental United States and outlying parts, by institutional contr type of institutions,*[2] *and State: 1940*[3]

State or Territory	Total	Publicly controlled							Privately controlled						
		Total publicly controlled	Colleges and universities	Arts and sciences	Professional and technical	Teachers and normal	Junior	Negro	Total privately controlled	Colleges and universities	Arts and sciences	Professional and technical	Teachers and normal	Junior	Negro
Continental United States and outlying parts	1,512,418	811,769	438,655	31,487	51,938	162,685	107,064	19,940	700,649	311,275	241,136	77,958	8,376	40,005	21,899
Continental United States	1,494,203	796,531	423,836	31,219	51,938	162,685	106,913	19,940	697,672	311,275	240,221	75,896	8,376	40,005	21,899
Alabama	19,987	14,234	9,268	902		2,552		1,512	5,753		2,854	44		669	2,186
Arizona	5,969	5,969	2,906			1,991	1,072								
Arkansas	10,928	7,938	2,850	667	513	1,440	1,899	569	2,990		2,297	74		108	511
California	120,290	90,065	28,851		765	15,140	45,309		30,225	13,092	11,041	4,812		1,280	
Colorado	17,376	11,410	6,549		813	2,397	1,651		5,966	3,952	1,289	277		448	
Connecticut	12,860	2,491	1,265			1,226			10,369	5,318	2,596	510	138	1,807	
Delaware	1,118	1,060	946					114	58			58			
District of Columbia	22,319	1,186				500		686	21,133	12,199	3,340	3,041	130	391	2,032
Florida	11,473	6,501	3,456	2,048			121	876	4,972		3,686			385	901
Georgia	23,229	14,015	3,688	1,935	2,846	686	3,607	1,253	9,214	1,733	3,392	530		1,008	2,551
Idaho	6,615	5,468	3,010			913	1,545		1,147		804			343	
Illinois	107,074	34,952	14,461			9,788	10,703		72,122	39,966	15,542	13,057	1,261	2,296	
Indiana	37,065	18,788	14,369		32	4,053	334		18,277	6,473	7,950	2,901	715	238	
Iowa	29,753	18,671	7,000		7,090	2,154	2,427		11,082	1,817	7,892	321		1,052	
Kansas	27,244	20,918	4,867	2,770	4,354	3,726	5,201		6,326		5,635	102		589	
Kentucky	22,414	14,864	7,979			5,616	330	939	7,550		4,240	867	445	1,998	
Louisiana	25,996	16,989	8,426	621	4,760	1,939		1,243	9,007	5,939	1,586			216	1,266
Maine	6,092	3,162	2,053			1,109			2,930		2,359	66		505	
Maryland	18,557	6,985	5,047			1,069	43	826	11,572	4,490	4,337	2,377		368	
Massachusetts	57,772	5,168			1,723	3,445			52,604	30,024	14,455	5,772	731	1,622	
Michigan	60,961	48,427	35,825		1,000	8,193	3,409		12,534	5,835	5,690	627		382	
Minnesota	34,647	24,821	17,526			4,668	2,627		9,826		8,697	859	216	54	
Mississippi	14,019	10,991	3,809	1,219		1,462	4,046	455	3,028		1,782			667	579
Missouri	40,393	20,226	6,881			9,619	3,061	665	20,167	10,323	3,886	2,333		3,625	
Montana	6,685	5,429	2,171		2,153	633	472		1,256		800		404	52	
Nebraska	16,579	11,806	8,519			2,951	336		4,773	1,799	2,599	57	90	228	
Nevada	1,267	1,267	1,267												
New Hampshire	5,897	2,573	2,026			547			3,324	2,437	363			524	
New Jersey	20,515	6,911			1,996	4,072	843		13,604	5,888	2,610	3,728	197	1,181	
New Mexico	4,950	4,950	1,773		1,281	839	1,057								

New York	195,596	69,493	62,772			6,721			126,103	88,256	19,109	16,734	1,308	696	
North Carolina	32,118	15,421	4,165	2,261	2,518	3,131	173	3,173	16,697	3,673	6,664		369	4,040	1,951
North Dakota	8,332	7,810	1,960		1,901	3,251	698		522		522				
Ohio	84,367	44,271	39,965	4,306					40,096	12,241	22,155	3,779	464	1,457	
Oklahoma	32,908	28,386	13,919	1,097	486	7,412	4,586	886	4,522	1,278	2,802	244		198	
Oregon	16,141	10,775	8,973		533	1,269			5,366		3,872	396	157	941	
Pennsylvania	83,401	17,010	7,293			9,427	83	207	66,391	34,935	21,549	8,483		1,011	413
Rhode Island	5,425	1,800	1,254			546			3,625	2,223	843	559			
South Carolina	15,914	8,807	2,051	2,162	3,785			809	7,107		4,261	250		573	2,023
South Dakota	6,583	4,555	937		1,786	1,832			2,028		1,699			329	
Tennessee	25,253	10,877	5,041		968	3,515		1,353	14,376	1,832	6,712	428	1,361	1,917	2,126
Texas	74,552	51,596	22,268	5,361	2,495	11,004	8,660	1,808	22,956	6,476	9,355	1,733		2,297	3,095
Utah	13,043	9,848	7,862				1,986		3,195	2,894	133	15		153	
Vermont	3,975	1,878	1,487			391			2,097		1,722			375	
Virginia	26,156	15,199	3,015	3,094	3,814	4,066		1,210	10,957	1,649	4,742	335		2,054	2,177
Washington	26,226	19,880	16,473			3,101	306		6,346		4,986		166	1,194	
West Virginia	14,444	10,897	3,400	2,776		3,037	328	1,356	3,547		2,926			533	88
Wisconsin	33,135	23,203	11,949			11,254			9,932	4,533	4,447	527	224	201	
Wyoming	2,264	2,264	2,264												
United States service academies	4,326	4,326			4,326										
Outlying Parts	18,215	15,238	14,819	268			151		2,977		915	2,062			
Alaska	268	268		268											
American Samoa															
Canal Zone	151	151					151								
Guam															
Hawaii	2,703	2,703	2,703												
Philippine Islands	10,242	7,528	7,528						2,714		652	2,062			
Puerto Rico	4,851	4,588	4,588						263		263				
Virgin Islands															

[1] Resident enrollment includes regular sessions only; excludes (*a*) summer session, (*b*) nonresident collegiate enrollment in correspondence and extension work, (*c*) enrollment in schools of nursing not affiliated with colleges or universities.

[2] Information for any one type of institution is reported in the appropriate category only; types of institutions are mutually exclusive. "Colleges and universities" are institutions of complex organization. "Arts and sciences" are institutions offering liberal arts 4-year degrees. "Professional and technical" institutions are those independently controlled. "Negro" includes institutions of all types for Negroes only. "Junior" are nondegree-granting institutions not otherwise classified.

[3] 12-month period ending June 30, 1940.

Source: U. S. Office of Education.

SECTION V

Earned Degrees Granted

TABLE 27.—*Estimated number of advanced earned degrees in continental United States and outlying territories, by degree, field, geographic area: July 1, 1946–June 30, 1947*

A. CONTINENTAL UNITED STATES AND OUTLYING PARTS [1]

Field of specialization	First graduate degree			Second graduate degree		
	Number of institutions	Estimated number of degrees	Distribution of degrees	Number of institutions	Estimated number of degrees	Distribution of degrees
			Percent			*Percent*
Total		35,919	100.0		3,787	100.0
Agriculture	50	648	1.8	18	111	2.9
Architecture	21	143	.4	4	23	.6
Biology	93	513	1.4	38	136	3.6
Botany	50	149	.4	25	78	2.1
Business	80	2,414	6.7	6	26	.7
Chemistry	146	1,131	3.2	71	452	11.9
Dentistry	11	234	.6			
Economics	94	693	1.9	34	159	4.2
Education	223	10,507	29.3	56	410	10.8
Engineering	291	3,278	9.0	64	184	4.9
Chemical	60	803	2.2	21	58	1.5
Civil	51	513	1.5	9	19	.5
Electrical	52	520	1.4	10	60	1.6
Mechanical	50	507	1.4	10	14	.4
Mining and metallurgical	37	231	.6	7	22	.6
Other	41	704	2.0	7	11	.3
English	170	1,742	4.9	144	202	5.3
Fine Arts	51	290	.8	8	42	1.1
Foreign language, classical	52	188	.5	17	39	1.0
Foreign language, modern	88	660	1.8	34	96	2.5
Forestry	21	275	.8	7	20	.5
Geology	60	269	.7	23	59	1.6
History	166	1,452	4.1	48	186	4.9
Home economics	58	617	1.7	7	16	.4
Industrial arts	22	180	.5	1	2	.1
Journalism	22	208	.6			
Law	22	177	.5	5	94	2.5
Library science	16	490	1.4	2	97	2.6
Mathematics	101	528	1.5	30	105	2.7
Medicine	35	823	2.3	14	135	3.5
Music	88	1,074	3.0	13	48	1.3
Nursing	15	355	1.0			
Pharmacy	22	78	.2	6	7	.2
Philosophy	54	216	.6	26	50	1.3
Physical education	51	789	2.2	4	21	.6
Physical sciences (not elsewhere listed)	29	226	.6	7	21	.6
Physics	88	499	1.4	40	149	3.9
Political science	81	606	1.7	33	101	2.7
Psychology	103	749	2.1	36	144	3.8
Religion	62	816	2.3	35	298	7.9
Social sciences (not elsewhere listed)	64	1,373	3.8	11	38	1.0
Sociology	102	469	1.3	23	65	1.7
Speech and dramatic arts	46	464	1.3	13	44	1.2
Veterinary medicine	7	17	.1	2	3	.1
Zoology	66	293	.8	24	83	2.2
Other	22	286	.8	7	43	1.1

[1] Based on reports from 402 institutions, of which 356 offer graduate work, 42 do not. University of Alabama, Oglethorpe University, Illinois Institute of Technology, and Presbyterian Theological Seminary of Chicago did not report.

