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# HIGHER EDUCATION

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By

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BUREAU OF EDUCATION

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# HIGHER EDUCATION

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## HUMAN PRODUCT OF THE COLLEGES

The manufacturer shapes his raw material in order to create a product that will meet a definite demand. He modifies his product in quick response to changes in demand and tries to anticipate such changes whenever this is possible. He markets his product himself or through a related organization. To insure proper use and to make repairs in case of breakdown, he "services" it after it is in the hands of the consumer. In other words, the business process is controlled by the necessity of getting the product into use and by its behavior in use.

The colleges, which by analogy may be regarded as manufacturers of a human product, have in the past largely neglected many of these processes. They have, to a large extent, contented themselves with shaping their materials by traditional patterns. They have not been highly sensitive to the fact when these patterns became or threatened to become obsolete. Even in the professions and technical fields of education relatively less attention has been paid to the life occupation of students than the manufacturer pays to the services that his product will render. The arts college has frequently repudiated all concern with the means by which its graduates shall earn their living. More important still, the colleges have seldom studied the society in which the student will live in order to determine the elements of knowledge and character which, in his world, will make for personal happiness, rich experience, and social usefulness. They have rested content in the faith that studies derived from the medieval period are still necessary to make life useful and happy in an age of cheap printing, swift transportation, machine production, and universal public education.

There would be no excuse for these statements in a survey of recent tendencies in higher education if it were not clear that the colleges and universities are now recognizing these facts and are taking measures to adjust their work to present conditions of living and of employment.

University leaders themselves are most emphatic in the statement of their realization of these maladjustments. Dean Hawkes, of Columbia University, for instance, sums up his critical judgment of colleges: "There is no doubt in my mind that the American college has failed more signally in relating the student's education to the kind of life that he is going to live than in any other direction." President Hall, of the University of Oregon, in his study of the relations of the university to the State, reports: "I repeatedly encountered criticism from our alumni that we were not doing our full duty by them in helping to locate them in positions when they graduated and in helping the men located in backward communities into better jobs after they have developed their capacity for promotion." Expressions of this kind might be multiplied, and analysis would show that they are almost equally divided between the obligation of the college to train and place its graduates in positions where they may earn a living and the responsibility of the college to provide these graduates with the knowledge and attitudes of mind which will make their lives full and useful in any community in which their lot is cast.

It is easily possible to prove, backward as the colleges have been in realizing their full usefulness, that four years of college work will enable the college graduate to make many thousands of dollars more during his life than the high-school graduate can make. This fact, however, is of no more significance than if the manufacturer should state that his profits were \$100,000 a year when they might have been \$1,000,000 if he had improved the usefulness of his product, his marketing methods, and the service given after the product was sold. Colleges are therefore now beginning to study seriously the world in which their graduates will live in order to prepare them better to earn their livelihood in that world, and to adjust themselves happily and usefully from the personal and social standpoints.

Everywhere increased interest is being manifested in the life occupations of students. Washington and Lee, to choose but one example, has made a case study of the choices of occupation by its students and the modification of these choices that result from college training. The New York College of Agriculture of Cornell University, the Minnesota College of Agriculture, and Iowa State College have recently made careful studies of the occupations of their graduates, in order to measure, to a degree, the suitability of the educational program to life interest after graduation. No element

of the survey of the land-grant colleges, now being conducted by the Bureau of Education, has attracted more attention and hearty cooperation from the institutions than the portion dealing with the occupational history of their graduates and ex-students. This interest may, in part, arise from the desire of the institutions to justify what they have been doing, but in large part it comes from the hope that a careful study of these matters may serve to direct emphasis in the construction of educational programs.

Such studies are open, of course, to the charge that educational processes lag behind shifts in occupational activity, that the program to be most useful must anticipate demand for services by the world in which the students will live. Nevertheless, it is characteristic of progressive thought in the higher educational world that it is keenly desirous of harmonizing its activities with the practical and social situations of the world outside college walls.

Placement and employment services have, of course, been offered by the colleges in more or less haphazard fashion for many years. Systematic services of this kind are now developing at a precipitant rate. Such services, even though highly developed and rendering excellent aid, may be carried on without any reference to the educational program. The process may consist merely of attempting to find positions for the product as it is, without any apparent effort to modify the process or the form of the educational offering to meet the needs of the positions in which graduates are placed. It is, therefore, especially significant that, in many instances, educational and vocational guidance and placement of students are being closely related to the activities of the college curriculum. Such efforts range from the attenuated relations implied by the creation by Middlebury College of a new office which combines the functions of director of admissions and alumni secretary to the formation of bureaus similar to the bureau of educational records and guidance at the University of Wisconsin. President Frank, of the University of Wisconsin, describes the purposes of this bureau as follows:

The bureau of educational records and guidance will go beyond the mere keeping of grades to the assembling of a wide range of information respecting the life and work of the students as the background and basis for the development of an effective service of counsel and guidance to the students—an end that is not always achieved by the prevailing system of advisers.

The bureau likewise will be the assembly point for a richly detailed fund of information regarding the nature and results of the educational processes to which the students are subjected. This will provide facilities that will make it possible for the university to keep up a continuous study of the results of its enterprises and to take its own educational pulse.

The content of instruction given in the colleges, as well as in the lower schools, has been largely imposed upon students without any very real reference to the student's own conception of values. This

is perhaps unavoidable to a degree. On the other hand, the usefulness of much material studied is so remote and unreal that the colleges themselves have had difficulty in making out a case for it. An attempt was made at Vassar two years ago to determine why college students study. The most important factors were interest in the subject and realization of the value of the work for the future. No one doubts that understanding by the student of the economic and personal usefulness of his work would transform his attitude toward his college course. Since the colleges now wish to take advantage of this factor in the teaching process, we may expect further studies of the life activities of our present social order which will result in profound modifications of both curricula and methods.

Tendencies in this direction are evident here and there. The University of Michigan Medical School has developed a plan to attach medical students in the interval between the junior and senior years to practitioners, in somewhat the same relationship as apprentices to craftsmen. Dean Cabot, of the medical school, makes it clear that the medical schools have emphasized the science of medicine from the standpoint of analyses by the chemist and bacteriologist and the physiologist, and have neglected the art which the product of the schools will be called upon to practice. They have neglected "the art by which the physician, in actual contact with the patient, estimates him as a personality rather than a laboratory animal and brings to bear upon his ailment the evidence of his senses, his judgment, and finally his scientific knowledge."

It is the attitude of the medical college rather than the specific device to which attention is here directed. A similar outlook is evident in studies made by the Iowa State College. Graduates of the engineering college were given full opportunity to criticize the education to which they had been subjected and to suggest means by which the educational program might be better adapted to the needs that they have found in actual experience. Such concern might be expected from work so definitely occupational as engineering, but similar inquiry has been made by the College of Liberal Arts of Boston University with reference to a program designed primarily to provide adjustment of personal life to society outside the occupational field.

Nor are the colleges content with increased concern over the occupational and personal needs which graduates will meet upon their entrance into the world outside. In the past the attitude of the colleges has been largely that while the student is on the campus the college owes a duty to him, but that upon graduation the relationship is reversed and the alumnus is under obligation to render service to his alma mater. At best during the college period there has been

a degree of mutual responsibility while thereafter it becomes a one-sided affair with the burden on the graduate. Colleges and universities are now recognizing that what they give the student during the years of undergraduate and graduate or professional residence is not a reservoir adequate for the needs of a lifetime. They are coming to recognition of their responsibility to the student after graduation and throughout his life.

University extension services have in the past given some educational aid to graduates. For many years the University of Wisconsin has offered postgraduate courses by extension to the medical men of the State. The regents of the University of Michigan plan by various means to keep practitioners in touch with the school and abreast of medical progress. The University of Minnesota has offered several intensive courses for dental practitioners. Similar aid through general extension has been given to graduates whose lives are not cast in the professional mold. But these services have never been systematically and consciously directed in all of the fields to which graduates go, for the purpose of maintaining the usefulness of the institution to students after they leave the campus. It is encouraging that the president of the University of Michigan announces a plan by which every alumnus shall be enrolled in something, and that the Carnegie Corporation has made a grant to the Adult Education Association to study thoroughly the obligations of the institution to the alumni.

