The Future of the University

1. The University of Pennsylvania today is the result of an evolution which has been in progress for two hundred years and the character of its development has to a large extent been determined by the changing conditions which it has been called upon to meet. From its small beginnings in a small community it has come to be the principal institution of higher learning in a large metropolitan area. Its founders could not have envisioned by the wildest flight of imagination its constantly expanding sphere of activities, its growth in size and complexity, its position as one of the leading universities of the country. In a consideration of the University's place in the educational world it is futile to speculate on what we would do if the University of Pennsylvania were not an institution with two centuries of history behind it. We must begin with the University as it is a body of fifteen hundred scholars and teachers training its students, a thirty million dollar fabric, a group of undergraduate, graduate, and professional schools, some of which are among the most distinguished in the country--and we must decide how we may best use our resources for the greatest social good.

2. The accident of geography plays a large part in human affairs and the fact that the University of Pennsylvania is situated in a metropolitan area and in one of the more heavily populated regions of the country has determined to some extent its destiny. We have always recognized our responsibility to the social order and have never shirked our obligation to the immediate community in which we function. Beyond this local community we owe an obligation to the state of Pennsylvania and those neighboring states from which we draw a large part of our student body and derive our main support. But the University is not merely a local institution; it is a national center of learning. Our students are drawn from every state in the union and from foreign countries. It is clear that we must continue to meet this threefold geographical obligation if we are to render our proper service to society.
There is, however, another basis on which we may consider the University. Generally speaking, there are three ways in which Pennsylvania, like other institutions of higher learning, performs its educational function and makes its contribution to social progress. One is by providing as many students as it can serve well with the education which will make them useful members of society, thereby fulfilling its function of leadership and contributing its share of leaders to the community and to the country. A second is by training qualified men and women for various professions which require specialized knowledge or high technical skill. And a third is by extending the bounds of knowledge through research and the training of others for research by which mankind approaches closer to the truth or gains greater control over his environment. The first of these functions is performed mainly by the undergraduate schools; the second by the professional schools, the third by the graduate schools and by members of the faculty carrying on their researches as individuals or as directors of laboratories. The University of Pennsylvania is performing all three of these functions, and of course must continue to perform them, if it is to continue to do what society has a right to expect of it.

We may consolidate these ideas, which need only to be stated to be accepted, by saying that the University of Pennsylvania by virtue of its history and location must fulfill its obligations to its immediate community, the surrounding regions, and the nation at large in the fields of undergraduate education, professional education, and post-graduate education and research.

It would be unwise to attempt to assign precedence to any one of the functions enumerated above—undergraduate, professional, and post-graduate education (and research)—since each has its special importance in the educational program of the University as a whole. But it can be said with propriety that the nature of a university as distinguished from institutions primarily of college grade lays peculiar emphasis on the importance of a distinguished faculty. An undergraduate college can occupy a place among the best institutions of its kind by building its faculty out of competent and
stimulating teachers on the undergraduate level. But while it is just as imperative that a university give its undergraduate students instruction of an equally high order, it cannot stop there. The rapid growth that has taken place in a multitude of fields of specialized knowledge makes it necessary for a university to have on its faculty a large number of specialists, scholars who by their research and publication have won distinction in their field, who are widely recognized as speaking with authority on their specialty, who are capable of directing the work of advanced students and training the future research scholars and specialists of their country. Universities derive their prestige among similar institutions of high learning by the number of distinguished scholars on their faculty and by the amount and quality of the research which emanates from them. The competition among universities for scholarly prestige is very keen since great scholars attract outstanding students, enhance an institution's prestige with the foundations that contribute to education and research, and advertise their university in the best sense of the word.

To assemble a faculty of competent and stimulating teachers is not especially difficult. It requires patience and persistence and a willingness to weed out the mediocre and the indifferent. But distinguished scholars are not common. That is why they are distinguished. They have a ready market because the supply is always limited. To be able to attract and hold outstanding men on its faculty a university must be able to compete in salary and opportunity with its natural rivals. It must maintain a retirement plan which will provide security in old age. It must not so overburden the productive scholar with teaching and administrative responsibilities that he can no longer produce. It must have a flexible policy of sabbatical leaves and temporary respite from teaching for special research projects. It should endeavor to provide a limited number of research assistants either by accumulating a fund for the purpose or by setting up scholarships in the graduate school in exchange for part of the student's time. And of course no university
can attract research scholars without the necessary laboratory facilities and a strong library. All these things cost money—some of them considerable, others relatively little—but they are necessary if the university is to have the scholarly prestige which its name should carry.

The effects of a distinguished faculty are felt far beyond the graduate school. They are very potent in the professional schools and reach down even into the undergraduate divisions. The teaching and example of great scholars are an inspiration to young men and the presence in a faculty of those carrying on research acts as a catalytic agent on their colleagues. But naturally the great scholar's influence will be most strongly exerted on graduate students. These in turn will become the teachers and investigators in other universities or carry on the work of research laboratories outside of universities. They will be the scientists, the philologists, the historians of the future. Although a number of other institutions in the neighborhood of Philadelphia may provide undergraduate instruction of a high order, it is unlikely that any other for a long time to come will be in a position to maintain an extensive program of advanced and highly specialized teaching and research. It is to the University that those in this area seeking such advanced instruction must look, and in this domain it is unthinkable that the University should not maintain its unquestioned preeminence.

It is equally obvious that we must maintain our distinction in professional education. Several of our professional schools are among the greatest in the country and to maintain their position requires constant thought and aggressive planning. Probably nowhere in the educational world are the changes that are taking place so rapid and so fundamental as in certain scientific fields, especially medicine. The developments that are in progress or in prospect are certain to be costly, but some way must be found for seeing that Pennsylvania does not fall behind the institutions with which she is already abreast, and for insuring that to the fullest extent that our resources permit our professional schools will be maintained in or brought to a position of leader-
9. The undergraduate schools derive their greatest strength from being a part of a great university, as a result of which undergraduates can study under distinguished scholars, receive the stimulus which creative minds can give, and spend four years in an atmosphere charged with high intellectual potentials. Their purposes and aims are more particularly considered in the next division of this report, and we confine ourselves here to two special topics,--Educational opportunities for women and our contributions to adult education in the community.