TABLE 27.—*Estimated number of advanced earned degrees in continental United States and outlying territories, by degree, field, geographic area: July 1, 1946–June 30, 1947*—Continued

B. NEW ENGLAND AND MIDDLE ATLANTIC STATES

Field of specialization	First graduate degree			Second graduate degree		
	Number of institutions	Estimated number of degrees	Distribution of degrees	Number of institutions	Estimated number of degrees	Distribution of degrees
Total		16,124	*Percent* 100.0		1,672	*Percent* 100.0
Agriculture	7	121	0.8	4	28	1.7
Architecture	7	68	.4	2	20	1.2
Biology	34	190	1.2	14	56	3.3
Botany	10	28	.2	6	25	1.5
Business	18	1,501	9.3	1	13	.8
Chemistry	43	476	3.0	23	170	10.3
Dentistry	3	175	1.1			
Economics	26	313	1.9	14	96	5.7
Education	56	4,988	30.9	11	152	9.1
Engineering	95	1,550	9.6	32	116	6.9
Chemical	20	425	2.6	9	34	2.0
Civil	17	193	1.2	5	13	.8
Electrical	18	260	1.6	5	38	2.3
Mechanical	15	186	1.2	3	4	.2
Mining and metallurgical	11	98	.6	5	19	1.1
Other	14	388	2.4	5	8	.5
English	47	815	5.1	14	87	5.2
Fine arts	12	75	.5	3	7	.4
Foreign language, classical	24	97	.6	8	17	1.0
Foreign language, modern	27	311	1.9	13	36	2.2
Forestry	5	104	.6	3	10	.6
Geology	15	71	.4	6	19	1.1
History	43	557	3.5	15	68	4.1
Home economics	8	295	1.8	3	9	.5
Industrial arts	4	63	.4	1	2	.1
Journalism	2	68	.4			
Law	9	76	.5	2	8	.5
Library science	4	267	1.7			
Mathematics	28	199	1.2	9	51	3.1
Medicine	10	339	2.1	8	111	6.6
Music	18	313	1.9	7	39	2.3
Nursing	5	177	1.1			
Pharmacy	6	40	.2			
Philosophy	20	72	.4	13	25	1.5
Physical education	11	442	2.7	3	17	1.0
Physical sciences (not elsewhere listed)	12	51	.3	2	7	.4
Physics	27	196	1.2	17	70	4.2
Political science	22	309	1.9	11	50	3.0
Psychology	34	270	1.7	16	57	3.4
Religion	19	269	1.7	19	203	12.1
Social sciences (not elsewhere listed)	17	741	4.6	5	18	1.1
Sociology	25	188	1.2	9	22	1.3
Speech and dramatic arts	9	109	.7	3	5	.3
Veterinary medicine	1	2	.1			
Zoology	16	56	.3	5	32	1.9
Other	6	142	.9	4	26	1.6

C. NORTH CENTRAL STATES

Total		10,037	*Percent* 100.0		1,188	*Percent* 100.0
Agriculture	11	234	2.3	7	51	4.3
Architecture	6	35	.3			
Biology	24	169	1.7	10	42	3.5
Botany	17	78	.8	14	43	3.6
Business	21	490	4.9	5	13	1.1
Chemistry	40	346	3.4	23	168	14.1
Dentistry	5	13	.1			
Economics	26	183	1.8	10	33	2.8

TABLE 27.—*Estimated number of advanced earned degrees in continental United States and outlying territories, by degree, field, geographic area: July 1, 1946–June 30, 1947*—Continued

C. NORTH CENTRAL STATES—Continued

Field of specialization	First graduate degree			Second graduate degree		
	Number of institutions	Estimated number of degrees	Distribution of degrees	Number of institutions	Estimated number of degrees	Distribution of degrees
			Percent			*Percent*
Education	58	2,856	28.5	16	108	9.1
Engineering	82	840	8.4	12	21	1.8
Chemical	17	216	2.2	6	14	1.2
Civil	13	160	1.6	2	2	.2
Electrical	15	95	.9	1	1	.1
Mechanical	16	165	1.6	2	3	.2
Mining and metallurgical	11	57	.6			
Other	10	147	1.5	1	1	.1
English	43	422	4.2	11	40	3.4
Fine arts	16	109	1.1	4	34	2.9
Foreign language, classical	16	65	.6	6	14	1.2
Foreign language, modern	20	177	1.8	8	21	1.8
Forestry	5	82	.8	3	7	.6
Geology	17	90	.9	7	24	2.0
History	39	372	3.7	11	34	2.9
Home economics	18	175	1.7	3	6	.5
Industrial arts	7	46	.5			
Journalism	13	97	1.0			
Law	4	34	.3	2	85	7.2
Library science	4	73	.7	2	97	8.2
Mathematics	29	196	2.0	13	35	2.9
Medicine	13	282	2.8	5	18	1.5
Music	31	574	5.7	3	5	.4
Nursing	4	88	.9			
Pharmacy	9	27	.3	4	5	.4
Philosophy	16	68	.7	4	4	.3
Physical education	13	125	1.2	1	4	.3
Physical sciences (not elsewhere listed)	7	118	1.2	2	7	.6
Physics	23	172	1.7	9	39	3.3
Political science	22	99	1.0	10	19	1.6
Psychology	25	245	2.4	11	52	4.5
Religion	14	187	1.9	5	37	3.4
Social sciences (not elsewhere listed)	19	257	2.6	2	14	1.1
Sociology	28	150	1.5	9	25	2.1
Speech and dramatic arts	17	228	2.3	6	30	2.5
Veterinary medicine	4	13	.1	2	3	.2
Zoology	22	137	1.4	12	40	3.4
Other	8	85	.8	2	10	.8

D. SOUTH ATLANTIC STATES

Total		2,589	*Percent* 100.0		290	*Percent* 100.0
Agriculture	9	58	2.2	2	6	2.1
Architecture	2	2	.1			
Biology	15	51	2.0	4	11	3.8
Botany	6	15	.6	1	2	.7
Business	9	51	2.0			
Chemistry	19	104	4.0	9	40	13.8
Dentistry						
Economics	14	71	2.7	5	14	4.8
Education	32	699	27.0	6	20	6.9
Engineering	28	128	5.0	5	10	3.5
Chemical	6	45	1.7	2	4	1.4
Civil	5	16	.6	1	2	.7
Electrical	3	17	.7	1	2	.7
Mechanical	6	20	.8	1	2	.7
Mining and metallurgical	1	1	.1			
Other	7	29	1.1			
English	20	139	5.4	7	36	12.4
Fine arts	4	15	.6	1	1	.3

TABLE 27.—*Estimated number of advanced earned degrees in continental United States and outlying territories, by degree, field, geographic area: July 1, 1946–June 30, 1947*—Continued

D. SOUTH ATLANTIC STATES—Continued

Field of specialization	First graduate degree			Second graduate degree		
	Number of institutions	Estimated number of degrees	Distribution of degrees	Number of institutions	Estimated number of degrees	Distribution of degrees
			Percent			*Percent*
Foreign language, classical	4	14	0.5	2	6	2.1
Foreign language, modern	12	42	1.6	4	12	4.1
Forestry	5	53	2.0	1	3	1.0
Geology	4	8	.3	2	4	1.4
History	23	161	6.2	8	31	10.7
Home economics	9	40	1.5			
Industrial arts	2	3	.1			
Journalism	2	13	.5			
Law	3	18	.7	1	1	.3
Library science	3	67	2.6			
Mathematics	19	67	2.6	3	6	2.1
Medicine	3	73	2.8	1	1	.3
Music	6	14	.5	1	2	.7
Nursing	2	24	1.0			
Pharmacy	3	4	.1	2	2	.7
Philosophy	5	20	.8	4	13	4.5
Physical education	3	43	1.7			
Physical sciences (not elsewhere listed)	2	3	.1	1	2	.7
Physics	12	29	1.1	5	14	4.8
Political science	13	48	1.9	5	12	4.2
Psychology	13	69	2.7	4	10	3.5
Religion	9	139	5.4	2	8	2.8
Social sciences (not elsewhere listed)	5	170	6.6	1	1	.3
Sociology	13	50	1.9	3	12	4.1
Speech and dramatic arts	3	29	1.1			
Veterinary medicine						
Zoology	6	31	1.2	2	3	1.0
Other	2	24	.9	1	7	2.4

E. SOUTH CENTRAL STATES

Total		3,001	*Percent* 100.0		140	*Percent* 100.0
Agriculture	13	139	4.6	1	1	.7
Architecture	4	15	.5	1	2	1.4
Biology	9	38	1.2	3	3	2.1
Botany	6	10	.3	1	3	2.1
Business	15	90	3.0			
Chemistry	21	77	2.5	4	13	9.3
Dentistry	1	43	1.4			
Economics	11	27	.9	2	3	2.2
Education	41	1,092	36.4	6	28	20.0
Engineering	26	122	4.0	4	6	4.3
Chemical	9	59	2.0	2	4	2.9
Civil	4	9	.3			
Electrical	3	8	.2	1	1	.7
Mechanical	3	18	.6			
Mining and metallurgical	3	17	.6	1	1	.7
Other	4	11	.3			
English	30	196	6.5	5	14	10.0
Fine arts	7	18	.6			
Foreign language, classical	6	10	.3			
Foreign language, modern	13	32	1.1	2	2	1.4
Forestry						
Geology	7	35	1.1	1	2	1.4
History	32	150	5.0	5	10	7.2
Home economics	12	71	2.4			
Industrial arts	6	35	1.2			
Journalism	3	7	.2			
Law	3	31	1.0			
Library science	3	16	.5			

TABLE 27.—*Estimated number of advanced earned degrees in continental United States and outlying territories, by degree, field, geographic area: July 1, 1946–June 30, 1947*—Continued

E. SOUTH CENTRAL STATES—Continued

Field of specialization	First graduate degree			Second graduate degree		
	Number of institutions	Estimated number of degrees	Distribution of degrees	Number of institutions	Estimated number of degrees	Distribution of degrees
			Percent			*Percent*
Mathematics	11	28	0.9	1	1	0.7
Medicine	6	95	3.2			
Music	14	64	2.1	1	1	.7
Nursing	2	64	2.1			
Pharmacy	1	2	.7			
Philosophy	1	4	.1			
Physical education	9	70	2.3			
Physical sciences (not elsewhere listed)	3	4	.1			
Physics	13	38	1.3	2	4	2.9
Political science	8	27	.9	1	1	.7
Psychology	10	40	1.3	1	4	2.9
Religion	13	158	5.2	7	35	25.0
Social sciences (not elsewhere listed)	11	90	3.0	1	1	.7
Sociology	14	26	.9	1	1	.7
Speech and dramatic arts	5	15	.5	1	1	.7
Veterinary medicine						
Zoology	7	14	.5	2	4	2.9
Other	2	8	.2			