Of necessity the facts cited in this discussion are scattered and incomplete, but anyone who has taken the pains to follow educational direction and administrative action during the past two years will recognize that one of the most important current tendencies in higher education is the desire to obliterate the sharp distinction between college life and life thereafter. The educational program is being directed to service continuously throughout the life of the alumnus. Higher institutions are becoming increasingly the source to which the alumnus turns when he discovers that he needs further training to improve his economic condition or to enrich his personal life.

#### HIGH SCHOOLS AND THE COLLEGES

It is as important that the college adjust itself to the life and education of the student before college entrance as that it shape its educational program to meet the economic and personal needs of the student after college graduation.

Not so many years ago by formal regulation and by general consent, the colleges dominated the high schools. Standards of admission were determined by the colleges and promulgated, theoretically at least, for the high schools to take or leave as they chose. We still

hear occasionally that colleges dictate to the public schools. As a matter of fact, this apparent dictation was never so serious as the formal requirements seemed to indicate. The colleges were so desirous of attendance that only in the most extreme cases did the formal requirements actually serve to exclude students. "Exceptional cases," special courses, preparatory departments, and "equivalents" provided an abundance of loopholes for admission. As college attendance has increased, this laxity in the enforcement of requirements has been stopped, and the requirements themselves made more exacting. The colleges are now in a position to refuse applicants, and they are doing so to a considerable extent.

The limitations of enrollment secured by various rules and selective processes are, however, by no means due solely to desire for educationally high standards. Before the present pressure for admission every new student meant an increase of income without a corresponding increase of expense. The point of diminishing returns has now been reached and in many instances the increase in student fees does not compensate for the increased cost to the institution. In other words, financial pressures and limitations rather than educational theory account for restrictions by the great majority of institutions. It is true that theoretical reasons have been set up, such as theories of the educational effectiveness of units of some specific size, but it may be doubtful whether these theories would be taken seriously if the expense item were not so ever present. Under these conditions a logical inference would be that the colleges might show a more decided desire than in the past to dominate the offerings of the high schools. Facts do not warrant this conclusion.

Failure to assume larger influence in controlling high-school offerings is largely due to the fact that the high schools themselves have become stronger, more self-reliant, more firmly entrenched as a respected and fundamental part of our social system. The professional spirit has developed in the secondary field to a remarkable degree. This spirit is based upon a high standard of technical knowledge concerning the teaching processes and the administration of schools. Practical experience and theoretical knowledge of educational problems are probably wider in the secondary field than in the college field. Secondary-school men no longer look upon the fact of college employment as evidence of superiority. High-school folk are more inclined to look to their own organizations and to the public department of education for aid and guidance than to accept college opinion as authoritative. An interesting example of this changed attitude of mind on the part of the public secondary schools is afforded by the recommendations of a committee of high-school men in Virginia. The group requested that "the college records of a particular high



school should operate as only one factor in the accrediting of the high school by the State board of education." In a further recommendation by the same group one may perhaps detect some reflection of resentment toward the common charge, formerly received humbly and as a matter of merited reproof, that college freshmen fail because of poor high-school preparation. This statement recommends "that the colleges having accepted high-school students on the basis of graduation from a public accredited high school shall assume responsibility therefor."

In brief, the high schools are better able than formerly to pursue their true task and responsibility of meeting a variety of objectives in the education of their pupils. Preparation for college is only one of these objectives.

Advances in elementary education, the firm establishment of public secondary education, and the desire of the colleges to adjust their programs to the needs of the life which students will live have all contributed to lack of confidence in the old plan of 7 or 8 years in the grades, 4 years in high school, and 4 years in college. The entire educational organization from the sixth grade to the attainment of the master's degree is in process of readjustment. The reconstruction of this period of education now under way has theoretical and psychological bases, but practical and immediate necessities account for the fact that theory is being given an opportunity to express itself in actual reorganization. The development of the elementary schools, of the junior high schools, and of 3-year senior high schools has compelled readjustment of college entrance requirements. Even in the East among the conservative women's colleges this is true. Wellesley, in announcing a new plan of admission in 1925, stated, "the rapid development of the junior high school movement has been one of the considerations of the college in the adoption of a more flexible scheme of admission." Previous biennial surveys by the Bureau of Education have called attention to specific and widespread evidence of such adjustment. It is not necessary to repeat the facts again.

The junior-college movement, which takes away the first two years from the traditional four-year college course and assigns them to the secondary field, has been especially significant in making the college conscious of its responsibility to the high school. Theoretical considerations place the junior-college period and program in the secondary field. The Association of Junior Colleges has affiliated itself with the National Education Association in the Department of Secondary Education. Further, actual tendencies of development align the junior colleges with public-school authorities and incorporate them with the high schools as part of one secondary education period. The most significant fact in this growth is the rapid increase in the

number of students enrolled in junior colleges for purposes other than preparation for the university.

In spite of these factors which contribute to the dignity and independence of the public high school there is no indication of desire to repudiate as one of its obligations that of preparing students for college. This of necessity must be so when in States like South Carolina, two-thirds of the graduates of accredited high schools go to higher institutions. On the other hand, the college is more willing than formerly to meet to the full limits of its abilities, the situations created by high-school determination and the obligation to accomplish its own independent purposes. The tendency is to seek common consideration of the problems of college and high-school relationships with full recognition that adjustment to high-school conditions must in large part be made by the college. This attitude is reflected in such studies as that made of the records of high-school students entering Georgia colleges and normal schools and published by the University of Georgia at the request of the Georgia College Association. The report is designed to enable high schools to determine in what departments their students show up best and weakest in their college work. But it is at the same time careful to point out that college faculties may secure aid in determining whether the work required of freshmen is above or below the normal working capacity of high-school graduates and to indicate the possibility of other adjustments to the needs of the high-school product when it is received in college. In Michigan the university has welcomed and is cooperating actively with a committee of the high-school teachers' division of the Michigan State Teachers' Association, in considering modification of the university's admission system. We have such developments as that of the bureau of school service of the University of Kentucky, under the direction of Dr. Floyd W. Reeves, designed to assist the public schools, and doubtless also hoping to learn from them. Altogether the biennium shows a much better relationship developing between the colleges and the high schools than would be expected if the independent position attained by the colleges by reason of the large number of applicants for admission were alone considered.

Although the colleges find themselves in a position where they feel that they must limit attendance, and although this limitation may take the form of setting a definite maximum enrollment and imposing selective processes in addition to submission of the ordinary 15 or 16 units of high-school credit, the colleges are attempting on the whole to enforce these restrictions in such a way as to contribute to, rather than to obstruct the attainment of high-school objectives.

During the biennium the number of colleges imposing arbitrary limitation of numbers has increased considerably. Whether such lim-

itation arises from financial stringency, as is most frequently the case, or from theories of an especially efficient size for the college unit, it is most common among private institutions. When this is true, selection of candidates is, of course, necessary if the number of applicants exceeds the limit set. This is frequently the case. Middlebury College, for instance, admitted in 1927 only 73 of 411 applicants. Although Middlebury College is an extreme example, admission of only one-half of those who apply is by no means uncommon. As a result, some concern has been felt lest educational opportunity is thus denied to capable and desirable students. Careful studies that have been made in New England and elsewhere tend to show, however, that these rejections are by no means as serious as they appear on the surface. Parents and students have heard so much of the difficulty of obtaining admission that they apply for entrance to several different colleges. In other words, the number of applications rejected by individual institutions is no real measure of the number of students excluded from college attendance.