The Function of Undergraduate Education

10. In the previous section reference was made to undergraduate education as one of the three main functions of the University. At Pennsylvania undergraduate instruction is provided in the College, devoted to a liberal program in the arts and sciences, and in a number of vocational fields,--engineering, business, fine arts, architecture, education and teacher training. We have also remarked above on how valuable was the association of undergraduate education with the environment of a great university. We believe the point can not be emphasized too often. A large center of learning is sometimes compared unfavorably with the small college as a place to pursue one's undergraduate education. There will doubtless always be those who prefer a small, compact student body in a rural setting with its limited but intimate social contacts. The story of the town mouse and the country mouse repeats itself under many guises. But it can be urged that the University college offers opportunity for a greater range of courses, contact with a larger number of distinguished scholars, more varied social experiences, and conditions which will make easier the transition from college to active life, and it may also be said that the university atmosphere in which the college student lives has an important part in enriching and intensifying his intellectual experience.

11. While many of the undergraduate schools have special vocational functions,
there are certain general purposes which all undergraduate education has in common.

(a) One common purpose is to transmit and make available the store of knowledge and wisdom which has been accumulated from the past. Modern man is not greater than his predecessors but he stands on the shoulders of those who have gone before and surveys his problems from the vantage point of their experience. Some of this knowledge has immediate practical application and it is also the point from which further progress proceeds. It should awaken intellectual curiosity and form the basis for enlightened opinion and informed judgment. By a fortunate provision of nature it is not necessary for each generation to discover for itself the principles of algebraic reasoning or Newton’s laws of motion.

(b) A second main purpose of undergraduate as of all education is to develop the powers of the student’s mind. At the college age the memory is still generally active, but it is an observation which has been made by many that students enter college and sometimes get to the professional schools without the capacity for accurate thinking. It is one of the most important functions of college training to develop the basic mental processes, -- the ability to read intelligently, to focus the attention, to follow a sequence of thought, to seize the essential points, to go to the heart of a problem, to reason to a sound conclusion. Such mental discipline is a prerequisite to clear and accurate statement in speech or writing. It should enable the college graduate later to solve the problems that arise in the course of his own work and should fit him to form unbiased judgments on those that face society as a whole. It may well stimulate in him a curiosity that will nourish throughout life an active desire for self-education.

(c) College education should cultivate the aesthetic sense and create a reserve of artistic and cultural interest for the enrichment of life and for a satisfying use of leisure. As Woodrow Wilson observed in one of his essays, "Not all of mental power lies in the processes of thinking."
The enjoyment of music, art, and literature, and a sensitivity to the beautiful in one's environment is a soul satisfying experience and may prove a welcome escape in times of stress. The development of aesthetic appreciation may in turn call forth an attempt on the part of the individual to realize his own artistic abilities through creative work, rewarding to him however inept it may seem to critics. Education for leisure may soon become an important element in general education at all levels since technological progress is making possible for mankind a gradual lessening of the working hours.

(d) Higher education falls of its full purpose if it stops with making the individual sufficient unto himself. It should aim also to promote social responsibility. By social responsibility we mean the response of the individual to the obligations of the group,--his family, his community, his country, his fellow-men however generalized. The cultivation of this responsibility means the stimulation of the right responses and their expression in action and behavior. This is of course the obligation not only of the college; it rests quite as much on the home, the school, the church, the press, even upon such agencies as the radio and the motion picture. But college can do much to develop social-mindedness by promoting tolerance, sympathetic understanding, and a capacity for adjusting private interest to the general good. Nor is the development of proper social attitudes limited to those departments and studies which are called social. It falls within the province of literature, ethics, history, and almost any subject, humanly conceived and humanely treated, in which man is considered in relation to his social environment. It should be one of the purposes of higher education to bring the individual into harmonious adjustment with his surroundings and arouse him to participation in the obligations which the organization of a democratic society imposes.

(e) Finally it may be said that higher education which leaves out of account man's spiritual and ethical needs suffers from a vital deficiency. In a world which has given of late so many evidences of having cast off not only
righteousness but even common decency there is need for spiritual regeneration if civilization is to survive. It cannot but arouse apprehension in thoughtful men to see daily the perversion of truth, the ruthless disregard of the rights of others, the flouting of law, and the willingness to employ any means to gain an end. Individual lapses may be set down to mental disease, but when the sickness extends to the public spokesmen of great economic and social groups and to political leaders in the pursuit of national ambitions it threatens the foundations of society. The regeneration of national morality must begin with the strengthening of the moral fibre of the individual, and because of the large part which colleges play in producing leaders in various walks of life our responsibility is proportionately great. It is not suggested that the end is to be accomplished through compulsory courses in religion and ethics. There are manifold opportunities for the implicit teaching of the nobility of man. The atmosphere of higher education should be conducive to spiritual self-development and the formation of character.

In stating these five aims of higher education it is not meant to suggest that they are to be achieved wholly in the classroom, or to exclude other incidental purposes which a college education serves. Nothing has been said about the physical development of the student, the building of a sound body without which a sound mind cannot perform efficiently. And nothing has been said about the social life on the campus which plays an important part in the development of the student's personality and social competence. There are many activities -- athletics, fraternities, undergraduate publications, and numerous student organizations in which different social and intellectual interests can find an outlet -- which contribute their share to the sum total of a college education. College education properly conceived is a many-sided experience extending through four years, preparing for life, establishing patterns of thought and conduct, and creating loyalties which will not end with graduation.