F. MOUNTAIN AND PACIFIC STATES

Total		4,154	*Percent* 100.0		497	*Percent* 100.0
Agriculture	9	94	2.3	4	25	5.1
Architecture	2	23	.5	1	1	.2
Biology	10	63	1.5	7	24	4.8
Botany	10	17	.4	3	5	1.0
Business	17	282	6.8			
Chemistry	23	128	3.1	12	61	12.3
Dentistry	2	3	.1			
Economics	16	98	2.4	3	13	2.6
Education	35	870	20.9	14	102	20.5
Engineering	60	638	15.4	11	31	6.2
Chemical	8	58	1.4	2	2	.4
Civil	12	135	3.3	1	2	.4
Electrical	13	140	3.4	2	18	3.6
Mechanical	10	118	2.8	4	5	1.0
Mining and metallurgical	11	58	1.4	1	2	.4
Other	6	129	3.1	1	2	.4
English	29	168	4.0	7	25	5.1
Fine arts	12	73	1.8			
Foreign language, classical	2	2	.1	1	2	.4
Foreign language, modern	15	96	2.3	7	25	5.1
Forestry	6	36	.9			
Geology	17	65	1.6	7	10	2.0
History	29	212	5.1	8	43	8.7
Home economics	11	36	.9	1	1	.2
Industrial arts	3	33	.8			
Journalism	2	23	.5			
Law	3	18	.4			
Library science	2	67	1.6			
Mathematics	13	38	.9	4	12	2.4
Medicine	3	34	.8	1	5	1.0
Music	19	109	2.6	1	1	.2
Nursing	2	2	.1			
Pharmacy	3	5	.1			
Philosophy	12	52	1.2	5	8	1.6
Physical education	15	109	2.6			
Physical sciences (not elsewhere listed)	5	50	1.2	2	5	1.0
Physics	13	64	1.5	7	22	4.4
Political science	16	123	3.0	6	19	3.8

TABLE 27.—*Estimated number of advanced earned degrees in continental United States and outlying territories, by degree, field, geographic area: July 1, 1946–June 30, 1948*—Continued

F. MOUNTAIN AND PACIFIC STATES—Continued

Field of specialization	First graduate degree			Second graduate degree		
	Number of institutions	Estimated number of degrees	Distribution of degrees	Number of institutions	Estimated number of degrees	Distribution of degrees
			Percent			*Percent*
Psychology	21	125	3.0	4	21	4.2
Religion	7	63	1.5	2	15	3.0
Social sciences (not elsewhere listed)	11	114	2.7	2	4	.8
Sociology	21	54	1.3	1	5	1.0
Speech and dramatic arts	12	83	2.0	3	8	1.6
Veterinary medicine	2	2	.1			
Zoology	15	55	1.3	3	4	.8
Other	4	27	.7			

G. OUTLYING TERRITORIES [1]

Total [2]		14	*Percent* 100.0			
Agriculture	1	2	14.3			
Biology	1	2	14.3			
Botany	1	1	7.1			
Economics	1	1	7.2			
Education	1	2	14.3			
English	1	2	14.3			
Foreign language, modern	1	2	14.3			
Social sciences (not elsewhere listed)	1	1	7.1			
Sociology	1	1	7.1			

H. IN INSTITUTIONS FOR NEGROES ONLY [3]

Total [2]		481	*Percent* 100.0			
Agriculture	5	15	3.1			
Biology	2	6	1.3			
Botany	1	1	.2			
Business	2	4	.8			
Chemistry	3	10	2.1			
Economics	1	1	.2			
Education	11	189	39.3			
English	6	27	5.6			
Foreign languages, modern	2	5	1.0			
History	5	23	4.8			
Home economics	6	21	4.4			
Industrial arts	3	4	.8			
Library science	1	20	4.2			
Mathematics	3	22	4.6			
Music	2	3	.6			
Physics	1	1	.2			
Political science	1	1	.2			
Psychology	1	6	1.2			
Religion	1	7	1.5			
Social sciences (not elsewhere listed)	2	104	21.6			
Sociology	5	10	2.1			
Zoology	1	1	.2			

[1] Only Hawaii and Puerto Rico have institutions offering graduate work.
[2] Fields listed are those in which degrees are being granted July 1, 1946–June 30, 1947.
[3] Included also in appropriate geographic area.

TABLE 28.—*Earned degrees granted by institutions of higher education for Negroes only in continental United States, by type of degree, and sex: 1932–44* [1]

	1944	1940	1932
Total—All degrees	5,071	5,201	2,501
Men	879	2,053	1,282
Women	4,192	3,148	1,219
Bachelors and first professional	4,939	5,056	2,472
Men	833	1,997	1,263
Women	4,106	3,059	1,209
Masters and second professional	132	145	29
Men	46	56	19
Women	86	89	10
Doctors	----------	----------	----------
Men	----------	----------	----------
Women	----------	----------	----------

[1] 12-month period ending June 30.

Source: U. S. Office of Education.

TABLE 29.—*Earned degrees granted by institutions of higher education, in continental United States, by type of degree and field: 1936–44*

12 months ending June 30	Bachelors and first professional				Masters and second professional				Doctors and third professional			
	1944	1942	1940	1936	1944 [1]	1942 [1]	1940 [1]	1936	1944 [1]	1942 [1]	1940 [1]	1936
Field												
All	125,875	185,346	186,500	143,125	13,414	24,648	26,731	18,302	2,305	3,497	3,290	2,770
Agriculture and forestry	1,252	5,577	6,226	2,907	196	578	669	436	95	159	153	94
Architecture	223	452	495	520	46	64	98	90	6			
Commerce	8,150	18,117	19,036	9,869	262	670	652	697	25	54	37	38
Education	26,499	43,132	44,905	32,359	5,108	9,721	9,578	6,521	359	425	379	305
Engineering	12,785	15,519	14,348	10,629	681	1,043	1,336	1,190	81	129	124	126
Fine arts	1,742	2,000	1,560	1,066	122	51	76	78	2			1
Home economics	6,652	7,024	5,921	3,541	145	173	200	141	2	4	5	5
Industrial arts	48	147	125	72								
Journalism	897	1,526	1,597	1,163	18	52	48	93		1	2	1
Law	1,394	5,733	7,168	7,423	43	125	340	447	24	35	35	23
Pre-law	(2)	685	751	687								
Library science	854	1,246	1,362	804	25	46	52	52		7	3	2
Music	2,519	3,202	3,037	2,034	320	553	368	211	8	6	8	13
Nursing	1,191	893	835	501	67	96	106	2				
Pharmacy	1,202	1,706	1,473	1,261	22	41	46	29	7	19	11	13
Pre-dentistry	(2)	181	98	102								
Dentistry	2,265	1,878	1,856	1,732	92	73	91	29				
Pre-medicine	(2)	2,320	2,041	1,884								
Medicine	5,678	5,601	5,490	5,504	134	194	231	169	40	35	59	53
Chemistry	3,711	4,116	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Mathematics and physical science	2,709	3,053	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Biological science	4,622	4,629	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Social science	10,750	15,679	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
English	5,799	8,428	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Modern language	2,047	2,480	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Classical language	428	656	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Theology	1,837	1,727	1,458	1,196	272	335	416	395	94	83	57	82
Veterinary medicine	670	547	499	265	5	4	3	2		1		
All other [3]	19,951	27,092	66,219	57,606	5,856	10,829	12,421	7,720	1,562	2,539	2,417	2,014

[1] Advanced degrees granted in colleges of arts and sciences are not reported by field.
[2] Break-down not available; included in "All other."
[3] Includes also degrees for which information as to fields is not available.

Source: U. S. Office of Education.

TABLE 30.—*Earned degrees granted by institutions of higher education in continental United States and outlying parts, by institutional control, geographic area, and sex: 1932–44* [1]

Year and area	Degrees granted by all institutions			Degrees granted by publically controlled institutions											
				Total degrees			Bachelors and first professional			Masters and second professional			Doctors and third professional		
	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women
1944															
Continental United States and outlying parts	142,377	63,801	78,576	69,841	28,199	41,642	63,459	24,879	38,580	5,430	2,505	2,925	952	815	137
Continental United States	141,594	63,467	78,127	69,121	27,892	41,229	62,752	24,580	38,172	5,417	2,497	2,920	952	815	137
New England and Middle Atlantic	43,956	21,126	22,830	11,349	3,654	7,695	10,915	3,447	7,468	394	169	225	40	38	2
North Central	45,003	20,902	24,101	25,430	11,688	13,742	21,933	9,777	12,156	2,814	1,334	1,480	683	577	106
South Atlantic	18,056	7,587	10,469	10,048	4,109	5,939	9,523	3,811	5,712	461	243	218	64	55	5
South Central	19,156	6,909	12,247	12,254	4,174	8,080	11,265	3,819	7,446	960	331	629	29	24	9
West	15,423	6,943	8,480	10,040	4,267	5,773	9,116	3,726	5,390	788	420	368	136	121	15
Outlying areas	783	334	449	720	307	413	707	299	408	13	8	5	-------	-------	-------
1940															
Continental United States and outlying parts	218,262	130,015	88,247	111,720	64,319	47,401	98,139	54,716	43,423	12,214	8,359	3,855	1,367	1,244	123
Continental United States	216,521	128,915	87,606	110,176	63,390	46,786	96,652	53,829	42,823	12,157	8,317	3,840	1,367	1,244	123
New England and Middle Atlantic	64,973	40,402	24,571	15,309	7,985	7,324	14,096	7,153	6,943	1,160	782	378	53	50	3
North Central	68,224	42,056	26,168	41,133	25,746	15,387	34,029	20,595	13,434	6,161	4,299	1,862	943	852	91
South Atlantic	24,442	13,451	10,991	12,652	6,723	5,929	11,755	6,048	5,707	808	592	216	89	83	6
South Central	33,231	17,382	15,849	23,341	12,280	11,061	20,951	10,774	10,177	2,306	1,429	877	84	77	7
West	25,651	15,624	10,027	17,741	10,656	7,085	15,821	9,259	6,562	1,722	1,215	507	198	182	16
Outlying areas	1,741	1,100	641	1,544	929	615	1,487	887	600	57	42	15	-------	-------	-------
1932															
Continental United States and outlying parts	160,714			71,996			63,267	35,310	27,957	7,767			962		
Continental United States	160,302			71,584			62,875	35,088	27,787	7,747			962		
New England and Middle Atlantic	53,369			8,216			7,656	3,974	3,682	546			14		
North Central	53,022	(2)	(2)	31,282	(2)	(2)	26,089	15,323	10,766	4,518	(2)	(2)	675	(2)	(2)
South Atlantic	17,111			8,245			7,628	4,720	2,908	575			42		
South Central	18,560			11,661			10,677	5,554	5,123	955			29		
West	18,240			12,180			10,825	5,517	5,308	1,153			202		
Outlying areas	412			412			392	222	170	20			-------		