Few public institutions set an arbitrary limit to the number that they will admit. Rhode Island State College, however, has been able to admit only one-half of the applicants under a rule imposed by financial necessity. The fact that all of the applicants measured up to the required 15 units is not regarded so seriously by public-school authorities in Rhode Island as it would be in the Middle West or Far West where the public is so thoroughly convinced of the State's obligation to provide higher education to those who satisfy the graduation requirements in the secondary field. State institutions apply selective processes much less willingly than is generally the case in private institutions. Dependence upon public taxation for support makes them more willing to accept the product of the public-school system, and in some States they are required to do so. Public taxation, of course, gives to these institutions an opportunity to increase resources more quickly than private institutions. Legislative authority must bear the burden of responsibility for failure to provide this opportunity for the citizens of the State. There is a decided difference, therefore, between the relationships of the high schools to an institution such as Vassar, for instance, and the relations to a public university such as that of Minnesota or Kansas. The president of Vassar can say what State university presidents would hesitate to proclaim—"Preparation for colleges like Vassar is so small a part of the total plan of study (in high school) that special arrangement can be made only with difficulty." Vassar indicates its desire to meet this situation by changing somewhat its admission requirements. The public institution desires and is compelled to organize curricula that will constitute a continuation of almost any high-school course. The public institution is making ad-

justments of its offerings constantly. The University of Akron presents an interesting example.

The graduates of the commercial curriculum of the city high schools in Akron had not been admitted to this municipally supported university because they did not have in their high-school work the regular college-entrance subjects. The university now proposes to meet this situation by establishing a number of short courses of study two or three years in length that will enable the graduate from the high-school commercial course to continue his work upon a college level. Such attempts to secure closer articulation with the needs of the local community, urban or State, frequently take the form of additional offerings outside the traditional 4-year college course.

One of the most interesting recommendations of the Virginia conference of secondary schools and colleges, called by the State department of education in 1927, has a direct bearing upon the coordination of high-school and college curricula. In effect the recommendation is that the colleges set up specific requirements for entrance into curricula rather than general requirements for entrance into college and that "only those requirements be made for entrance that are essential for successful progress in that curriculum." The decreasing conservatism of the colleges in limiting admission to those who satisfy traditional prerequisites is being accelerated by high-school demands such as one also made by the Virginia conference. The colleges are called upon to provide a general course, admission to which is not based on geometry, advanced algebra, and foreign language. Although in some of the middle western and western universities curricula of this character have been provided for some years, it is significant that the educationally conservative South should make a demand of this character. It doubtless reflects the infusion into an agricultural region of industrial and commercial life.

Those who are satisfied that present available methods of predicting success and of determining ability are conclusive regard careful selection of college students as essential. The selective processes used include intelligence tests, examinations, and investigations by personnel specialists, but actual admission is usually determined upon the basis of some arbitrary mathematical computation. A very common one is that of restricting admission to the upper quartile of the high-school class, but the process may become somewhat involved, similar to that of the University of Chicago, which adds to the high-school passing mark two-fifths of the difference between the passing mark and 100 per cent.

Many educators believe that failure to make careful selection of college students by these and other devices is unfair both to the

student and to the institution. President McVey, of the University of Kentucky, reflects this attitude in his statement that "the chaff must be winnowed out, else the entire system of higher education in the United States will break down." On the other hand, those who have less confidence in the final validity of our judgments based upon information now obtainable, view this tendency to selection with considerable disquiet. The president of Franklin and Marshall College, in describing the work of his own institution, says:

No attempt has been made to discriminate in the selection only of students of superior quality so as to eliminate or reject those who have been less fortunate in early training and opportunity, provided they meet the test of scholarship and character in the requirements for admission. The greatest danger in modern education is not that the gifted student may be dwarfed or hindered in his development, but rather that the one of mediocre ability may be neglected and not given a fair chance to stimulate all that is best in him. No college that is worthy of its privilege can arbitrarily drop those in the lower quarter who have acceptably passed the intellectual standards without shirking responsibility inherent in the charter of the institution.

President McVey represents a State university and the president of Franklin and Marshall College represents a private institution. These two quotations serve to emphasize that the difference of opinion is not one drawn upon public and private college lines. Alumni of the private colleges as well as of the public ones are beginning to resent exclusion in certain instances as going beyond all reason. Naturally they raise questions when they discover that their alma mater, as is true of one institution, has only 9.5 students per teacher and yet succeeds in graduating only 45 per cent of students admitted from the upper quartile of the high-school classes.

Few State university administrators are willing to place their institutions in the position of refusing to admit any very large number of graduates from accredited high schools. Nevertheless they recognize that in many cases four years of college may not be best for all who have qualified by a high-school course for admission to the university. In the past they have met this situation by the application of drastic and in some cases cruel processes of elimination after admission to the college. During the biennium a marked increase of dissatisfaction with this process may be observed in the comment of presidents and deans. The tendency is apparently to turn to the development of junior colleges or lower divisions and of other terminal curricula shorter than the traditional 4-year course, and to provide for the shifting of the students whom guidance programs failed originally to assign properly.

The outstanding tendencies with reference to high-school and college relations during the biennium have been recognition on the part of the colleges of the strength of the position of the public high schools, willingness to consider adjustments on the basis of facts

rather than upon the basis of theoretical or traditional curricula, and the cooperation of both high school and college in the creation of new units of organization and instruction in the field that lies between the junior high school and the senior college.

#### COLLEGE COOPERATION AND CONSOLIDATION

In harmony with the current desire of the colleges to conduct their work as part of one educational process with the high school and to look to the needs and desires of the outside world for guidance in the development of their educational programs are the closer cooperating relationships among the colleges themselves. One of the striking tendencies of the biennium is the increase of such cooperation.

Of course, there have always been contacts between colleges and cooperative activities through professional associations, through exchange of professors and students, and by means of interchange of publications. Recent tendencies, however, go further. In the past the association of colleges has consisted largely of common counsel for the purpose of deriving information and suggestions which each might carry back for the solution of its own problems. The tendency now seems increasingly to be toward association for the purpose of undertaking together common educational projects. In the past the competitive attitude has made it difficult to secure real cooperation for joint attack upon common objectives. Apparently there has developed recently greater desire to analyze the tasks of higher education in order to determine the responsibility of specific institutions for the performance of special functions and willingness to relinquish to and to assist other institutions in the performance of obligations outside chosen fields. The correspondence of the Bureau of Education indicates a striking growth of interest in these matters. In view of the frequent tendency of theses to lag behind actual movements in education it is perhaps especially significant that in the University of South Carolina, a Ph. D. thesis on the subject of consolidation of higher institutions is in course of preparation. The new spirit is expressed in cooperative ventures and in actual consolidation and affiliation of organizations.

It must no doubt be admitted that part of this cooperative attitude of the colleges has resulted from the abundance of student material and consequent financial pressure. But anyone familiar with the situation will recognize that changes in the entire educational organization from the elementary to the college period have contributed to this movement. Probably also the attitude and interest with reference to these matters are due in part to changes in the intellectual and social convictions of the college world. The view-

point is less individual. Scholarship cuts across and spreads over ever widening geographical and institutional areas.

It is impossible for colleges to avoid recognition of their common interest when studies like those of George R. Moon, of the University of Chicago, show that a large proportion of the students who drop out during the freshman year do so to attend other institutions; when the Western College for Women publishes the fact that its large losses at the end of the sophomore year are due to the desire of students to enter coeducational institutions; when all the colleges find that a large proportion of their students leave the regular college course at the end of the sophomore year to undertake specialization in their own institution or elsewhere. In the past, institutions have been preoccupied with attempts to prevent such shifting of students in order to preserve their own attendance at the largest possible number and to secure credit for carrying a large percentage of students through to completion. As soon, however, as the higher institutions recognize as a fact and as a desirable condition the possibility of accomplishing certain life objectives in less than four years, the values of wider student experience, and the impossibility for every institution to provide specialization in every field, the measure of the effectiveness of an institution ceases to be the proportion of its freshmen that it can graduate and becomes the ability of the program offered to meet the needs of the students it has.