It is evident that the benefits of a college course as here set forth are
not the exclusive property of any one undergraduate school but are characteristic of all liberal education. Education is liberal when it frees men's minds from ignorance, superstition, and prejudice, stimulates independence of thought and inquiry, develops the capacity to distinguish truth from error or falsehood, quickens one's response to the things of the spirit, extends one's interests beyond the workshop and the market-place. With due allowance for the part which vocational subjects must have in the more technical schools, such should be the aim of all education at the college level.

The Future of the Liberal Arts College

14. There seems to be very little doubt in the American mind that a college education is a personal asset. Before the war well over a million full-time students a year were enrolled in American colleges and universities. And then the war brought home to several million young men and young women the advantages in rank and pay which came to those with college training. Today a flood of young men and an appreciable stream of young women are starting in college under the plan by which the Federal government pays the expenses of those who served in the armed forces. The movement has only begun. Many of these students of today would have had no hope of going to college before the war, but now that the opportunity is open to them they are eagerly seizing it, and their earnestness in class and the effort which the great majority of them so far have put on their work is reassuring evidence that they do not look upon the program as a junket. Many of them are married and are finding it difficult to live on the government allowance. They could get jobs at the prevailing high wages. Clearly they look upon a college education as a worthwhile investment.

15. Yet it is probable that a good many of the students in our colleges and universities are there on faith. They have seen other college graduates become successful in life, and they hope that a similar college experience for them will bring similar results. Those who are pursuing technical courses
in schools of engineering, architecture, business administration, and the like have a particular vocation in view and their motivation is clear enough. But what of our students in the liberal arts colleges? If the number of books and articles that have appeared in recent years discussing the future of the liberal arts college or the liberal arts program is any measure of public opinion, it is clear that the colleges of arts and sciences are on the defensive, if not actually in jeopardy. We cannot meet the issue by avoiding it.

One of the circumstances affecting the position of the liberal arts course is the competition which it faces with college programs which are more obviously pointed toward a specific vocational goal. We cannot escape it because it is a fact. Until fairly recent times the great majority of students who went to college pursued the regular college course. Schools of engineering separately administered date only from the Civil War. The Massachusetts Institute of Technology was founded in 1861 and our own Towne Scientific School was organized in 1875. The Wharton School, the first collegiate school of business in the country, was created in 1881 with one full-time professor of political economy and one part-time instructor in accounting. A full four-year course was not established until 1894. The Wharton School's example was not followed until 1898 when Chicago and California established similar courses. Most collegiate schools of business date from the present century. It is so with schools of architecture and education, our own dating from 1890 and 1914 respectively. These rapidly growing schools with their specialized programs have attracted large numbers of students, leaving for the general college course those students who were planning to enter one of the learned professions or whose ultimate vocational intentions lay elsewhere.

A substantial interest in cultural things among the people of any country (including our own) has been in the past and will probably always be the mark of a small minority. It is an indispensable minority, let us say the ten percent who make possible the Philadelphia Orchestra, the Metropolitan Museum, the Bach Festival, and who save civilization from becoming wholly materialistic.
The American people in particular are a practical people not yet far removed from the experience of pushing back the frontier and subduing a continent. We do not have and apparently do not take kindly to the idea of a large leisure class. Consequently the great majority of students who go to college do so primarily with a practical end in view and are likely to choose a college course that has a definite vocational value. It is in the liberal arts college that we have the fullest opportunity to broaden the cultural interest of students, but we cannot do this or anything else for students until we get them.

18. Certain colleges and a few universities are generally associated in the public mind with liberal arts education. When we think of the graduate of these institutions we assume that he is a product of what used to be called the straight college course. We do not so immediately jump to this conclusion concerning the graduate of many large universities. It would be interesting to know how many men go to a liberal arts college (or a university where the college is the chief undergraduate school) because they want to pursue a liberal arts course and how many go for other reasons,--family tradition, preparatory school influence etc.,--or for other things which they associate with these institutions,--the atmosphere of a college town, the social life, and the like. In any case the college program at such places meets little competition from other more clearly vocational schools. It is not so at Pennsylvania and many other large universities.

19. Among the technically minded it is often supposed that to produce cultivated men and women is the exclusive business of the liberal arts course and its only purpose. This belief is perhaps in part an inheritance from the past when few went to college and those few were drawn from the privileged class. In the days of quill pens and oil lamps a college education may have served to adorn the gentleman, lend a certain elegance or grace to his social life, and possibly provide him with one or two interests for his leisure time. Such an education might also furnish the background for theology or law and
suffice for the pursuits of an untechnological world. To assume that this is still the character of the liberal arts college is to suppose that while the world has moved on, the liberal college has stood still. If this were true, its future would indeed be with those same quill pens and oil lamps which its students once used.

20.

If we believe in the value of the liberal arts college we must do something to define its value in terms which the world will understand. We cannot expect others to buy our wares if their value remains known only to ourselves. The colleges have done little to promote an understanding of the purposes served by the liberal arts course, including the careers for which it is the best preparation. We have assumed that it was sufficient to open our doors and wait for students to come, having found out by some secret means what value for them resided in a liberal education. Our own College bulletin begins with instructions concerning the filing of applications for admission, aptitude tests, vaccination, and even addressing mail. Hidden away somewhere around page 40 are two pages of brief statements addressed "For students interested in Law," "For students interested in Journalism", "For students interested in Archaeology", etc. Within the limits of professional propriety and with full dignity we could learn much from business and financial executives about presenting our case to the public. But first we must agree on our case.

21.

Three considerations supply substantial motivation for a liberal arts education. One is the opportunity for self-development in an atmosphere of intellectual challenge, already discussed sufficiently above as one of the goals of all undergraduate education. It is a vital motive but for most men must be directed toward or associated with the practical business of making a living. For women students the case is somewhat different and such a motive may often constitute the chief desire for a college education. Many women look forward to marriage as a career and seek only in college the foundation for a richer intellectual and aesthetic life, a satisfying family relation-
ship, and an intelligent and thoughtful participation in the problems of the world in which their life is lived.