TABLE 30.—*Earned degrees granted by institutions of higher education in continental United States and outlying areas, by institutional control, geographic area, and sex: 1932–44*—Continued

Year and area	Degrees granted by privately controlled institutions											
	Total degrees			Bachelors and first professional			Masters and second professional			Doctors and third professional		
	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women
1944												
Continental United States and outlying parts	72,536	35,602	36,934	63,186	31,323	31,863	7,997	3,214	4,783	1,353	1,065	288
Continental United States	72,473	35,575	36,898	63,123	31,296	31,827	7,997	3,214	4,783	1,353	1,065	288
New England and Middle Atlantic	32,607	17,472	15,135	27,082	14,961	12,121	4,654	1,831	2,823	871	680	191
North Central	19,573	9,214	10,359	17,683	8,467	9,216	1,694	594	1,100	196	153	43
South Atlantic	8,008	3,478	4,530	7,199	3,001	4,198	660	359	301	149	118	31
South Central	6,902	2,735	4,167	6,382	2,550	3,832	462	136	326	58	49	9
West	5,383	2,676	2,707	4,777	2,317	2,460	527	294	233	79	65	14
Outlying areas	63	27	36	63	27	36						
1940												
Continental United States and outlying parts	106,542	65,696	40,846	90,044	55,887	34,157	14,575	8,192	6,383	1,923	1,617	306
Continental United States	106,345	65,525	40,820	89,848	55,717	34,131	14,574	8,191	6,383	1,923	1,617	306
New England and Middle Atlantic	49,664	32,417	17,247	39,385	26,338	13,047	9,005	5,009	3,996	1,274	1,070	204
North Central	27,091	16,310	10,781	24,352	14,746	9,606	2,447	1,321	1,126	292	243	49
South Atlantic	11,790	6,728	5,062	10,544	5,903	4,641	1,075	683	392	171	142	29
South Central	9,890	5,102	4,788	8,810	4,526	4,284	1,017	525	492	63	51	12
West	7,910	4,968	2,942	6,757	4,204	2,553	1,030	653	377	123	111	12
Outlying areas	197	171	26	196	170	26	1	1				
1932												
Continental United States and outlying parts	88,718			75,188	48,183	27,005	11,592			1,938		
Continental United States	88,718			75,188	48,183	27,005	11,592			1,938		
New England and Middle Atlantic	45,153			36,195	25,051	11,144	7,655			1,303		
North Central	21,740	[2]	[2]	19,952	12,191	7,761	1,493	[2]	[2]	295	[2]	[2]
South Atlantic	8,866			7,898	4,523	3,375	752			216		
South Central	6,899			6,150	3,231	2,919	717			32		
West	6,060			4,993	3,187	1,806	975			92		
Outlying areas												

[1] 12-month period ending June 30.
[2] Not available.
Source: U. S. Office of Education.

SECTION VI

Faculty of Higher Education

TABLE 31.—*Faculty*[1] *in institutions of higher education in continental United States and outlying parts, by institutional control: 1900–44*[2]

Year (12 months ending June 30)	Continental United States and Outlying Parts	Continental United States			Outlying parts		
		Total	Publicly controlled	Privately controlled	Total	Publicly controlled	Privately controlled
1944	135,252	134,451	65,069	69,382	801	777	24
1942	134,946	134,137	65,477	68,660	809	781	28
1940	133,153	131,552	62,305	69,247	1,601	1,428	173
1938	125,013	123,677	58,490	65,187	1,336	1,197	139
1936	111,554	110,225	51,148	59,077	1,329	1,246	83
1934	100,436	99,935	46,169	53,766	501	501	
1932	101,189	100,789	48,449	52,340	400	272	128
1930	83,045	82,386	60,062	22,324	659	501	158
1920	48,770	48,615	(3)	(3)	155	(3)	(3)
1910	(3)	36,480	(3)	(3)	(3)	(3)	(3)
1900	(3)	23,868	(3)	(3)	(3)	(3)	(3)

[1] Includes instructional and administrative personnel for regular session; does not include summer session.
[2] Data reported for 1900, 1910, and 1920 are total numbers; data for all other years are total numbers reduced to full-time basis, i. e., full-time equivalents.
[3] Not available.

Source: U. S. Office of Education.

TABLE 32.—*Faculty*[1] *in institutions of higher education, continental United States and outlying parts, by type of institution,*[2] *institutional control, and sex: 1932–40*[3]

	1940			1936			1932		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
Continental United States and outlying parts	133,153	95,753	37,400	111,554	79,296	32,258	101,189	71,952	29,237
Colleges and universities	67,914	55,666	12,248	56,829	46,940	9,889	52,500	43,404	9,096
Arts and sciences	24,380	14,453	9,927	20,642	11,962	8,680	18,962	11,135	7,827
Professional and technical	15,485	12,810	2,675	12,290	10,090	2,200	9,523	8,303	1,220
Teachers and normal	11,740	5,343	6,397	11,194	4,593	6,601	11,272	4,375	6,897
Junior	9,704	5,143	4,561	7,450	3,821	3,629	6,331	3,230	3,101
Negro	3,930	2,338	1,592	3,149	1,890	1,259	2,601	1,505	1,096
PUBLICLY CONTROLLED									
Continental United States and outlying parts	63,733	45,045	18,688	52,394	36,041	16,353	48,849	32,751	16,098
Colleges and universities	37,463	29,465	7,998	30,089	23,671	6,418	27,364	21,413	5,951
Arts and sciences	2,131	1,002	1,129	1,532	617	915	1,898	903	995
Professional and technical	6,610	5,396	1,214	5,408	4,431	977	4,800	3,893	907
Teachers and normal	10,793	5,024	5,769	10,376	4,335	6,041	10,506	4,084	6,422
Junior	5,038	3,178	1,860	3,717	2,269	1,448	3,151	1,837	1,314
Negro	1,698	980	718	1,272	718	554	1,130	621	509
PRIVATELY CONTROLLED									
Continental United States and outlying parts	69,420	50,708	18,712	59,160	43,255	15,905	52,340	39,201	13,139
Colleges and universities	30,451	26,201	4,250	26,740	23,269	3,471	25,136	21,991	3,145
Arts and sciences	22,249	13,451	8,798	19,110	11,345	7,765	17,064	10,232	6,832
Professional and technical	8,875	7,414	1,461	6,882	5,659	1,223	4,723	4,410	313
Teachers and normal	947	319	628	818	258	560	766	291	475
Junior	4,666	1,965	2,701	3,733	1,552	2,181	3,180	1,393	1,787
Negro	2,232	1,358	874	1,877	1,172	705	1,471	884	587

[1] Faculty includes instructional and administrative personnel reduced to full-time basis.
[2] Information for any type of institution is reported in the appropriate category only; types of institutions are mutually exclusive. "Colleges and universities" are institutions of complex organization. "Arts and sciences" are institutions offering liberal arts 4-year degrees. "Professional and technical" institutions are those independently controlled. "Negro" includes institutions of all types for Negroes only. "Junior Colleges" are nondegree-granting institutions of higher education not elsewhere classified.
[3] 12 months ending June 30 of the year specified.

Source: U. S. Office of Education.

TABLE 34.—*Faculty*[1] *in institutions of higher education in continental United States and outlying parts, by institutional control, geographic area, and sex: 1900–1940*[2]

	All institutions			Publicly controlled			Privately controlled		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
1940									
Continental United States and outlying parts	133,153	95,753	37,400	63,733	45,045	18,688	69,420	50,708	18,712
Continental United States	131,552	94,536	37,016	62,305	43,971	18,334	69,247	50,565	18,682
New England and Mid-Atlantic	38,504	29,577	8,927	7,846	4,988	2,858	30,658	24,589	6,069
North Central	39,319	28,039	11,280	21,176	15,393	5,783	18,143	12,646	5,497
South Atlantic	17,041	11,626	5,415	9,025	6,501	2,524	8,016	5,125	2,891
South Central	19,410	12,831	6,579	12,764	8,688	4,076	6,646	4,143	2,503
West	17,278	12,463	4,815	11,494	8,401	3,093	5,784	4,062	1,722
Outlying parts	1,601	1,217	384	1,428	1,074	354	173	143	30
1936									
Continental United States and outlying parts	111,554	79,296	32,258	52,394	36,041	16,353	59,160	43,255	15,905
Continental United States	110,225	78,316	31,909	51,148	35,125	16,023	59,077	43,191	15,886
New England and Mid-Atlantic	33,199	25,273	7,926	6,768	4,024	2,744	26,431	21,249	5,182
North Central	32,969	23,056	9,913	17,680	12,531	5,149	15,289	10,525	4,764
South Atlantic	14,545	9,842	4,703	7,318	5,066	2,252	7,227	4,776	2,451
South Central	15,323	9,862	5,461	9,837	6,544	3,293	5,486	3,318	2,168
West	14,189	10,283	3,906	9,545	6,960	2,585	4,644	3,323	1,321
Outlying parts	1,329	980	349	1,246	916	330	83	64	19
1930									
Continental United States and outlying parts	83,045	60,563	22,482	36,101	24,536	11,565	46,944	36,031	10,913
Continental United States	82,386	60,062	22,324	35,460	24,051	11,409	46,926	36,015	10,911
New England and Mid-Atlantic	25,692	20,102	5,590	5,064	2,879	2,185	20,628	17,227	3,401
North Central	26,584	18,955	7,629	13,895	9,712	4,183	12,689	9,243	3,446
South Atlantic	9,717	6,910	2,807	4,379	3,260	1,119	5,338	3,650	1,688
South Central	10,280	6,740	3,540	5,673	3,704	1,969	4,607	3,036	1,571
West	10,113	7,355	2,758	6,449	4,496	1,953	3,664	2,859	805
Outlying parts	659	501	158	641	485	156	18	16	2

ALL INSTITUTIONS, 1900–1920[3]

	1920[3]			1910[4]	1900[4]
	Total	Men	Women		
Continental United States and outlying parts	48,770	35,799	12,971	.....	.....
Continental United States	48,615	35,731	12,884	36,480	23,868
New England and Mid-Atlantic	15,314	12,154	3,160	11,424	6,679
North Central	16,529	11,667	4,862	13,096	8,866
South Atlantic	6,076	4,375	1,701	4,401	3,078
South Central	5,591	3,646	1,945	4,570	3,115
West	5,105	3,889	1,216	2,989	2,150
Outlying parts	155	68	87	(5)	(5)

[1] Includes instructional and administrative personnel. Data reported for 1900, 1910, and 1920 are total numbers; data for all other years are total numbers reduced to full-time basis; i. e., full-time equivalents.
[2] 12 months ending June 30 of year specified.
[3] Detail by institutional control not available.
[4] Detail by institutional control and by sex not available.
[5] Data for outlying parts not available.