It is necessary to mention but a few examples of cooperation between colleges and universities to indicate the spirit that controls a large proportion of our institutions at the present time. In Minnesota, 50 freshman scholarships are granted by the university, but these scholarships, under the regulations, need not be taken in the University of Minnesota. The university indicates to the high-school students entitled to receive the 50 scholarships that their purpose will be served quite as well if they attend any reputable higher institution of learning. In Ohio, 12 arts and science colleges in the State have an understanding with the Ohio State University whereby graduate work in certain fields is left to the university. Seven private women's colleges in the East combine to present the claims of women's colleges for financial support. Even on this most delicate subject of competition for funds there seems to be willingness to abide by the results of presentation of a common cause. Another striking instance is the case of Miami University and the Western College for Women. For various reasons, which in no way reflect upon the character of the work offered by these institutions, large numbers of students leave at the end of the sophomore year. As a result the upper classes in both institutions are small. Instruction in these classes, therefore, becomes expensive. The proposal has been made that certain classes be conducted in common, thus enabling each institution to reduce its

expenses without reducing the variety of its offerings or the excellent character of its instruction.

It is not the purpose of this statement to multiply examples of cooperation. Examination of the detailed history of higher education during the past few years will show that such arrangements have been increasing with regularity. Administrative devices have been invented for their accomplishment, and the scope of such arrangements extended to include matters that a few years ago would have been regarded as outside the field of cooperation.

It seems worth while to call attention somewhat more specifically to instances which indicate a tendency to actual consolidation and affiliation. The Bureau of Education issues annually a directory of colleges and universities. Each institution makes a report which is used in compiling this directory. The reports show that actual consolidations of institutions have been notably frequent during the past two years. Very little information has been available which would indicate the significance of these consolidations. In some cases, such as the consolidation of Newberry College and Sunderland College in South Carolina, it has been the purpose to meet the requirements of a regional association. Probably similar purposes have controlled the affiliations of the Missouri Wesleyan at Cameron, Mo., and Baker University at Baldwin, Kans., and that of Duchesne College and Creighton University. In some cases affiliations have taken place in order to secure concentration of resources. This is probably the case with Erskine College and the Woman's College of Due West, S. C.

More interesting than these examples of affiliation to meet formal standards or to increase financial strength are affiliations for specific educational purposes. Dental schools have frequently consolidated as a result of desire for higher standards and the wish to affiliate with medical schools. The example of the medical center idea, which brings together medical schools, hospitals, nursing schools, schools of dentistry and pharmacy, would seem to be spreading to other lines of activity. One interesting case of affiliation for a specific purpose is that of Western Reserve University and the Case School of Applied Science, which have jointly established an evening college in Cleveland to carry on adult and part-time activities. An affiliation for a similar purpose is that of the Sheffield Scientific School at Yale and the New Haven Branch of Northeastern University. Yale permits the use of classrooms and laboratories for the evening classes of the Northeastern University, thus serving its local community and furthering the interests of the other college.

One of the most interesting proposals is the Claremont College scheme. The purpose seems to be that of obtaining the benefits of the small college unit and at the same time securing the advantages



from the increased facilities which association provides. Thus the library, certain laboratories, graduate work, and extension activities may be carried on as common projects while each constituent college will have its own objectives and program, its own trustees, faculty, and endowment. It is a definite attempt to set up a college federation.

President Nicholas Murray Butler describes another tendency with reference to his own institution that is by no means confined to Columbia:

It is quite within the bounds of possibility that during the next generation both Columbia University and other universities that have the inestimable advantages of an urban situation may find themselves surrounded by a whole group of junior colleges that have sprung up as the result of their several influences and inspirations. The administration and oversight of a group of such junior colleges would present no serious difficulties and their teaching positions would naturally be filled, chiefly at least, by men and women trained at the university under whose auspices they had been brought into being. Junior colleges, wherever they are, will do well to seek university affiliation.

New York University, Boston University, the University of California, Vassar College, Rutgers University, and others, perhaps, have entered into arrangements of affiliation with junior colleges or are undertaking the development of junior colleges as branch institutions.

In some instances this relationship of the junior college to central institutions has developed or tends to develop from the extension activities of the institution. Extension classes are established in various centers. As they develop and the programs become extensive and the attendance large, the economical thing is to establish them as affiliated resident junior colleges.

The branch institution is, of course, no new thing. The University of Idaho has for many years had a branch junior college at Pocatello; the Texas Agricultural and Mechanical College has branch colleges; the Agricultural College of Utah conducts a branch junior college at Cedar City; both the Colorado Agricultural College and the University of Colorado have participated in the establishment of affiliated branches. Instances of this kind might be multiplied.

In some cases affiliated junior colleges tend to become 4-year institutions without destroying the relationship. Few instances have arisen, however, in which a 4-year college has been adopted by a larger institution and maintained as a separate unit. The merger of St. Stephen's with Columbia University, therefore, is especially interesting. St. Stephen's College is located 90 miles from New York City and has been successfully operated in affiliation with the Episcopal Church for many years. Columbia University limits its attendance in Columbia College to 2,000. It has over three times

that number of applicants for admission each year. One of the purposes of the merger of St. Stephen's with Columbia is to enlarge the field of undergraduate education without affecting the limits placed upon Columbia College. St. Stephen's will enable Columbia to conduct another unit of very different character from Columbia College. St. Stephen's will have the advantages of a small country college limited to 250 students.

Columbia University and Union Theological Seminary have been affiliated to a greater or less degree for many years. Recently, however, owing to the fact that the State department of education would not extend the privilege of granting the master's and doctor's degrees to the seminary, this affiliation has been made closer. It is very important for missionaries and for women who teach the Bible in denominational schools in this country to have the master's and doctor's degrees. They secure the training for their special work in the seminary. Columbia and Union have recently made an arrangement whereby the university will grant advanced degrees for work carried on in the seminary.

Attention has been called in previous biennial reports to the tendency of various groups to affiliate and consolidate their work. Examples of this kind are the merger of the Catholic colleges in and near St. Louis with the College of Arts and Sciences of St. Louis University. The autonomy of the several affiliated colleges is preserved but the degrees are granted by the university. The Arkansas Methodist Educational Commission has adopted a proposal to unify the work of the colleges under its control. It is proposed to establish a central university and to reduce the three Methodist colleges—Hendrix, Galloway, and Henderson-Brown—to the rank of junior colleges. The institutions will be under a single board of trustees. Competition for students will thus be reduced.

Church boards are increasingly employing educational advisors and supervisors for their groups of schools who will serve to render aid and to guide the development of the individual institutions in harmony with the common purposes of the group and in such a way as to prevent undesirable duplication and competition. Surveys of entire groups of church institutions and continuous surveys under competent central direction are enabling small institutions to obtain the advantages of self-knowledge which have in the past been largely confined to large colleges and universities.

A recent development is of special interest as indicating the affiliation of institutions for the purpose of rendering a common community service in an effective manner. New York City has had two colleges—the College of the City of New York and Hunter College—both in the borough of Manhattan and each with its own board of

trustees. The demands upon these two institutions tended to exceed their capacities. Every borough of the five in New York City therefore demanded a college similar to the College of the City of New York or Hunter. Bills for five new colleges were before the legislature in 1924, which, if granted, would have given the city seven colleges with seven separate boards of trustees and seven groups applying to the city for funds. In response to these demands and in order to prevent the evils of competition and expenditure which would result from such an arrangement, a board of higher education has been set up in which ultimately all the boroughs will be represented. This board will administer the whole situation and is proceeding to set up a system of colleges which will be known as the College of the City of New York, although each constituent portion will have a distinctive name.

Although little comment has been aroused, these attempts at cooperation and affiliation have been effected in sufficiently scattered portions of the United States and upon a sufficiently large scale to indicate that a new form of organization is being developed in higher education. The tendency to association and affiliation seems to be developing for the purpose of perfecting the selective processes of the stronger institutions and for the purpose of serving as feeders to their advanced work, for the purpose of strengthening the faculties and prestige of the weaker elements, and, above all, for the purpose of covering the entire demand for higher education in an economical and efficient manner.