22. A second purpose served by the liberal arts program is preparation for the professional schools and for post-graduate study in many fields of specialization. There is perhaps no one course of study that can lay claim to being the best preparation for law school or medical school. However, as the College bulletin says, "The best legal opinion recommends as a preparation for the study of law the broadest cultural education, recognizing that the successful lawyer must be able to work at his problems from every point of view, and that he must know where to go for special information on a great variety of subjects." In like manner we are told by Dr. Robert M. Kelly, Executive Director of the Association of American Colleges (The American Colleges and the Social Order, 1940, p. 319), "Medical colleges are advising against pre-medical courses, chiefly in science." What is chiefly desired by schools of law and medicine is young men who have been trained to think, whose minds have been so disciplined that they can approach the study of any subject with confidence and vigor. However the organization of the college curriculum into group requirements (insuring to each student a core of basic disciplines), a field of concentration, and generous choice of electives provides the broad foundation on which professional studies can be built.

23. All college students are motivated by a third consideration, one on which the liberal arts colleges have in the past laid too too little stress. And here the present report is unorthodox. We believe that whatever other cravings the college student may seek to satisfy, he knows that upon graduation or at some time thereafter he is going to be faced with the problem of making a living. There are some who profess to believe that the only valuable studies in a liberal arts program are those that have no practical value. This is surely going too far. It is honorable to make a living. No disrespect attaches to the ability to support oneself and one's family or contribute to the community chest, and a college education to be liberal need not lead
to economic bankruptcy. To assume that in a democratic society any considerable number of students not supported by inherited wealth will pursue a course of study in college that does not hold out the promise of economic self-respect is unrealistic.

24. By a fallacy which it seems easy for the mind to fall into it is often assumed that because the College does not, like the more technical schools, prepare the student for a particular vocation whose label it wears, it prepares immediately for none. Nothing in reality is further from the truth; indeed the College prepares directly for a greater variety of professions than does probably any other school. We have not sufficiently stressed the fact. Would the student look toward a career as a scientist -- a biologist or physicist, a mathematician or astronomer -- he must seek his preparation in the College. Would he be a journalist, a linguist, an historian, he must go to the College. Would he be a psychologist, a social worker, a teacher, he can get his training in the College. We need to have it more generally understood that education in the College does not prepare one simply for the vocations of life.

25. Indeed, we need to go further. We need to make it clear that the best preparation for almost any career outside the learned professions is a broad education that develops the character and intellect to the fullest, and that a disciplined mind and a capacity for hard work are more important than the study of any particular subject. Our greatest Elizabethan scholar was trained as a lawyer. A college professor and a geologist have both occupied the White House. No president of the United States has ever had a course in the theory and practice of presiding, with or without prerequisites, and a turning of the pages of Who's Who suggests that outside of certain professions most of the country's leaders have attained the distinction for which they are recognized without having pursued a curriculum designed for their particular job. The College prepares not only for intellectual but for economic self-sufficiency. We are failing in our duty if we fail to make its full value appreciated.
There has been much thoughtful examination, both before the war and since, of the best ways of achieving the ends sought through a college education. Constant self-examination is necessary for every school and department of a university, and of this necessity Pennsylvania has not been unmindful. In fact, in our undergraduate schools nothing has been so constant as change, although the pattern has been one of evolution rather than revolution. In some places interesting educational experiments have been tried with individual programs carefully tailored to fit the individual student. For these experiments the sponsors claim exceptional merits, and they can be carried on with limited equipment and limited resources. They discard in part the concept of group requirements -- a certain range of subjects which with variations is considered good for all students -- in force at most institutions, and advance the system of a major field and electives usual in the junior and senior years to a position more central in the program. Their chief merit would seem to lie in capitalizing early the student's inclinations and interests and thus securing a stronger motivation for study. The danger would seem to be in focusing too early the student's studies and thus missing the benefits of a broad and well-rounded education. In any case, one could hope to carry out the plan only where the student body was small.

The American way of life which sanctions the greatest degree of individual liberty compatible with the common good is a sound theory of American higher education. The organization of the American college curriculum should combine the assurance of that knowledge and those disciplines which the experience and general agreement of educated men approve with the opportunity for the individual to pursue paths into which his own inclinations and special aptitudes lead him. Such a college course should strike the proper balance between what is required of all and what is varied to fit the needs of the individual student. In its variable part it will permit the choice of a field of concentration and allow for the enrichment of the mind in areas outside
the major interest. Such a plan it is believed, avoids the danger of one-sidedness inherent in completely individualized programs of study and refrains from such a regimentation of the student as is likely to destroy initiative and enthusiasm. It offers in a reasonable proportion the advantages claimed for both the highly individualized and the highly prescriptive plans of study sometimes advocated elsewhere.

28. At Pennsylvania as at most other institutions where a common core of basic disciplines constitutes the main part of the work of the first two years, these disciplines divide into three general categories which may be described as the humanities, the natural sciences, and the social sciences. Each is made up of a group of courses (in which certain options are permitted). The group in the humanities usually consists of English and one or more foreign languages, other courses in arts and letters being left for election in the later years if they do not fall within the field of concentration. To these groups in Pennsylvania is added the requirement of Physical Education, participation in some sport or systematic exercise in each of the four years of college. It will be well to examine the philosophy behind each of these groups.