Source: U. S. Office of Education.

TABLE 35.—*Percentage of teaching staff holding earned doctorates [1], December 1, 1945 305 institutions of higher education ranked and ranks converted to percentiles [2]*

Institutions ranked by percentiles	Percent of staff	Institutions ranked by percentiles	Percent of staff	Institutions ranked by percentiles	Percent of staff
100	73.33	66	41.04	32	26.48
99	69.92	65	40.61	31	25.96
98	64.92	64	40.17	30	25.43
97	62.38	63	39.75	29	24.92
96	59.90	62	39.34	28	24.44
95	58.38	61	38.92	27	23.96
94	56.85	60	38.51	26	23.49
93	55.32	59	38.10	25	23.01
92	54.54	58	37.69	24	22.53
91	53.96	57	37.28	23	22.06
90	53.37	56	36.86	22	21.58
89	52.78	55	36.45	21	21.10
88	52.19	54	36.04	20	20.62
87	51.61	53	35.63	19	20.15
86	51.02	52	35.22	18	19.38
85	50.43	51	34.81	17	18.48
84	49.86	50	34.42	16	17.59
83	49.31	49	34.03	15	16.69
82	48.77	48	33.64	14	15.79
81	48.22	47	33.25	13	14.84
80	47.68	46	32.86	12	13.45
79	47.13	45	32.47	11	12.07
78	46.59	44	32.08	10	10.68
77	46.04	43	31.69	9	9.22
76	45.50	42	31.30	8	7.70
75	44.97	41	30.90	7	6.18
74	44.53	40	30.51	6	----------
73	44.10	39	30.12	5	----------
72	43.66	38	29.64	4	----------
71	43.22	37	29.11	3	----------
70	42.79	36	28.59	2	----------
69	42.35	35	28.06	1	----------
68	41.92	34	27.54	0	----------
67	41.48	33	27.01		

[1] Includes teachers in fields where the normal objective of an individual's training is the earned doctorate. Excludes fields of dentistry, engineering, fine arts, law, medicine, music, nursing, and pharmacy.

[2] Table to be read as follows: "100 percent of the institutions had 73.33 percent or less of teaching staff with earned doctorates", "25 percent of the institutions had 23.01 percent or less of teaching staff with earned doctorates."

Source: North Central Association of Colleges and Secondary Schools, study of member institutions.
NOTE.—Data used in preparing chart 2, vol. IV of Report of the President's Commission on Higher Education.

TABLE 36.—*Resident enrollment and total faculty, institutions of higher education in continental United States: 1910–60*

Year ending June 30—	Resident enrollment (to nearest 1,000) [1]	Total faculty (to nearest 100) [2]	Average number of students per faculty member
1910	355,000	36,500	9.7
1916	441,000	43,600	10.1
1920	598,000	48,600	12.3
1926	1,037,000	73,700	14.1
1930	1,101,000	82,400	13.4
1936	1,208,000	110,200	11.0
1940	1,494,000	131,600	11.4
1947	2,354,000	155,000	15.2
Goals of President's Commission on Higher Education for:			
1952	3,885,000	300,000	13.0
1960	4,600,000	350,000	13.1

[1] Excludes: (*a*) enrollment in summer sessions, (*b*) nonresident collegiate enrollments in correspondence and extension work, and (*c*) enrollment in nurse-training institutions not affiliated with colleges and universities; excludes duplicates.

[2] Data reported for 1910 and 1920 are total numbers; data for all other years are total numbers reduced to full-time basis, i. e., full-time equivalents.

Source: Data for 1910–40, and 1947 enrollment from U. S. Office of Education.
NOTE.—Data used in preparing chart 1, vol. IV of Report of the President's Commission on Higher Education.

TABLE 37.—*Median annual salary of instructional staff,*[1] *on a 9-month basis as of December 1, 1945, 257 institutions of higher education ranked, and ranks converted to percentiles* [2]

Institutions ranked by percentile	Median annual instructional salary (9-month basis)	Institutions ranked by percentile	Median annual instructional salary (9-month basis)	Institutions ranked by percentile	Median annual instructional salary (9-month basis)
100	$4,200	66	$2,923	32	$2,424
99	4,137	65	2,907	31	2,410
98	4,034	64	2,891	30	2,392
97	3,786	63	2,875	29	2,371
96	3,734	62	2,858	28	2,350
95	3,683	61	2,842	27	2,328
94	3,632	60	2,826	26	2,307
93	3,560	59	2,810	25	2,285
92	3,458	58	2,795	24	2,264
91	3,386	57	2,781	23	2,243
90	3,356	56	2,767	22	2,221
89	3,326	55	2,753	21	2,200
88	3,296	54	2,739	20	2,180
87	3,266	53	2,726	19	2,159
86	3,236	52	2,712	18	2,138
85	3,205	51	2,698	17	2,118
84	3,188	50	2,684	16	2,097
83	3,174	49	2,670	15	2,076
82	3,160	48	2,656	14	2,056
81	3,146	47	2,642	13	2,035
80	3,131	46	2,628	12	2,015
79	3,117	45	2,614	11	1,994
78	3,103	44	2,600	10	1,970
77	3,088	43	2,586	9	1,947
76	3,074	42	2,571	8	1,924
75	3,060	41	2,556	7	1,900
74	3,046	40	2,542	6	1,877
73	3,031	39	2,527	5	1,853
72	3,017	38	2,512	4	1,830
71	3,003	37	2,498	3	1,806
70	2,987	36	2,483	2	1,676
69	2,971	35	2,468	1	1,457
68	2,955	34	2,454	0	1,310
67	2,939	33	2,439		

[1] Limited to full-time appointees.
[2] Table to be read as follows: "100 percent of the institutions had median instructional salaries, on a 9-month basis, of $4,200 per year or less." "25 percent of the institutions had median instructional salaries, on a 9-month basis, of $2,285 per year or less.

Source: North Central Association of Colleges and Secondary Schools, study of member institutions.
NOTE.—Data used in preparing chart 4, vol. IV of Report of the President's Commission on Higher Education

TABLE 38.—*Median annual salaries in 51 land-grant institutions by academic rank (9-month basis): 1929–42*

Academic year (ending in June)	Professors	Associate professors	Assistant professors	Instructors
	Median annual salaries (9 months basis)			
1929	$4,278	$3,342	$2,738	$2,047
1930	4,457	3,349	2,818	2,060
1931	4,513	3,362	2,837	2,066
1935	3,775	2,903	2,449	1,769
1936	3,951	2,973	2,486	1,792
1937	4,166	3,144	2,556	1,842
1938	4,163	3,189	2,592	1,892
1940	4,245	3,272	2,605	1,937
1942	4,302	3,324	2,645	1,862

Source: U. S. Office of Education.
NOTE.—Data used in preparing chart 5, vol. IV of Report of the President's Commission on Higher Education.

TABLE 39.—*Ratio of equivalent number of full-time students to the equivalent number of full-time teaching staff members, December 1, 1945, 289 institutions of higher education ranked, and ranks converted to percentiles* [1]

Institutions ranked by percentile	Students per teacher	Institutions ranked by percentile	Students per teacher	Institutions ranked by percentile	Students per teacher
100	3.8	66	10.6	32	14.2
99	4.4	65	10.7	31	14.4
98	5.1	64	10.8	30	14.5
97	5.7	63	10.9	29	14.7
96	6.1	62	11.0	28	14.8
95	6.3	61	11 2	27	15.0
94	6.5	60	11.3	26	15.2
93	6.7	59	11.4	25	15.3
92	6.9	58	11.5	24	15.5
91	7.1	57	11.6	23	15.6
90	7.3	56	11.7	22	15.8
89	7.5	55	11.8	21	16.0
88	7.7	54	11.9	20	16.2
87	7.9	53	12.0	19	16.4
86	8.1	52	12.1	18	16.6
85	8.2	51	12.2	17	16.8
84	8.3	50	12.3	16	17.1
83	8.5	49	12.4	15	17.3
82	8.6	48	12.5	14	17.5
81	8.7	47	12.6	13	17.7
80	8 9	46	12.7	12	17.9
79	9.0	45	12.8	11	18.4
78	9.2	44	12.9	10	18.8
77	9.3	43	13.0	9	19.3
76	9.4	42	13.1	8	19.8
75	9.6	41	13.2	7	20.6
74	9.7	40	13.3	6	21.6
73	9 9	39	13.4	5	22.6
72	10.0	38	13.5	4	23.8
71	10.1	37	13.6	3	24.9
70	10.2	36	13.7	2	26.2
69	10.3	35	13.8	1	31.1
68	10.4	34	13.9	0	47.6
67	10.5	33	14.0		

[1] Table to be read as follows: "100 percent of the institutions had 3.8 students per teacher or more", "25 percent of the institutions had 15.3 students per teacher or more."

Source: North Central Association of Colleges and Secondary Schools, study of member institutions.

NOTE.—Data used in preparing chart 3, vol. IV, Report of the President's Commission on Higher Education.