#### SPECIAL PERIODS AND SERVICES

To most people college work means study pursued nine months each year for a period of four years. This conception is entirely inadequate to cover the present day activities and services of universities and colleges. The variety of periods, courses, and services which do not harmonize with the popular idea of the activities of the university, is startling to anyone unfamiliar with developments during the past 15 or 20 years. Summer schools, research bureaus and stations, conference groups, short courses, institutes for special groups of interest from child welfare to tax problems, municipal reference bureaus, reading and club service, and many other forms of educational and expert aid are given as a result of the assembly of personnel and equipment for the education of resident undergraduate and graduate students.

The desire of the universities to utilize these resources for wider usefulness has led to considerable confusion. The place of these services in the institutional organization is not clearly defined. The administration and the offerings are not regularized or standardized.

Participation of college faculties in these activities is frequently not regarded as on the same basis as is "regular" class and laboratory work or research. Financing is usually a thing apart from the financing of other activities of the institution. It is not the purpose of this discussion to treat of the summer session as such but it serves conveniently as an example of a highly developed educational period and service of the character under consideration. It has attained a development that presents characteristics which may indicate tendencies in the development of other special periods and services. The summer school perhaps most clearly represents the present tendency in the adjustment of these "extra" activities to what is known as "regular" work.

From the standpoint of institutional organization and function, summer school is in a stage of transition. In spite of attempts to make it so, it has not been placed upon the same basis as the regular quarter or term. Even in the institutions in which the summer school is formally designated as a fourth quarter, administration frequently continues to be special; the faculty in large part is assembled for what is regarded as an extraordinary purpose; offerings, even when regular resident courses are reproduced, are supplemented by special offerings; and the regular offerings themselves are modified to a considerable degree to meet the more concentrated efforts of a different class of students. The summer quarter, therefore, still retains its character of a special period offering special work for groups with basic interests different from those of the "term time" resident graduate and undergraduate student body.

The student body of the summer school is, of course, largely made up of teachers and other types of workers who are free for a relatively short period. The school for women workers in industry, which has been running at Bryn Mawr for several years, a similar school recently inaugurated by Barnard, and the International Institute conducted at Williams, are examples of other types of special summer session service. Special periods and courses are primarily intended to render educational service to those who are actively employed, and to those who wish to correct deficiencies of past educational experience.

All of these services have experienced a tremendous growth within recent years. The increase in attendance at summer school is illustrative, although probably even less remarkable than participation in the benefits of some of the other activities under discussion. The summer school at the University of Michigan has almost trebled in the past 10 years; from 1918 to 1927 the attendance increased from 1,301 to 3,811. Everywhere attendance in summer schools has increased more rapidly than general attendance upon the regular sessions of the institutions, although the growth of the latter has been

so remarkable as to constitute the starting point for much of the educational discussion of the past few years.

One feature of summer-school attendance is especially significant—the increase in the proportion of graduate students. In Michigan over one-fourth of the summer-school students in 1927 were securing graduate credit. The percentage of summer enrollment in the graduate school increased from 11 per cent in 1918 to 27 per cent in 1927, and the per cent with college degrees increased from 21 per cent in 1918 to 41 per cent in 1927. Similar increases in the graduate field are shown in the University of Minnesota where the growth has been from 11.6 per cent in 1924 to 16.2 per cent in 1927.

In the graduate and professional phases of extension activities large gains have also taken place. Extension work was formerly regarded as of subcollege, or at best, of junior college level. The increased emphasis upon professional service has already been illustrated in connection with medical and dental courses for practitioners and similar work has been growing rapidly for teachers and business men. This change of emphasis in the work offered in summer schools and other special periods is significant in that it is evidence of larger desire to render service to alumni and to establish closer connection with the needs of the world outside college walls.

Support of these special periods and services presents many problems. In general they tend to become more nearly self-supporting or even profitable than is the work of the accredited undergraduate institution. This is illustrated again by the financing of summer schools. They sometimes establish credit items upon the institutional accounts. Thus the summer school at Middlebury College operated in 1926 at a profit of more than \$2,000, and in 1927 it showed a credit balance of more than \$10,000. The latter figure should be reduced by the \$7,250 allowed for use of college buildings and the work in the general college offices, but still a balance of more than \$2,500 is shown. These amounts are, of course, insignificant as sources of income for the institution, but that any balance should be obtained from the activity of an educational institution not conducted for the purpose of profit is a new thing in education. In many respects the summer school, from the financial standpoint, may be regarded as comparable to the utilization of idle land by the erection of a building which serves as a "taxpayer," or by the practice of a manufacturer in taking on contracts during slack seasons which do not pay a profit but pay the carrying charges of the plant and serve to maintain the organization intact. Idle college plants deteriorate rapidly. The spectacle of a great educational institution standing relatively empty and unused during practically a quarter of the year is not conducive to support either from legislative assemblies or private

benefactors. President Hall, of Oregon, advances this argument in his proposal to double the budget of the summer school. He argues that to expand the summer work will utilize the plant during the fourth quarter, thus increasing the capacity of the institution one-third.

There is danger in the tendency to require research units and similar activities, which are here regarded as a type of special service to meet the entire cost of their maintenance. Research units and activities set up to accomplish specific studies in the field of industry may, of course, properly be borne by the industry itself. Such support is not undesirable unless it tends to distort the spirit of research and scientific study. Research in the social and general economic fields is, however, an activity that does not directly contribute to a going business in the same sense that research in the scientific fields may. Since research in the social fields is not directly a business matter, Government and private donation would seem to be justified in their support. Self-support of industrial research may tend to distort the scientific viewpoint; social research can not expect to become self-supporting.

The greatest need in connection with the special periods and services under discussion is recognition of these services as proper and valuable to the institution as well as to those served. To be sure, not all of the services now carried on should be continued indefinitely as college functions. In some cases it is perhaps merely the function of the institution to develop the service with the idea of turning it over to a more appropriate agency as soon as possible. Further definition and assignment of function with reference to these services should take the place of present somewhat haphazard inauguration. Indications are that this definition is now in process of formulation, not upon the basis of traditional conceptions of college functions, but from the standpoint of the relationship of the institution to the individual who does not attend college, and to the individual who continues to have problems which educational service may solve after he has left college.

Parallel to the need for further definition is determination of how far the State or regular institutional funds should be devoted to the support of these activities. Some standardization of relationship is perhaps desirable in order to prevent important phases of this work from being regarded as excrescences or asides in the life of the institution. The tendency naturally, in view of the active discussion centering about the idea that the college student should pay most of the cost of his education, is to make adults who take advantage of these services pay all the expense. Institutions that will not accept the principle of education at cost for non-resident students are frequently willing to promote special periods and services at a profit. Whether

one principle should control regular work and another work of the type under discussion, may be questioned, but the tendency is to make some such distinction.

### COLLEGE RELIGIOUS AND SOCIAL LIFE

The meaning of religion to the individual or to any group is always difficult to measure. This is especially difficult in the colleges and universities. Many factors serve to confuse judgment. On the one hand, organized effort tends to magnify the significance of religion in college life, and on the other, young people to-day in college and out tend to regard matters of this kind as more largely personal than social. Probably the conception of religion that is representative of college student opinion is that it is decency, personal and social altruism, personal self-reliance and responsibility, rather than a magical means of salvation, a series of observances such as church attendance, or a body of theological conviction. The tendency to magnify personal independence and individual responsibility may, in religious as well as in moral issues, tend to develop either intelligent tolerance or a wishy-washy attitude upon problems of personal conduct and social obligation. On the other hand, theological dogmas about which much feeling and earnest discussion centered in the older generation, may be formally accepted by reason of early training without real conviction. If this attempt to summarize discussion and comment is reasonably correct, the college attitude on religious questions differs little from that of a large proportion of the general public.

Anyone seeking to evaluate the place of religion in the colleges would naturally expect enlightenment in the report of the national student conference held in December, 1926, and published as *Religion on the Campus*. Examination shows, however, that this conference concerned itself in large part with the subject matter of religion rather than with the campus problems of religious life. The report creates the impression that it might have been just as well a conference of theological seminary students for the purpose of discussing certain technical points of their contemplated profession.