29. English. The minimum requirements in English are designed to give the student (1) an appreciation of the resources of his mother tongue and a command of those resources in speech and writing; and (2) an acquaintance with some of the best of English literature. We believe that the language which we use throughout life should not be taken for granted, that an educated man or woman should know something about its historical development, the circumstances which have brought about its simplified grammatical structure and peculiarly rich and cosmopolitan vocabulary, and should have the basis on which to exercise a discriminating taste and sound judgment on matters of usage, standards, and linguistic innovations. We believe that every college graduate should be able to express himself in clear and effective English with a reasonable degree of grace and facility. To this end the courses in composition are designed. The ability acquired in these courses -- an ability
to organize ideas and express them in well-formed sentences and larger units in writing -- carries over into speech, but it would be desirable to require some work in speech were it not that most students elect one or more courses in public speaking. The aim of the courses in literature is twofold: (1) to awaken in the student a love of books, if that love has not been awakened before, to extend the range of his enjoyment, and to cultivate his taste for the best as distinct from the cheap and ephemeral; (2) to place the great works of English literature in their historical setting so that the student will have an intelligent grasp of the history of this part of his cultural heritage. Incidentally it may be said that students in the College at Pennsylvania generally take a number of courses in literature beyond those that are required, and that this is true of the students in all the other undergraduate schools whose curricula permit of any considerable number of electives. In this respect Pennsylvania is fortunately distinguished from some of the other large universities.

30. **Foreign Language.** The study of a foreign language should serve several purposes. It should furnish the student with a tool which will be at his disposal in business or in a field which requires him to keep abreast of developments in other parts of the world. It should enlarge his understanding of the ways of language by contact with the structure and idiom of a speech other than his own. And it should open to him the thought and literature of another nation or race, thus broadening his outlook and making possible a richer aesthetic experience. The traditional arrangement of the foreign language program in the College has not always accomplished these purposes. Departments of language have long recognized that one three-hour course for two years allowed inadequate time to obtain satisfactory results, especially where classes numbered twenty or thirty students. The results obtained in the intensive language programs devised for the army, in which Pennsylvania's success was conspicuous and widely recognized, are generally acknowledged, even though the popular notion that they were due to a new kind of linguistic
wizardry is entirely false. They gave teachers of language the opportunity to demonstrate what they had always maintained, that an intensive program (15-17 hours per week) and small classes (8-10 students), permitting constant practice in the spoken tongue, would produce fluency in the ordinary foreign language in a relatively short time (6-9 months). It would be regrettable if we failed to profit by the experience thus gained and neglected to capitalize on the popular interest in foreign languages stimulated by the war. It is not suggested that we subject all students to intensive language discipline, but we should make it possible in the case of certain foreign languages (such as French, German, Spanish, and Russian) for the interested student to pursue an intensive course (10-12 hours a week) by redistributing his other requirements in the rest of his freshman and sophomore years. An experiment in this direction is planned for the next Fall term. It would not be too much, however, to require of every student of the College that before graduation he demonstrate by examination a genuine reading knowledge of at least one foreign language.

The Natural Sciences. The group in natural science is designed to give the student an understanding of at least one aspect of the physical world about him and some experience with scientific method. The group includes the physical sciences (chemistry and physics), the biological sciences (botany and zoology), psychology, which focuses attention on man himself, mathematics, logic, the philosophy of science, and possibly astronomy and geology. Training in habits of precision and close observation as well as familiarity with the procedures of scientific experiment will be obtained by insisting that one of the courses chosen in this group be a laboratory course. Any plan of study to be successful must enlist the student's cooperation. No real broadening of the mind is produced by exposing the undergraduate to prescribed general courses unless his interest is aroused; and his interest is likely to be aroused only with respect to some of the prescribed courses. Hence in this group and the next it is believed that the student should be allowed consider-
able freedom of choice. Only so can we expect him to experience the intellectual stimulation, the mental development, and the sense of achievement which should go with a college career.

32. The Social Sciences. It is commonly said that one half of the world does not know how the other half lives. The result is an imperfect sympathy with and failure to appreciate the point of view of those whose lot is different from our own. Such sympathy and understanding can be greatly extended through literature and some of the other arts, but the enlargement is likely to be fragmentary and unorganized. Moreover it is likely to lack historical perspective. To give the student an understanding of the structure and growth of political, economic, and social institutions and with the different concepts which have prevailed at different times is the purpose of the social sciences: history, anthropology, economics, political science, sociology, and philosophy. Such studies enable the student better to appreciate his place in the social order and his obligations in a democratic society, may stimulate him to examine the bases of his own conduct and beliefs, and challenge him to a more objective judgment of other political and social creeds. In these post-war years when many ideologies may be tested and many features of the social order may be questioned it is more than ever necessary that he be able to keep his bearings and judge wisely as events unfold.

33. Physical Education. Of this requirement nothing need be said.

34. As we have intimated above, it is important that various alternative ways be provided whereby the student can satisfy the group requirements. The range of existing knowledge is so wide that no possible general curriculum can hope to cover it all, and it is impossible for a curriculum committee or a faculty to determine accurately for all students the sampling of this intellectual world best adapted to produce the broadening of the mind that we aim at.

35. The part of the course of study here outlined will, it is believed, accomplish certain things. It will give the student the ability to express himself clearly and effectively; without which, in spite of all he knows, he will
remain inarticulate. It will lay the foundation for an enduring enjoyment of good books. It will give him a command over at least one foreign language both as a tool and as a key to another culture than his own. It will acquaint him with certain broad fields of knowledge necessary to understand his environment and define his place in the social order. It will teach him to think,---that is, to reason, to weigh and discriminate, and to form independent judgments. It will promote his physical development. It will provide a broad base for his field of concentration and the work of the junior and senior years.

36. It is suggested that the student's attainments at the end of the sophomore year should be tested by a general examination similar in character to the Graduate Record Examination. This examination would reveal areas which needed to be strengthened, and by revealing where he was strong serve to indicate the direction in which his field of concentration might lie.