TABLE 40.—*Study of faculty characteristics and opinions*

A. INSTITUTIONS PARTICIPATING IN STUDY, BY TYPE

State Universities

University of Kentucky, Lexington, Ky.
Indiana University, Bloomington, Ind.
West Virginia University, Morgantown, W. Va.

Land-Grant Colleges

Michigan State College, E. Lansing, Mich.
Pennsylvania State College, State College, Pa.
State University of Iowa, Iowa City, Iowa.

Municipal Colleges

University of Cincinnati, Cincinnati, Ohio.
Wayne University, Detroit, Mich.
University of Pittsburgh, Pittsburgh, Pa.

Liberal Arts Colleges

Oberlin College, Oberlin, Ohio.
Wabash College, Crawfordsville, Ind.
Grove City College, Grove City, Pa.
Augustana College, Rock Island, Ill.
University of Miami, Coral Gables, Fla.

Technical School

Case School of Applied Science, Cleveland, Ohio

Teachers Colleges

Ball State Teachers College, Muncie, Ind.
Michigan State Normal College, Ypsilanti, Mich.
State Teachers College, Indiana, Pa.

Junior Colleges

Junior College of Connecticut, Bridgeport, Conn.
Wright Junior College, Chicago, Ill.
Grand Rapids Junior College, Grand Rapids, Mich.
Fairleigh-Dickenson Junior College, Rutherford, N. J.
Grove City College, Grove City, Pa.

Negro Colleges

Lincoln University, Lincoln University, Pa.
Miner Teachers College, Washington, D. C.

Women's Colleges

Pennsylvania College for Women, Pittsburgh, Pa.
Vassar College, Poughkeepsie, N. Y.

Men's Colleges

Franklin and Marshall College, Lancaster, Pa.
Princeton University, Princeton, N. J.

Source: Study made by American Council of Learned Societies, American Council on Education, National Research Council, Social Science Research Council.

B. DISTRIBUTION OF FACULTY PARTICIPATING IN SURVEY, BY RANK

[10 percent, systematic sample of full-time teaching personnel]

Rank	Number	Percent of sample
Full professor	155	23.20
Associate professor	131	19.61
Assistant professor	161	24.10
Instructor	205	30.69
Lecturer	2	.30
Other or unspecified	14	2.10
Total	668	100.00

C. PERCENT DISTRIBUTION OF FACULTY, BY SALARY,[1] AND AGE

Age	Average salary	Under $1,750	$1,750–$2,499	$2,500–$3,499	$3,500–$4,999	$5,000–$7,499	$7,500 and over	All salaries
All ages	$3,867	1.05	17.37	44.27	28.40	8.00	0.91	100.00
Under 25 years	2,250	.45	3.18	1.66	------	------	------	5.29
25 to 34 years	3,126	.15	3.47	17.83	8.31	.45	------	30.21
35 to 49 years	4,219	.45	10.27	20.85	9.21	.45	------	41.24
50 years and over	4,601	------	.45	3.93	10.88	7.10	.91	23.26
Average age, years	------	23.8	28.5	35.3	43.9	48.4	51.0	40.5

[1] Salary or salary equivalent on a 9-month basis. Rank and salary showed a high positive correlation, as did all other characteristics with salary.

D. PERCENT DISTRIBUTION OF FACULTY, BY SALARY,[1] AND BY SEX

Sex	Average salary	Under $1,750	$1,750–$3,499	$2,500–$3,499	$3,500–$4,999	$5,000–$7,499	$7,500 and over	All salaries
Men	$4,052	0.5	2.9	25.6	34.9	15.8	1.3	81.0
Women	3,099	.2	4.7	8.1	5.3	.7	------	19.0
Total	------	------	------	------	------	------	------	100.0

[1] See table 40 C.

TABLE 40.—*Study of faculty characteristics and opinions*—Continued

E. PERCENT DISTRIBUTION OF FACULTY, BY SALARY,[1] AND HIGHEST EARNED DEGREE [2]

Highest earned degree	Average salary	Under $1,750	$1,750–$2,499	$2,500–$3,499	$3,500–$4,999	$5,000–$7,499	$7,500 and over	All salaries
Second graduate or professional degree	$4,547	----	0.6	7.2	23.0	14.1	1.1	46.0
First graduate or professional degree	3,403	----	3.0	20.3	14.9	2.3	----	40.5
Bachelor's degree	2,968	0.6	3.9	6.2	2.2	.1	.3	13.3
No degree	4,325	----	----	.1	----	.1	----	.2
Total	----	----	----	----	----	----	----	100.0

[1] See table 40 C.

[2] Second graduate or professional degree includes Ph. D's, and professional degrees based on 2 or more years of study beyond bachelor's. First graduate or professional degree includes master's and professional degrees based on 1 or more years of study beyond bachelor's.

F. PERCENT DISTRIBUTION AND AVERAGE SALARY [1] OF FACULTY BY COLLEGIATE TEACHING EXPERIENCE

Collegiate teaching experience	Percent of total	Average salary
Under 2 years	14.1	$2,703
2 to 5 years	20.5	3,205
5 to 10 years	16.8	3,743
10 to 20 years	23.1	4,323
20 years and over	25.5	4,733

[1] See table 40 C.

G. AVERAGE YEARS OF TEACHING EXPERIENCE OF FACULTY, BY LEVEL OF EXPERIENCE

Level of experience	Average years of experience
Collegiate	11.8
Secondary school	2.1
Elementary school	.4
Total	14.3

H. AVERAGE SALARY [1] AND DISTRIBUTION OF FACULTY, BY NUMBER OF YEARS [2] IN INSTITUTION (TO JUNE 30, 1947)

Number of years in institution	Average salary	Percent
1½ years or less	$3,083	33
Over 1½ to 5 years	3,631	16
5 to 10 years	4,081	15
10 to 20 years	4,510	18
20 years and over	4,643	18

[1] See table 40 C.

[2] Exclusive of leaves of absence.

TABLE 40.—*Study of faculty characteristics and opinions*—Continued

K. DISTRIBUTION,[1] OF FACULTY RESPONSES TO QUESTIONS ON ATTITUDES TOWARD THE TEACHING PROFESSION AND OPINIONS ABOUT THEIR JOBS, BY SALARY

1. How would you rate the opportunities your institution offers faculty members of ability?

Opinion	Distribution of responses						
	All salaries	Under $1,750	$1,750–$2,499	$2,500–$3,499	$3,500–$4,999	$5,000–$7,499	$7,500 and over
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Excellent	22.7	------	0.9	5.3	10.5	5.7	0.3
Fairly good	61.1	0.5	4.2	21.1	24.4	10.1	.8
Poor	13.8	.2	1.1	5.8	5.7	.9	.1
Very poor	2.4	------	.2	1.3	.3	.5	.1
Total	100.0						

2. Do you consider that your present assignment in your institution is as important as any other assignment you might have been given?

As important as any other assignment I might have	70.7	0.5	4.6	22.9	28.4	13.1	1.2
Fairly important, but I could be doing somewhat more important work	26.4	.2	2.0	10.1	10.4	3.7	------
I could be doing much more important work in a different assignment	2.9	------	.1	1.1	1.2	.3	.2
Total	100.0						

3. Do you consider that your present work in your institution is as important as any other type of work outside your institution?

It is as important as any other type of work I might engage in	75.8	0.5	5.5	25.9	29.7	13.0	1.2
It is fairly important, but I could be doing more important work elsewhere	19.8	.2	1.1	6.4	8.7	3.2	.2
I could be doing much more important work elsewhere	4.4	------	.3	1.8	1.7	.6	------
Total	100.0						

4. How do you rate college and university teaching with reference to freedom of expression?

I feel that teachers in colleges and universities are unfairly restricted in expressing themselves	5.8	0.2	0.3	2.0	1.8	1.5	------
College faculties are restricted on some matters, but, by and large, freedom of expression is not restricted	36.2	.2	3.1	13.0	14.9	4.8	0.2
I doubt that faculty members are more restricted than anyone else	28.9	.2	1.5	10.1	11.5	5.2	.4
In my opinion, opportunities for self-expression are greater in college teaching than in many other types of professions	29.1	.2	2.1	8.7	11.8	5.5	.8
Total	100.0						

5. If you have the opportunity, do you think you will stay in your present institution?

Yes, I am almost certain I will	45.0	------	2.1	11.9	20.8	9.3	0.9
Yes, I probably will, but I'm not sure	35.5	------	1.8	13.3	14.4	5.7	.3
I may, but I probably won't	11.8	0.3	2.1	4.9	3.1	1.4	------
No, I'm almost sure I won't	7.7	.2	1.4	3.7	1.7	.5	.2
Total	100.0						

6. Do you think you will stay in higher education?

Yes, I am almost certain I will	71.2	0.1	4.1	22.3	30.2	13.6	0.9
Yes, I probably will, but I'm not sure	20.8	.1	1.4	7.9	7.9	3.0	.5
I may, but I probably won't	4.5	.1	1.1	2.0	1.1	.2	------
No, I'm almost sure I won't	3.5	.1	1.1	1.7	.6	------	------
Total	100.0						

[1] See table 40c.

TABLE 41.—*Ranking of occupations*

[Number of interviews: 2,920]

Occupation	Rank
U. S. Supreme Court justice	1
Physician	2
State governor	2
Cabinet member in the Federal Government	4
Diplomat in the U. S. Foreign Service	4
Mayor of a large city	6
College professor	7
Scientist	7
United States representative in Congress	7
Banker	10
Government scientist	10
County judge	12
Head of a department in a State government	12
Minister	12
Architect	15
Chemist	15
Dentist	15
Lawyer	15
Member of the board of directors of a large corporation	15
Nuclear physicist	15
Priest	15
Psychologist	22
Civil engineer	23
Airline pilot	24
Artist who paints pictures that are exhibited in galleries	24
Owner of factory that employs about 100 people	26
Sociologist	26
Accountant for a large business	28
Biologist	28
Musician in a symphony orchestra	28
Author of novels	31
Captain in the Regular Army	31
Building contractor	33
Economist	33
Instructor in the public schools	33
Public school teacher	36
County agricultural agent	37
Railroad engineer	37
Farm owner and operator	39
Official of an international labor union	40
Radio announcer	40
Newspaper columnist	42
Owner-operator of a printing shop	42
Electrician	44
Trained machinist	44
Welfare worker for a city government	44
Undertaker	47
Reporter on a daily newspaper	48
Manager of a small store in a city	49
Bookkeeper	50
Insurance agent	50
Tenant farmer—one who owns livestock and machinery and manages the farm	50
Traveling salesman for a wholesale concern	50
Playground director	54
Policeman	54
Railroad conductor	54
Mail carrier	57
Carpenter	58
Automobile repairman	59
Plumber	59
Garage mechanic	61
Local official of a labor union	61
Owner-operator of lunch stand	61
Corporal in the Regular Army	64
Machine operator in a factory	64
Barber	66
Clerk in a store	67
Fisherman who owns his own boat	67
Streetcar motorman	67
Milk route man	70
Restaurant cook	70
Truck driver	70
Lumberjack	73
Filling station attendant	74
Singer in a night club	74
Farm hand	76
Coal miner	77
Taxi driver	77
Railroad section hand	79
Restaurant waiter	79
Dock worker	81
Night watchman	81
Clothes presser in a laundry	83
Soda fountain clerk	84
Bartender	85
Janitor	85
Share cropper—one who owns no livestock or equipment and does not manage farm	87
Garbage collector	88
Street sweeper	89
Shoe shiner	90

Source: National Opinion Research Center, University of Denver.