As an indication of the trend of student thought upon religious matters, the participation of students in defeating the bill introduced into the Minnesota Legislature for the purpose of preventing the teaching of evolution seems more significant. The discussion before the legislative committee did not, of course, concern the merits of the case for and against evolution, but was confined to discussion of the question, as to whether legislation upon such matters was appropriate subject matter for consideration by a political body.

The students were, with rather surprising unanimity, opposed to the legislation, not upon the grounds of religious doubt or disbelief, but upon the grounds of social and individual principles, which maintain the right of the individual to examine all aspects of thought and of the university to present for their consideration all types of thinking. President Coffman's argument against the bill did not touch the religious question at all, except to assert that the bill should fail because "it will stifle learning, cripple research, destroy intellectual integrity, doom the university to mediocrity or less, and it will not make students more religious." College students have for many years been regarded by their elders as especially prone to resent compulsion both of formal law and social pressure. It is among youth that the belief is strongest that progress may be made by challenging the exercise of authority and the enforcement of conventional practices and beliefs. The attitude of the students in the Minnesota discussion probably reflects this viewpoint of young people even more than it reflects the effect of university teaching.

When Yale abolished compulsory chapel the fears expressed on the part of those who are interested in religious life were given much publicity. Similar action by other institutions has been taken, yet no disastrous results can be noted. The president of Vassar is satisfied that voluntary chapel attendance at that institution has been a success. The number who go to chapel has been greatly reduced but there has been a complete change in the attitude toward the service and in the response to its value by those who attend.

When one turns from questions of student belief and attitude in regard to matters of religion and attempts to find an objective measure of religion in the colleges, the instruction offered in religion and related subjects, such as Biblical literature, naturally seems to offer some basis for judgment. Several studies have been made recently in regard to the opportunity for study of religious subjects in the undergraduate colleges. It is rather surprising to find the richness of the offerings in State universities and nondenominational institutions, although, as may be expected, they offer fewer semester hours in the field of religion than is the case of the denominational institutions. Inasmuch as some of the denominational colleges undertake to train religious teachers and missionaries and offer special inducements to those who contemplate entering the ministry, it becomes more significant that the offerings in these subjects in the State universities and nondenominational institutions so nearly approach those of the denominational colleges. Indeed, it would seem that the variety of offerings is probably greater in State and nondenominational colleges than in the denominational. This is, of course, accounted for in part by the fact that the denominational colleges are smaller and have not at their command the resources of



the larger universities. It is also interesting to note that the non-denominational colleges allow a maximum of free electives in religious subjects in practically the same proportion as the denominational.

It has been said that it is difficult to distinguish between the religious tone of institutions upon any basis that can be traced to the religious connection or nonconnection of the institution. Various inquiries would seem to indicate that there is more difference in regional attitudes than between denominational and nondenominational institutions in the same region, if great national institutions, such as Harvard, Princeton, and Chicago, are omitted from consideration.

Drinking in the colleges of the United States has received much discussion. Attention to drinking in the colleges has been given an amount of attention all out of proportion to student consumption of liquor as compared to that by the general public. From the standpoint of the social experiment which the United States is now trying, this is probably as it should be, since the future generation of leaders will come from the colleges and the success or failure of the experiment will depend more largely upon this group than upon the general public. From the standpoint, however, of the impression given of American college life and of present conditions as compared with those of the past, the emphasis creates a distorted view. Probably no single thing has done more to correct these impressions than the poll taken by the Literary Digest with reference to drinking in the colleges. Two hundred and thirteen college presidents replied to the questions of the magazine and were almost unanimous in saying that drinking, as they have observed it, is on the decrease. One hundred college editors replied, and as one account expresses it, "the majority of them agree with the opinion of the college presidents that youth is giving up the bottle." Drinking seems to be going out of fashion among college students. Those who knew conditions in the colleges 20 or 25 years ago have little reason for concern. While we may have lost something of our inside view of what is going on, ordinary intelligent observation is all that is required to prove the difference. In some sections of the country, for instance, in large portions of the Middle West and the South, drinking is in much the same category as opium eating. It "isn't done" by college students.

It is encouraging, also, that discussion of the tone of college magazines and other publications is receiving considerable attention. Most educators have been more concerned about the uses of print than about sumptuary observances. College papers, with the growth of interest in training for journalism, have improved in make-up

and literary style and frequently in content. The public knows little about this development. Its knowledge of college papers is derived from a few comics and jokes of the salacious or near salacious type. The Illini Weekly, of the University of Illinois, summarizes the situation briefly:

Most of these humorous magazines are quoted in anthological publications and screen digests and newspapers, and sporadically one or another of the journals, by blaspheming one or another sacred cow, erupts into the staid and sober press agencies of the country. By these means the country at large is aware that these facetiously titled "humorous" magazines exist.

The country identifies each of the publications with the college from which it issues, which is fairly important, and identifies all of them with the colleges of the country \* \* \* which is much more important. The great American people \* \* \* look on these humorous publications as barometers of the undergraduate intelligence and morals. The barometer is falling.

From the administrative standpoint, college publications have always been a source of disturbance and distress. The tendency to be daring in social, governmental, and administrative matters, the desire to shock authority in one fashion or another, and to disturb smug respectability is no new thing. In general, however, college administrations and the editorial staffs themselves are taking more frequently the position that activities of this kind, when freely self-directed, have a larger educational value than has been usually recognized, or than they can have when subjected to close administrative supervision. The belief is not simply one of the psychology of learning, but faith that students themselves through public opinion will correct and prevent abuses. The importance of individual instances, mistaken zeal, or of moral shiftlessness should not be exaggerated.

It is usually recognized that the social life of large universities is to a degree unified by common enthusiasm for athletics and other "activities." But few commentators give sufficient emphasis to loyalty to the organization and "personality" of the university itself. Probably much of the feeling of allegiance to the university, as such, arises from a certain possessive sense that may be identified in large part with the accident of residence comparable to loyalty to "my State," "my town," and "my neighborhood." The cohesive power of these loyalties is frequently strong and the source of much personal satisfaction to students. Nevertheless they do not usually satisfy the gregarious instincts of students or provide full opportunity for group activity and expression.

Class loyalty, which in part meets these needs in the smaller colleges, is relatively insignificant in the larger universities. Common intellectual interest centered about a subject-matter field or a professor creates a unity of thought and of activity that is sometimes

minimized by those who discuss college life, but is of great influence and weight. The growing importance of student professional and technical organizations and activities demonstrates this unmistakably.

The measures taken by university administrations to facilitate student intercourse and welfare—personal guidance, faculty advisors, commons and dormitories for freshmen, student unions, and similar devices—are often impersonal and do not create a single group that within itself provides for the activities and interests, the congenialities and comradeships, that self-made human circles do in the world outside. Large dormitories and immense dining halls tend to prevent the development of the group consciousness that arises from the intimacies of living and eating.

Fraternities offer one solution of some of these problems of university and college social life. As student organizations they have the advantages of being self-formed groupings and self-directed in large part. Even though there may be a degree of artificiality in their formation and conduct, this is probably no more true than with other groups organized to serve social needs. They combine the benefits of common housing and dining, of social life, of guidance in activity, and even in study. Condemnation of fraternities and their faults must be considered in the light of these advantages and of certain material facts.

There are 3,429 active fraternities and sorority chapters in nearly 700 colleges in the United States not including chapters of honorary and semihonorary fraternities. Almost 2,600 of these have college homes of which nearly 2,000 are owned by the chapters themselves. The investment is approximately \$64,000,000. Almost one-tenth of the entire college student body of the country is housed and fed in fraternity houses. The burden thus taken from the institutions is, therefore, considerable.