37. The most momentous choice the student must make is his choice of a field of concentration. He should be preparing for this choice during his freshman and sophomore years, by trying out his various interests and aptitudes, and by consultation with his advisers and other students. Furthermore, it should be impressed upon the underclass student that he must qualify himself for acceptance as a major in one of the accepted areas. It is suggested that the department (or group committee, in the case of composite majors) have the privilege of approval or rejection; in other words, that the student must be accepted by the department or group committee concerned. This would cause the department or group committee to assume more responsibility for the guidance of the students it accepts, and would also furnish the student an additional incentive to do work of high quality during his freshman and sophomore years.

38. Having been accepted for a field of concentration, the student should henceforth plan his work in consultation with advisers in this field. Each department should carefully study its requirements, and present a program, or variety of programs, which it considers suited to produce undergraduate competence in the field it covers, with a maximum of flexibility for individual
interests and aptitudes. The number of semester credits required for a major might well vary somewhat widely from subject to subject though I believe a maximum should be set which will leave a reasonable amount of time to the student during his junior and senior years for furthering his general education. It would be desirable also to set up integration courses for majors in related fields, to discourage provincialism and bring the student's special competence into fruitful relations with other special fields. The student's competence in his field of concentration should be tested by a general examination, not limited to the courses he has taken, toward the end of the senior year.

**Proposals for Improving Our Educational Procedures**

39. The plan here described carries on the liberal arts program which has existed at Pennsylvania in recent years. This is not to say, however, that it is identical with that program or that the committee endorses that program in its existing form. On the contrary, it feels that without departing from its basic philosophy, which we believe to be sound, it is possible to modify and greatly improve it. The reshaping of the program of studies is properly the function of the faculty, and the details in this reshaping can be appropriately left to the curriculum committees. Nevertheless it is fitting here to point out what seem to be the defects in the present plan and to indicate the direction which we believe the needed changes should take.

40. (1) An impartial judge of American education would be compelled to admit that it has certain weaknesses which seem to be characteristic of it generally. That is to say they are not limited to any one stage in the educational process or to any particular section of the country, much less to any particular institution. The same criticism can usually be leveled at the secondary school and the college, the private school as well as the public high school, the small college and the larger institutions. It would be futile to pretend that Pennsylvania alone is exempt from this criticism and certainly unfair to
conclude that because we are willing to face it we are more deserving of it than other college and universities. Unless we recognize weakness we can do nothing to correct it. Yet some of the faults of the American educational process can be eliminated if we set ourselves to eliminate them. Therefore we venture to point some of them out and to offer constructive suggestions for their correction.

The most general and certainly the most serious criticism that can be leveled against the American educational process from the secondary school through college and sometimes beyond is that it suffers from superficiality. Students commonly enter college and in many cases reach the professional schools with mental habits that can be described charitably as lax and inexact. The condition is so general among those entering the professional schools, for example, that it cannot be set down to the laxness of any one college or group of colleges but must be considered a general weakness of the educational system by which the students have been prepared. It would be unwise to attach the blame for this slackness to any one feature or castigate the whole system by selecting an educational whipping boy. Indeed the causes seem to be several, whether or not they are connected. The situation may result in part from the gradual abandonment of the old and rigorous disciplines, Latin, Greek, mathematics, and the widespread substitution for them of less exacting subjects. It is certainly to be connected with the growth of mass education and the overcrowding of many high schools. Our schools have large numbers of students who have little desire to learn and are there only because the law does not permit them to work. They have to be promoted to make room for incoming classes. The whole process makes it difficult for even the conscientious and able teacher to do effective work and standards suffer. It is easy for students to "get by" and the habit of mind engendered by four years of "getting by" in high school carries over into college.

But it would be unfair for colleges to place the blame on the secondary schools and pretend that they are without fault or responsibility of their own.
It is true that the college teacher is handicapped by the inadequate preparation and mental habits of the students whom he finds in his classes. But if they had not been admitted they would not be there. More general insistence on College Board examinations, less general acceptance of a school certificate would result in higher quality among incoming students. It would also result in smaller freshman classes and the rejection of some applicants whom the colleges would like eventually to have among their alumni. It would penalize the college with strict entrance requirements as compared with those where the admissions policy was more liberal. It is also true that the college teacher is himself often too willing to yield to circumstances and because he does not court unpopularity by being more severe than colleagues in his own or other departments marks too liberally and accepts careless work or inadequate effort from his students.

We have mentioned some of these circumstances in order to indicate the complexity of the problem. Some of the factors are beyond our control, but if we are not to adopt a defeatist attitude we must see what we can do with the situation as we find it. The facts are that students are coming to college less well prepared than a generation or two ago, not having passed through the old disciplines which taxed the mind and developed habits of precision. They have more general information, more general science, more current events, more superficial reading, but are content with general impressions which they can express only in equally general terms. Some indeed have not learned to read adequately--to apprehend ideas sharply, to recognize the sequence of thought in an article or chapter, subject it to critical judgment, and arrive at an intelligent opinion of the conclusions reached. Ten percent of incoming freshmen are shown by tests over a period of years to be in need of remedial work in the reading clinic. How can we make up for these deficiencies during the four years in college?