SECTION VII

Finance of Higher Education

TABLE 42.—*Index of changes in resident enrollment and educational expenditures of institutions of higher education in continental United States: 1932–47*

Year (12 months ending June 30)	Resident enrollment [1]	Educational (and general) expenditures [2]
	1932=100	
1932	100	100
1934	91	88
1936	105	100
1938	117	113
1940	129	124
1947	204	182

[1] See table 19 for definition of resident enrollment.
[2] See table 45 for definition of educational and general expenditures.

Source: U. S. Office of Education.
NOTE.—Data used in preparing chart 2, vol. V of Report of the President's Commission on Higher Education.

TABLE 43.—*Percentage distribution of income for current educational purposes, by source, and institutional control: 12 months ending June 30, 1940*

Source	All institutions	Privately controlled institutions	Publicly controlled institutions
	Percent	*Percent*	*Percent*
Total	100.0	100.0	100.0
Philanthropy	19.9	36.2	4.1
Endowment earnings	12.7	23.4	2.3
Private gifts and grants	7.2	12.8	1.8
Student fees	35.7	52.9	19.1
Public sources	36.6	3.7	68.3
Local	4.3	.1	8.4
State	26.9	2.8	50.0
Federal	5.4	.8	9.9
Miscellaneous	7.8	7.2	8.5
Sales and services of organized activities	5.8	4.5	7.1
Other	2.0	2.7	1.4

Source: U. S. Office of Education.
NOTE.—Data used in preparing chart 5, vol. V of Report of the President's Commission on Higher Education.

TABLE 44.—*Educational and general expenditures,[1] institutions of higher education, continental United States and outlying parts, by type of institution,[2] and institutional control: 12 months ending June 30, 1940*

	Total all institutions	Publicly controlled						Privately controlled					
		Colleges and universities	Arts and sciences	Professional and technical	Teachers and normal	Negro	Junior colleges	Colleges and universities	Arts and sciences	Professional and technical	Teachers and normal	Negro	Junior colleges
Continental United States and outlying parts	$526,020,833	$175,639,130	$7,645,660	$29,934,214	$40,143,190	$4,714,785	$15,182,640	$126,627,522	$77,514,600	$29,125,680	$2,385,790	$6,292,693	$10,814,929
Continental United States	521,989,757	171,946,525	7,497,417	29,934,214	40,143,190	4,714,785	15,144,842	126,627,522	77,470,585	29,017,265	2,385,790	6,292,693	10,814,929
Alabama	6,694,831	3,654,842	387,658		607,074	272,229			774,260	43,611		736,635	218,522
Arizona	2,187,452	1,374,227			655,981		157,244						
Arkansas	3,503,098	1,773,692	235,104	118,926	286,788	175,466	259,920		543,882	36,387		46,063	26,870
California	33,984,592	12,330,458		273,233	2,590,847		7,129,674	5,691,359	3,159,403	2,230,626			578,992
Colorado	5,762,180	2,977,743		359,872	809,946		222,319	670,943	538,844	58,564			123,949
Columbia, District of	4,740,739				175,118	174,836		2,246,678	704,202	111,492		1,002,930	325,483
Connecticut	10,857,525	1,112,361			651,622			6,788,990	1,775,517	265,411	59,399		204,225
Delaware	814,938	725,035				80,852				9,051			
Florida	4,261,153	2,039,778	589,079			263,231	18,635		1,150,333			146,869	53,228
Georgia	7,143,963	1,963,641	427,021	909,902	159,529	225,386	470,362	699,997	1,280,989	153,437		662,862	190,837
Idaho	1,976,348	1,234,174			243,150		307,461		143,632				47,931
Illinois	34,498,769	8,491,662			2,751,293		1,147,702	13,619,291	4,315,606	3,143,856	459,027		570,332
Indiana	14,485,120	8,153,354		12,651	1,172,575		20,150	2,182,342	2,432,035	314,794	118,739		78,480
Iowa	13,083,309	4,872,785		4,052,630	821,286		333,736	332,717	2,310,524	71,059			288,572
Kansas	7,969,601	2,048,433	674,296	2,378,203	866,547	36,947	366,068		1,418,199	35,373			145,535
Kentucky	6,640,808	3,444,536			1,342,516	154,308	28,138		980,646	235,509	134,974		320,181
Louisiana	8,860,266	4,320,565	160,460	988,840	468,410	361,412		1,761,294	373,130			318,641	107,514
Maine	2,956,978	1,398,795			284,939				1,084,320	37,646			151,278
Maryland	8,212,307	2,763,585			320,638	268,951	24,182	2,675,181	1,655,401	302,810			201,559
Massachusetts	30,055,115			1,700,537	1,289,351			13,976,885	7,634,244	4,636,582	142,575		674,941
Michigan	20,718,460	15,067,162		355,093	2,122,032		452,002	836,075	1,625,016	197,922			63,158
Minnesota	12,983,591	8,535,200			1,177,887		536,550		2,579,969	50,007	67,943		36,035
Mississippi	4,495,441	2,434,956	257,807		320,735	160,969	615,791		400,629			135,455	169,099
Missouri	13,264,258	3,964,848			1,664,045	417,115	344,587	3,427,144	1,376,597	585,607			1,484,315
Montana	2,063,224	468,115		1,143,684	168,746		72,975		158,801		35,853		15,050
Nebraska	5,011,489	3,612,781			625,193		34,852		627,875	25,485	34,237		51,066

Nevada	538,546	538,546												
New Hampshire	3,621,553	1,274,742			233,012			1,832,437						281,362
New Jersey	10,283,760			361,704	1,327,417		77,421	6,117,660	893,268	1,289,002	40,863			176,423
New Mexico	1,902,233	473,251		775,504	306,377		347,101							
New York	67,823,443	9,173,360		446,978	2,388,754			39,191,100	8,085,528	7,621,112	419,096			497,515
North Carolina	12,612,168	1,706,795	728,114	2,591,384	639,491	489,722	18,760	3,569,932	1,717,826		61,187	388,123		700,834
North Dakota	2,225,250	473,372		892,658	582,176		135,203		141,841					
Ohio	24,811,326	12,141,457	1,090,199					2,379,041	7,343,177	1,228,288	110,791	412,922		105,451
Oklahoma	7,483,201	4,779,228	170,465	102,840	958,958	210,439	458,664	262,966	458,894	28,500				52,247
Oregon	5,427,263	3,856,568			352,521				910,318	116,433	59,072			132,351
Pennsylvania	33,910,353	5,228,750			3,038,476	91,230	22,750	11,470,470	8,050,420	5,196,384		123,579		688,294
Rhode Island	2,809,675	610,908			214,387			1,484,378	180,543	319,459				
South Carolina	4,961,584	516,486	618,868	2,209,033		176,544			1,077,705	52,233		225,907		84,808
South Dakota	2,400,138	387,643		1,118,008	429,166				424,714					40,607
Tennessee	8,975,973	2,589,237		130,537	607,006	173,362		1,757,855	1,819,924	59,204	532,149	802,800		503,899
Texas	19,424,638	9,099,768	908,441	490,222	2,675,051	352,266	1,154,944	1,958,966	1,777,911	214,556		392,714		399,799
Utah	3,087,185	2,120,019					356,189	448,585	80,433	33,674				48,285
Vermont	2,447,377	1,254,595			83,329				956,707					152,746
Virginia	11,144,061	1,687,036	817,039	3,575,187	948,929	303,759		296,924	1,896,921	158,634		869,448		590,184
Washington	6,620,248	4,704,976			886,455		31,462		761,187		52,540			183,628
West Virginia	3,788,307	1,987,267	432,866		494,220	325,761			471,106			27,745		49,342
Wisconsin	12,508,185	7,568,646			2,401,217			948,312	1,378,108	154,557	57,345			
Wyoming	1,011,147	1,011,147												
United States service academics	4,946,588			4,946,588										
Outlying parts of the United States	4,031,076	3,692,605	148,243				37,798		44,015	108,415				
Alaska	148,243		148,243											
American Samoa	(3)													
Canal Zone	37,798						37,798							
Guam	(3)													
Hawaii	1,057,705	1,057,705												
Philippine Islands	1,039,991	931,576								108,415				
Puerto Rico	1,747,339	1,703,324							44,015					
Virgin Islands	(4)													

[1] Educational and general expenditures include expenditures for administration and general control, resident instruction, organized research separately budgeted, extension, libraries, plant operation and maintenance, organized activities related to instruction, and miscellaneous unitemized expenditures.

[2] Information for any one type of institution is reported in the appropriate category only; types of institutions are mutually exclusive. "Colleges and universities" are institutions of complex organization. "Arts and sciences" are institutions offering liberal arts 4-year degrees. "Professional and technical" institutions are those independently controlled "Negro" includes institutions of all types for Negroes only.

[3] Not available.

Source: U. S. Office of Education.