• Many of the evils that arise in connection with college fraternities have been due to institutional assumption of too little responsibility and authority in aspects of fraternity activity other than those connected with housing. In recent years, however, in cooperation with national fraternity headquarters, the colleges are exercising a greater degree of legitimate control and discovering means of utilizing the fraternity organization to handle details of discipline and maintenance of scholastic standards. Reports of grades of fraternity men in comparison with those of the general student body and of non-fraternity men are now quite commonly made annually and published by the colleges. Studies of national groups and of large numbers of colleges tend to show that fraternity scholarship compares very favorably with that of other groups.

## IMPROVEMENT OF INSTRUCTION

The quality of teaching in the colleges is receiving ever greater attention. The denunciation of college instruction continues. The president of Washington and Lee University summarizes in a brief statement the features of responsibility that have received most attention and the standpoint from which interest arises: "The annual waste heap of college failures . . . is, in my judgment, a severe indictment of the curriculum enforced, the methods of instruction employed, and the campus atmosphere allowed to form in the undergraduate department of our American institutions."

The bureau's biennial report on higher education for 1924-1926 describes in some detail the efforts being made to improve college teaching. These efforts arose in large part from increased interest in the individual student and were expressed chiefly in administrative measures intended to arouse the interest of the faculty and to call their attention to the development of teaching theories and practices in secondary education which appeared to be applicable to college instruction. The devices adopted to accomplish this purpose include: (1) Requirements of professional training in education as a prerequisite to employment; (2) experience in teaching as prerequisite for employment; (3) courses in education designed for college faculties; (4) faculty meetings for the discussion of the problems of teaching; (5) the formation of institutional committees for study of problems of teaching; and (6) analyses of the content of courses and statement of course objectives.

Studies of this kind are still being made and should continue to be made, although knowledge of their value is now quite widely disseminated. The more or less routine measure of the extent to which administrative devices of these types are being or have been adopted is being carried forward by a study conducted by a committee of the National Society of College Teachers of Education. This study covers general organization or administration, organization and administration of classes, methods of supervision, and changes in curricula.

Although no attempt can be made here to describe the specific measures taken during the biennium to make adjustments in the administrative field for the purpose of improving the instruction given to students, it is worth while perhaps to call attention to three or four experiments and studies in this direction.

Harvard has adopted a plan whereby departments may be permitted to discontinue lectures and other classroom work during two periods of two and one-half weeks each during the year. Both students and instructors are required to be in attendance at the institution during these periods. The purpose is to give students

opportunities to carry on systematic reading and self-directed study activities without the interruptions and restrictions of daily schedules. Although it is stated that the arrangement is designed to give the teacher more opportunity for writing and research as well as to give the student a better opportunity for study, the readjustment is of importance also as an experiment in modifying present teaching conventions.

Under a somewhat similar although less general plan, Cornell University has extended the privilege of informal study to about 50 sophomores. Under the Cornell plan the maximum number of class hours will be 15, but in addition 3 hours for informal study will be demanded in order to satisfy the requirements for graduation. Great freedom is allowed to the student in selecting the field to which he shall devote himself during the period of informal study and in determining how he shall attempt the task.

The experiment in conducting a summer school for engineering teachers which was financed by the Carnegie Corporation in the summer of 1927 has been continued during the summer of 1928 and will be continued in the summer of 1929. Schools were held during the summer of 1927 at Cornell University and at the University of Wisconsin. The work of the first school centered about the teaching of mechanics and covered the organization and content of such courses as well as the methods of presentation and testing. On the whole those who attended or participated in the work were very favorably impressed. The benefits derived seem to have been difficult to formulate but judgment by the teacher students was almost universally favorable. The second summer school held at Massachusetts Institute of Technology and the University of Pittsburgh was also successful. From the two experiences it is interesting to discover that comment and criticism indicate that more valuable results were obtained from informal exchange of experience and opinion than from the formal lectures and discussions. It was difficult to secure men professionally trained in education who could make specific applications to engineering teaching or even to college teaching. Little actual experimentation in the problems of engineering college education has been carried on. The body of knowledge, therefore, upon which to base applications and conclusions is very limited, much more so than is true of the teaching of Latin or mathematics in the high school. The practical experience of successful engineering teachers was of necessity, therefore, the most interesting and helpful source of information with reference to the problems with which the summer schools were designed to deal. Some commentators, at any rate, are of the opinion that controlled experiments in the field of college teaching of engineering will have to be carried on over a period of

years before a body of information can be collected which will serve as a real basis for the instruction of engineering professors.

—An attempt has been made at the University of Chicago to set up "an informal means of self-appraisal and development of balanced excellence in instruction." The method used in determining a standard by which the quality of instruction might be judged is exceedingly interesting. Two things were sought: First, what an instructor should do; and, second, the qualities which he should possess. The members of the committee, consisting of four members of the faculty and of five students, first prepared a list of the qualities desirable in instructors conducting lecture-discussion classes in the junior college. These suggestions and others were then tabulated and classified and submitted to 31 instructors in the junior college with the request that they indicate additions, omissions, and revisions. Upon the basis of the suggestions received the committee reclassified and revised the list which was then submitted to educational experts for suggestions. Five classifications were made in the self-appraisal form. In the order of ranking, knowledge and organization of subject matter is assigned first place; skill of instruction, second; personal qualities, third; professional development, fourth; and university cooperation, fifth. If there is validity in this order based upon the judgment of students and of faculty members, it is interesting to note that professional development and university cooperation, the factors upon which the colleges have been in the habit of placing most emphasis in their estimate of teachers, are at the bottom of the list. Of the subdivisions under knowledge and organization of subject matter, possessing a broad and accurate knowledge of the subject is given first rank, while pointing out the relations between the materials of the course and other subjects and between these materials and current affairs is fifth and last among the points listed. If the arrangement of the 11 points which characterize skill in instruction can be accepted, getting the point of view of the students and adjusting to the students' power of comprehension is assigned first ranking. Managing routine affairs efficiently, such as seating students, recording attendance, meeting and dismissing classes, and returning papers promptly, is eleventh in order. Of the 10 personal qualifications listed for self-rating by the instructor, interest in the subject and interest in teaching are the two that head the list, while freedom from personal idiosyncrasies is regarded as the least important. Probably such a rating scheme does not provide a very practical mechanism for judgment but it repays study and should prove suggestive to the teacher who wishes to improve his work. If the plan of investigation might have rested upon a

somewhat broader student base than was the case in this special instance, its force would be even greater.

Administrative devices and studies of procedure, such as those described above, lead naturally to increasing emphasis upon study and experimentation in actual teaching. During the biennium growth of such work has been remarkable. A fairly satisfactory measure of such interest is afforded by reports collected by the Bureau of Education showing the studies in education in progress but not completed during the year 1927-28. Of 800 studies 105 were in the field of higher education. Of these approximately one-fifth were concerned directly and primarily with content, aims, and methods of instruction in various subject-matter fields. No similar record is available for the first year of the biennium covered by this review nor for the studies completed in the second year, but examination of the 247 studies in higher education reported to the bureau as completed in 1926-27 shows that almost one-seventh deal with similar problems of teaching. This number would have been considerably increased if the studies in content and method of courses of professional character conducted by teacher-training institutions had been included. These were omitted since it was so frequently impossible to determine that they were directly applicable to college instruction, although undoubtedly they were in many cases. As may be expected, schools of education and other teacher-training agencies are the most active in attacking their own problems of teaching by the use of methods which they have promoted in the study of elementary and secondary school problems. Mention may be made of two or three of the studies bearing directly upon the problems of college instruction.

The University of Akron in attacking the problem of student mortality has attempted to get at basic reasons for student deficiency and progress rather than to rest content with processes of exclusion or upon other administrative devices which relieve the institution of responsibility. The committee appointed to study this matter found that one student could read and understand to the extent of 100 points in a fixed time, while another could read and understand the same material only to the extent of 20 points. On this basis the scope and extent of the work which may probably be assigned to students will vary widely. One of Minnesota's subcommittees on research, that on the teaching of science, undertook in 1926-27 to study the prevailing methods of science instruction in the various departments of the University of Minnesota. The study included the use of textbooks, research technique, conscious changes of methods on the part of instructors, and the formulation of experimental projects in teaching. The State University of Iowa in 1925-26 made a case study in

elementary psychology of the results of two methods of instruction, the lecture conference and the individualized method. The experiment was carefully controlled and supervised. The procedures adopted and the account of the study should be examined in detail by all college teachers who are desirous of conducting experiments along these lines. The results of the experiment conducted at the University of Iowa led to the tentative conclusion that these two methods are equally effective in teaching this particular subject. The advantages of either method must therefore be sought in differences of expense and of administrative difficulties. It is true, however, that the tests applied do not measure adequately differences of growth in character and initiative on the part of the students in the two types of activity.