The problem is not insoluble. Graduates of our engineering schools, it may be said, seem to have arrived at habits of exactness and the ability to
think sharply in technical matters, possibly because their work in mathematics and science so generally consists in the solving of problems. There would seem to be no reason therefore to think that students in other schools, including the College, could not develop comparable habits and powers of mind if required to do so. The problem seems to be one of (a) classroom methods and (b) standards. The student must be made to think, to grapple with ideas, to change the attitude of passive receptivity for one of active participation. Habits of precision, clear reasoning, and exact statement need not only to be insisted on but cultivated. And here we come to the heart of the matter. We cannot accomplish these ends while we lecture to large classes. Lectures have their place, and an important place, in college teaching. Their function is to clarify and stimulate, to awaken interest as well as satisfy it. But any method whereby the teacher does all the work will inevitably fail to achieve a real interchange of thought. The power of reasoning is best developed by the interplay of minds, and this interplay is possible only in small groups where the student's mind can be exercised by a teacher using the Socratic method. It is the nearest approximation to Mark Hopkins and the log. A costly method of solving the problem is the tutorial system or the preceptorial system in use at some institutions. For Pennsylvania we would recommend that wherever the lecture system is employed, it be supplemented by quiz hours and discussion groups in sections small enough to make sure that every student receives a share of the instructor's attention. But the method alone will not accomplish the desired result unless accompanied by high standards. A part of what the student learns must be learned by reading and study outside the class. If the teacher accepts superficial reports on outside reading he will get superficial reports. If he is content with general impressions, vague and inexact understanding by the student, he cannot expect to receive more. Accurate and critical reading habits can be cultivated by the teacher who insists upon them and who sets a standard in class work and examinations high enough to insure them. The practice of inviting examiners from outside has
(2) A second weakness in our educational system, especially regrettable at the college level, is the apparent absence of student initiative. There seems to be little disposition on the part of the student to assume responsibility for his own education. In many cases he is content with a perfunctory participation in the educational process of which he is supposed to be the beneficiary. Yet it is hardly an exaggeration to say that no one becomes really educated until he takes his education into his own hands. Responsibility is largely a matter of maturity, and we cannot expect a young man at seventeen to have the same realization of the value of college that he will have at thirty when he is launched on a career and is the head of a family which depends on him for support. Our social system is also in part responsible for a spirit of dependence in the youth of America. So many of his decisions are made for him by his parents, the school, and (let us confess it) the college that he is not encouraged to strike out for himself. Yet the straw is often laid ready to be kindled when the right spark is applied. We can do much through the power of suggestion to stimulate the independent pursuit of knowledge, to cultivate reading outside the curriculum, to induce work beyond the assigned task. And for those who require something more than suggestion we would recommend that consideration be given to programs of summer reading, tested by adequate examinations in the fall. A further proposal will be made below in connection with the reorganization of the work of the senior year.

(3) A third weakness which we believe is particularly apparent at Pennsylvania is the diffusion of the student's effort over too many courses at one time. The organization of a large number of our courses on a one-term basis meeting only two or three hours a week results in piece-meal education with little integration. The student's interests are scattered and he has no disposition to work with intensity on anything. A superficial acquaintance with many subjects has less educational value than the thorough mastery of a few. A program made up of three or four courses would permit the instructor to make
larger demands on the student's time and to expect proportionately greater returns both in the quality and character of the work done. This is the plan of study at many other colleges and universities and we recommend that the appropriate curriculum committees make recommendations to the dean and faculty of each undergraduate school where the criticism here made applies.

47. (4) A fourth recommendation concerns more especially certain defects in the organization of the liberal arts program. It is by no means certain that we are making the most fruitful use of all four years that the student is in college. It would seem that educationally the two weakest years in the liberal arts program are the freshman and the senior years. The weakness of the freshman year is the lack of articulation with the work of the later years of secondary school. Many students feel that too much of the work in English, foreign language, history, and some of the sciences goes over ground covered--and at times covered more carefully--in school. The better the school from which the student comes, the more likely is he to have this feeling about one or more of his freshman subjects. The weakness of the senior year, in the liberal arts program as at present constituted at Pennsylvania, is that it often lacks a focus. By the time the student reaches the beginning of his last year he has generally satisfied all his group requirements and has frequently accumulated enough credits in his major subject to fulfill this part of his program. As a result he fills up his course with a variety of unrelated electives, and the senior year instead of being the culmination of his educational experience is something of an anticlimax, if not what has been described as an educational joy ride. Few advisors will have the firmness to resist what can be interpreted as a commendable breadth of interest. But some seniors seem to have adopted the motto of Alabama and given it a meaning of their own. They might have written it at the top of their course card--"Here I Rest."

48. A substantial improvement in the work of the freshman year would be effected if in each subject which continues the work of the secondary school the
students were screened by a well-planned achievement test and sectioned according to the adequacy of their preparation. This is done in some subjects; it might well be done in a number of other. Each group of students could then be carried forward at a rate which would ensure maximum effort and maximum progress, and the better prepared students might be relieved of certain requirements so that they could begin at once on more advanced work that would arouse their interest and prove more rewarding.

The problem of the senior year is closely bound up with that of the major field or field of concentration and that of honors work in the major subject. There is not a little dissatisfaction with the requirements for the honors major. In some departments the chief difference between a pass major and an honors major is that the honors major takes a comprehensive examination at the end of the senior year. Such a distinction could be made significant if the examination were independent of the particular courses taken and was the test of much independent work done under the guidance of a specially designated adviser. It may be questioned whether a student should be graduated with honors on the basis of supplementary work rather than distinguished performance, and therefore whether all students should not meet the same requirements in the major subject. In any case, we feel that the senior year should be the most important year in the student's college career and that its importance should arise from the fact that it marks the culmination of his work in his field of concentration. Two things might bring to a focus this work in the major field: (1) a senior essay similar to that required at the University of Chicago (and elsewhere); (2) a seminar which would demand much of the student's time and would draw together the knowledge previously acquired in courses pursued as separate entities. The essay would be on a topic of substantial character and scope and would involve much independent reading and study. It could be effectively related to the program of summer reading recommended in a previous paragraph. Other plans might be better adapted to certain fields of concentration and might suggest themselves to a committee
charged with the study of the problem. We recommend the appointment of such a committee.