TABLE 45.—*Student fees as percent of educational and general expenditures,[1] institutions of higher education in continental United States and outlying parts, by institutional control and State: 12 months ending June 30, 1940*

	All institutions	Publicly controlled	Privately controlled
	Percent	*Percent*	*Percent*
Continental United States and outlying parts	38.3	20.4	57.7
Continental United States	38.5	20.4	57.7
Alabama	36.3	29.9	54.2
Arizona	17.5	17.5	
Arkansas	32 0	22.1	75.2
California	30.2	14 0	61.1
Colorado	36.8	26.4	69.3
Connecticut	33.2	9.8	38.7
Delaware	19.5	19.6	12.1
Florida	33.8	12.1	80.6
Georgia	40.2	33.6	49.5
Idaho	16.7	12.5	56.1
Illinois	41.1	13.7	56.5
Indiana	35.8	20.0	64.6
Iowa	28 9	17.5	67.1
Kansas	27.8	22.1	50.4
Kentucky	30.0	25.5	43.2
Louisiana	22.8	11.8	49.9
Maine	36 3	23.0	53.8
Maryland	24.9	13 8	43.1
Massachusetts	53.4	16.3	57.5
Michigan	27.2	21.2	66 7
Minnesota	25.8	16.6	60.4
Mississippi	23 8	17.2	59.5
Missouri	41.4	19 6	61.7
Montana	20.1	16.1	55.2
Nebraska	27.0	21.7	57.6
Nevada	6.1	6.1	
New Hampshire	43.3	20 2	59.7
New Jersey	43.1	39.8	43.8
New Mexico	25.4	25.4	
New York	50.4	11.1	58.9
North Carolina	39.5	28.8	49.8
North Dakota	19.4	17.2	52.1
Ohio	43 9	28.0	62 1
Oklahoma	20.9	14.4	74.8
Oregon	30.1	19.9	65.6
Pennsylvania	53.1	26.0	62.0
Rhode Island	40 4	12.1	52 2
South Carolina	35 6	25 9	59.3
South Dakota	30.6	23 1	61.7
Tennessee	40.6	29.9	47.5
Texas	35.7	25.5	67.2
Utah	31.5	30.1	37.0
Vermont	53.0	33.2	76.9
Virginia	39.8	30.6	57.6
Washington	31.5	24.8	69.6
West Virginia	29.6	21.8	75.7
Wisconsin	29.4	19.2	69.7
Wyoming	13.4	13.4	
District of Columbia	57.3	3.5	61.5
Outlying parts of the United States			
Alaska	7.1	7.1	
American Samoa			
Canal Zone	77.0	77.0	
Guam			
Hawaii	26.7	26.7	
Philippine Islands	32 6	23.1	14.7
Puerto Rico	15.6	15.4	23.9
Virgin Islands			

[1] Educational and general expenditures include expenditures for administration and general control, resident instruction, organized research separately budgeted, extension, libraries, physical plant operation and maintenance, organized activities relating to instruction, and miscellaneous unitemized expenditures exclude auxilliary enterprises and activities, noneducational expenditures, and capital outlay.

Source: U. S. Office of Education.

TABLE 46.—*Comparison of estimates of expenditures for general and educational purposes by institutions of higher education in continental United States and estimated income from students, by type of institution and institutional control: 1932, 1940 and 1947*[1]

Type of institution [2] and/or institutional control	1932 [3]	1940 [3]	1947 [4]		
			Total	Educational payments by students [5]	Payments by Federal Government for education of veterans [6]
All institutions:					
Educational expenditures	$420,633,000	$521,989,700	$1,005,542,000		
Income from student fees	$150,648,700	$200,726,900	$565,567,000	$264,380,000	$301,187,000
Proportion of expenditures financed by student fees (percent)	35.8	38.5	56.2	26.3	29.9
Publicly controlled:					
Educational expenditures	$205,863,700	$269,381,000	$525,848,000		
Income from student fees	$34,479,700	$54,989,200	$202,127,000	$72,856,000	$129,271,000
Proportion of expenditures financed by student fees (percent)	16.7	20.4	38.4	13.8	24.6
Privately controlled:					
Educational expenditures	$214,769,300	$252,608,700	$479,694,000		
Income from student fees	$116,169,000	$145,737,700	$363,440,000	$191,524,000	$171,916,000
Proportion of expenditures financed by student fees (percent)	54.1	57.7	75.7	39.9	35.8
UNIVERSITIES					
Publicly controlled:					
Educational expenditures	$126,613,100	$171,946,600	$333,573,000		
Income from student fees	$23,042,100	$35,405,900	$115,171,000	$31,025,000	$84,146,000
Proportion of expenditures financed by student fees (percent)	18.2	20.6	34.5	9.3	25.2
Privately controlled:					
Educational expenditures	$116,993,100	$126,627,500	$179,244,000		
Income from student fees	$60,598,000	$67,540,400	$140,941,000	$61,540,000	$79,401,000
Proportion of expenditures financed by student fees (percent)	51.8	53.3	78.6	34.3	44.3
ARTS AND SCIENCE COLLEGES					
Educational expenditures	$67,644,000	$84,968,100	$180,917,000		
Income from student fees	$39,443,000	$53,170,600	$140,462,000	$80,303,000	$60,159,000
Proportion of expenditures financed by student fees (percent)	58.3	62.6	77.6	44.4	33.2
INDEPENDENT PROFESSIONAL AND TECHNICAL COLLEGES					
Educational expenditures	$45,528,700	$58,951,400	$162,524,000		
Income from student fees	$12,269,300	$20,232,200	$83,591,000	$39,209,000	$44,382,000
Proportion of expenditures financed by student fees (percent)	26.9	34.3	51.4	24.1	27.3
TEACHERS AND NORMAL SCHOOLS					
Educational expenditures	$39,537,800	$42,529,000	$59,063,000		
Income from student fees	$6,797,500	$10,635,000	$22,548,000	$10,505,000	$12,043,000
Proportion of expenditures financed by student fees (percent)	17.2	25.0	38.2	17.8	20.4
JUNIOR COLLEGES					
Publicly controlled:					
Educational expenditures	$8,991,000	$15,144,800	$32,409,000		
Income from student fees	$1,216,100	$2,694,000	$16,976,000	$6,014,000	$10,962,000
Proportion of expenditures financed by student fees (percent)	13.5	17.8	52.4	18.6	33.8
Privately controlled:					
Educational expenditures	$8,310,400	$10,814,900	$36,528,000		
Income from student fees	$5,845,200	$8,201,200	$36,906,000	$30,319,000	$6,587,000
Proportion of expenditures financed by student fees (percent)	70.3	75.8	101.0	83.0	18.0
NEGRO INSTITUTIONS					
Educational expenditures	$7,014,900	$11,007,400	$21,284,000		
Income from student fees	$1,437,500	$2,847,600	$8,972,000	$5,465,000	$3,507,000
Proportion of expenditures financed by student fees (percent)	20.5	25.9	42.2	25.7	16.5

[1] 12 months ending June 30 of year specified.
[2] See table 44 for definitions of types.
[3] Adjusted to nearest $100.
[4] Estimated to nearest $1,000 from sample survey of 333 institutions made in March and April 1947.
[5] Does not include payments for living expenses, student supplies, etc.
[6] Does not include payments by the Federal Government for living expenses, student supplies, guidance, etc.

Source: U. S. Office of Education.
NOTE.—Data used in preparing chart 4, vol. V, of Report of the President's Commission on Higher Education.

TABLE 47.—*Educational expenditures of institutions of higher education in continental United States compared with the gross national product: 1932–60*

Year (12 months ending June 30)	Educational expenditures	Gross national product	Educational expenditures as percent of gross national product
			Percent
1932	$421,000,000	$67,100,000,000	0.63
1934	370,000,000	60,300,000,000	.61
1936	420,000,000	78,500,000,000	.53
1938	475,000,000	78,500,000,000	.61
1940	522,000,000	95,500,000,000	.55
1947	1,005,000,000	217,000,000,000	.46
1900 (in terms of average dollar value in 1947, and 1947 GNP)	2,587,000,000	(217,000,000,000)	1.19

Source: Educational expenditures, except for 1960, from U. S. Office of Education. Gross national product from U. S. Bureau of Foreign and Domestic Commerce.

NOTE.—Data used in preparing chart 3, vol. V of Report of the President's Commission on Higher Education.

TABLE 48.—*Estimates* [1] *of selected expenditure and income items for institutions of higher education in continental United States, by type of institution, and institutional control: 12 months ending June 30, 1947*

Types of institution [2] and/or type of control	Estimated educational and general expenditures				Estimated income from students		
	Total general and educational	Resident instruction	Physical, plant, operation and maintenance	Other general and educational	Total [3]	Student fees, educational, excluding payments by Federal Government	Student fees, educational, paid by Federal Government for veterans [4]
All types of institutions	$1,005,542,000	$494,256,000	$154,882,000	$356,404,000	$565,567,000	$264,380,000	$301,187,000
Publicly controlled	525,848,000	256,004,000	73,417,000	196,427,000	202,127,000	72,856,000	129,271,000
Privately controlled	479,694,000	238,252,000	81,465,000	159,977,000	363,440,000	191,524,000	171,916,000
Universities:							
Publicly controlled	333,573,000	157,656,000	38,830,000	137,087,000	115,171,000	31,025,000	84,146,000
Privately controlled	179,244,000	104,960,000	26,179,000	48,105,000	140,941,000	61,540,000	79,401,000
Arts and science colleges	180,917,000	84,679,000	36,214,000	60,024,000	140,462,000	80,303,000	60,159,000
Independent professional and technical colleges	162,524,000	69,207,000	22,386,000	70,931,000	83,591,000	39,209,000	44,382,000
Teachers colleges and normal schools	59,063,000	33,207,000	10,320,000	15,536,000	22,548,000	10,505,000	12,043,000
Junior colleges:							
Publicly controlled	32,409,000	21,338,000	4,971,000	6,100,000	16,976,000	6,014,000	10,962,000
Privately controlled	36,528,000	12,688,000	11,267,000	12,573,000	36,906,000	30,319,000	6,587,000
Negro institutions	21,284,000	10,521,000	4,715,000	6,048,000	8,972,000	5,465,000	3,507,000

[1] From sample survey of 333 institutions, made in March and April 1947.
[2] See table 44 for definitions of terms.
[3] Includes educational fees paid by students and payments by the Federal Government for the education of veterans. Does not include payments by students or by the Federal Government for living expenses, student supplies, guidance, etc.
[4] Does not include payments by Federal Government for living expenses, student supplies, guidance, etc.

Source: U. S. Office of Education.