50. (5) Finally, certain general questions have arisen in the minds of one or more members of the committee. One is whether the more vocational schools are providing sufficiently for the general aims set forth above under "The Function of Undergraduate Education," whether with the pressure for more time in which to cover the ever growing body of technical knowledge we have moved away from the concept of a well-balanced education. A second question is whether we are doing enough directly to refine the speech and manners of those who come to college from an environment of limited cultivation. One is often distressingly aware of the incongruity between the intellectual accomplishment at the end of college and the lack of cultivation that manifests itself in personality and speech. The presence of large numbers of veterans in college today is likely to make the problem more pressing for several years to come. And finally it is troubling some of us that the development of the proper moral code is left so largely to chance. This is not the vexed question of the merits of the honor system. It concerns rather the question of whether we are doing all that we could do to develop in the student body an attitude in little things--pride in the campus, respect for property, regard for the rights of others--which can become a part of one's habitual social attitude and be carried over into later life. They are mentioned here only as points to which further consideration might be given.

The Goal of Pennsylvania's Undergraduate Program

51. It may be well before passing on to others parts of this report to ask ourselves what kind of men and women we wish to turn out as graduates of Pennsylvania. We have heard much in recent years about the common man, common in the sense that he breathes the universal air, listens to political speeches over his radio, and casts a mighty vote, common also in the sense that he greatly outnumbers the uncommon man. Democracy has courted him, political
creeds have taken his name, and a gigantic nation has been developed on the
power which he wields. But without the exceptional man, the brilliant
thinker, the individual with the capacity to direct and organize the work of
others, humanity would be helpless, especially in times of national emergency.
At this very moment the nation that best exemplifies the political philosophy
of the proletariat is offering rewards for exceptional achievement in science
and the arts far greater than those held out in America. We have reason to
be grateful that the American way of life, when this country, reluctant and
unprepared, was precipitated into a deadly struggle for the survival of that
way of life, had in the past provided a sufficient number of trained minds
capable of directing vast military operations in Europe and the Pacific or
the equally vast scientific operations of the Manhattan Project. It is un-
thinkable that in the future we should not make sure that for the good of the
common man we will produce a sufficient number of uncommon men, the men upon
whom, as Carlyle reminds us, the progress of the world depends.

The capacity to direct others depends upon factors not easy to define.
There will always be great men, like Lincoln, whose achievement depends upon
innate qualities and the opportunity which gives them play. They are as in-
explicable as the creator of Hamlet, and they cannot be predicted or created
by any known process of education. Yet education can do much, and it is our
only hope for a future unwilling to throw itself on the mercy of blind chance.
It can produce a steady stream of well-informed men and women, trained to
think clearly and vigorously. It can give them the breadth of view and the
soundness of judgment that can serve as a stabilizing element in a world that
greatly needs stability. It can give them such competence in some field of
thought or action that they can undertake a problem or a job not with hesita-
tion but with confidence. It can cultivate in them the power of organization,
the capacity to see what needs to be done and make the plans and devise the
methods necessary for doing it. It can bring them to the point where routine
action ends and creative activity begins, the product of vision. These are
powers of the exceptional man, the powers upon which the welfare of the common man depends. They are sometimes called the capacity for leadership.

It is to the cultivation of such powers and the moulding of such men that the educational policies of the University of Pennsylvania should be directed.
University of Pennsylvania
Committee on Educational Policy and Planning

I. The Future of the University

1. Plans for the future of the University must start from the point at which we have arrived after two centuries of growth.

2. The University has an obligation to serve the local community, the surrounding region, and the country.

3. The functions of a university are on three levels: undergraduate, professional, post graduate (including research).

4. Summary of these premises.

5. The need of a university (as opposed to a college) for specialists and scholars distinguished in research.

6. The conditions necessary to attract and hold a distinguished faculty.

7. The University has preeminence in the post-graduate field and in research in this area and must continue to supply the need for specialists for many years to come.

8. The professional schools, already great, must be kept great.

9. Undergraduate education considered more fully in next section. We confine ourselves here to two topics:
   Educational opportunities for women (separate report here)
   Adult education (separate report here)

II. The Function of Undergraduate Education

10. Undergraduate education in a large university (vs. small college)

11. The five general purposes of all undergraduate education:
   (a) transmit accumulated knowledge
   (b) develop the powers of the mind
   (c) cultivate the aesthetic sense
   (d) promote social responsibility
   (e) nourish spiritual and ethical character

12. These ends are not achieved solely in the classroom.

13. Liberal education an essential ideal in all undergraduate schools.
III. The Future of the College

14. College education generally considered a personal asset, but
15. Liberal Arts education is on the defensive
16. Competition with vocational programs
17. A substantial interest in cultural things the mark of a small minority
18. Preferred position of liberal arts at some institutions
19. The end served by the liberal arts program has undergone a gradual change
20. Need for promoting a better understanding of its purpose
21. Three motives for a liberal arts education: (a) self-development
22. (b) Preparation for professional and graduate schools
23. (c) Preparation for a vocation
24. Colleges are vocational
25. College offers preparation for a great many careers. Need to stress this fact.

IV. Proposals concerning the Curriculum of the College

26. Previous discussion and experiment
27. A proper balance must be struck between prescription and liberty
28. The group requirements
29. English
30. Foreign Language
31. Natural Sciences
32. Social Sciences
33. Physical Education
34. Latitude allowed within the plan
35. Summary of aims in group requirements
36. Profile examination suggested
37. Choice of a field of concentration
38. The organization of the major; comprehensive examination
39. The traditional Pennsylvania program, reshaped

V. Proposals for the Correction of Defects in our Educational Procedures

40. (1) Certain weaknesses inherent in the American educational system.

41. Superficiality - its causes in secondary school
42. Colleges not without blame
43. The Problem for the Colleges
44. Not insoluble

45. (2) Lack of student initiative and a remedy

46. (3) Diffusion of student's effort over too many courses. Remedy

47. (4) Weakness in the program of the freshman and senior years.
48. Suggestion for improving freshman year
49. Suggestion for strengthening senior year (and the major)

50. (5) Some general problems

VI. The Goal of Pennsylvania's Undergraduate Program

51. The common man vs.
52. The leader