One publication that has great immediate practical suggestion for the individual college dean or teacher who wishes to attack the problems of college teaching is a little book edited by Prof. Sidney L. Pressey, of Ohio State University, called "Research Adventures in College Teaching." The studies reported vary in seriousness and importance. None is so extensive or so difficult as to discourage repetition or improvement by any college faculty which wishes to obtain first-hand information on its own problems of teaching. The studies reported are not without considerable value in the results obtained, but their greatest importance and their real contribution consists in the demonstration of what can be done with very little expense and with relatively small effort in experimentation looking to improved instruction in the colleges.

If an attempt were made to summarize the tendencies during the last biennium looking to better college teaching methods, three points would certainly be included. First, there is greater emphasis upon willingness to try out plans for self-conducted activity on the part of the student; second, a much greater emphasis in instruction is placed upon making the student realize that certain elements of work done are merely providing tools for future activity; third, there is decidedly less satisfaction with the cramming process and more willingness to accept as the objective of instruction the stimulation of the student's own intellectual interest and activity.

Methods of instruction that are now receiving most attention all lead to the library. Of course, the library has always been considered an important element in the college, but consciousness of its central importance has lagged somewhat behind the developments which now tend to make it in truth the heart of higher education. New methods of instruction have been very important in centering attention upon college library service. In addition, the development of graduate and research work in many fields by many institutions has thrown a much greater burden upon the library. Textbook-lecture



emphasis in college instruction is giving way to emphasis upon student reading, project development, and self-directed activity on the part of the gifted student. Review of all literature, wide reading, and other methods which characterize research procedures may have been overemphasized in undergraduate instruction, but it is unquestionable that great gains have been made in the resulting departures from cut-and-dried methods.

The study of a selected group of college and university libraries made for the Association of American Universities by George Allen Works and published by the American Library Association is an important and, on the whole, a successful attempt to bring forward for consideration some of the problems of college and university libraries which relate to library educational service rather than to problems of technical library procedure. Although a list of 18 of the better-known and larger institutions was selected for study, most of them known for the size and variety of their book collections, reading of the report gives as its most obvious impression the conviction that even these excellent institutions and libraries are surprisingly short of information with reference to their library service. This is true even though the study confines itself for the most part to elements of service susceptible of objective measure. The author was able to develop surprisingly little that had direct application to the coordination of the work of the student and teacher with the service of the library. In other words, it would seem that college and university libraries have, under the leadership of the American Library Association, shared with other libraries in the thorough development of the technique of handling books which so strikingly distinguishes American library service from similar service in Europe. However, few seem to know much about the larger aspects of library administration. The facts in regard to the cost of services are not available. The organization of the staff imitates that of the public library without very much conscious adaptation to the very different service of higher educational institutions. Library technique is of higher quality than college library administration. Both technique and administration have, however, made more progress than conscious and systematic coordination of teaching functions and library service.

The survey of negro colleges and universities, made by the United States Bureau of Education during 1927-28, emphasized the library service in these institutions. The development of a high type of instruction by these institutions is clearly and unmistakably dependent upon a prior development of an adequate and intelligent educational library service. This problem was made the subject of a conference on negro libraries called by the American Library Asso-

ciation in February, 1928, and participated in by representatives of the Rockefeller Foundation, the Carnegie Corporation, the Bureau of Education, and representatives of college and State library services. In so far as the conference concerned negro college libraries, the most important conclusion reached was that the relatively undeveloped condition of both negro libraries and of negro higher education affords an especially promising field for experiments in the coordination of library service with instruction and with curricular development. These institutions provide a field for experiment which might bring results of tremendous value to other institutions.

### RESEARCH AND GRADUATE WORK

Any attempt to describe current conceptions of research and of graduate work in the colleges and universities is confronted by a dilemma whose horns are multiplied like those of the beast in the Apocalypse. A multitude of questions about research and graduate work in the institutions are being asked. Three questions, however, probably afford starting points for discussion which covers a large proportion of the problems involved. First, is it the function of an educational institution to sponsor and conduct research apart from its teaching program? Second, upon what basis should an institution determine the nature and scope of its graduate offerings? and, third, what should be the relationship between the research carried on by an institution and its program of graduate work? These questions can not be discussed conveniently as isolated problems. They are intimately interrelated and overlapping.

The justification for research work detached from teaching functions is not clear-cut. The public in general regards the college or university as a teaching institution. It may recognize the value of the results of research but does not see clearly what the relationship is to the main function of the institution. It may be doubted whether many institutions are prepared to present to the public from this standpoint conclusive arguments for all the types of research carried on. When special research units, such as the engineering experiment station, the agricultural experiment station, and similar organized units with limited research functions are set up, there is, of course, no difficulty in making the defense and selling the idea to the public. The case can not so clearly be made for research carried on by the instructing staff without definite financial provision. Usually defense of this phase of the research activities of an institution takes the form of assertion that it provides service to the State and Nation, adds to wealth and social welfare, and is necessary in order that instructors may be kept alive. A conclusive argument seems to be that research provides subject matter for

instruction. Usually undergraduate instruction is most prominently referred to.

Research by undergraduate college teachers is presented as an essential element of their activity, but is seldom rewarded by specific remuneration, and provision is infrequently made for it in the schedule of teaching assignments. The common expression in regard to research by undergraduate instructors is that it is "a by-product of teaching." Just what this means is difficult to determine. Much the same situation exists with reference to teachers who are also carrying on graduate instruction, although there is more recognition in pay and in allowance of time for research activities on the part of these instructors. In both cases institutions tend to expect research of the teacher upon much the same basis as they expect him to maintain his health and respectable standing in the community. The college or university in fact sponsors and makes itself responsible in only the slightest degree for the research work of the individual. Under this plan the institution gets credit for productive and creative activity of research character at a minimum of expense. Even when a certain amount of time is allowed the extent of the institution's support of individual research is ill-defined and the actual cost of carrying on research activity is impossible to determine. When an institution's research work is in large part merely individual research, the work is scattered and the different phases of such activity little related. In other words, there is in fact no program, and duplication of effort results within institutions and between institutions. These conditions tend to prevent the development of institutional specialization in specific research fields.

Common usage links research and graduate work together, but the actual connection is vague and the relationship not clearly formulated in theory or in practice. Lip service is rendered to research, but the tendency is to emphasize graduate work and to measure its value in terms of numbers and in terms of the rigidity of the processes of a formal character through which the graduate student is compelled to pass. While it is recognized that graduate work should and sometimes does have some of the characteristics of research, this is not taken too seriously and in few cases does any large proportion of the graduate work contribute to an institutional program of research.

Graduate work as now carried on is subject to two criticisms: First, it is assumed that anyone who has gone through the academic process leading to an advanced degree, preferably the Ph. D., is competent to conduct graduate work. Even this formal standard, however, is not always strictly maintained. Although condemned by formal

standards, graduate instruction is too frequently regarded as merely a continuation of course work similar to that given in the undergraduate years. Commonly, of course, a higher degree of specialization is required and various devices of method and procedure seldom characteristic of undergraduate instruction are introduced into the graduate course work. In this way some of the processes and tools of research may be acquired, but there is the minimum of the spirit of research developed. Second, when the institution's research work is largely dependent upon individual effort without specific support, the professor tends to regard graduate students as an imposition and nuisance. There is some justification for this feeling. Why should an activity that is so largely personal and conducted during time stolen so often from leisure or from possible profitable employment be exploited by the institution for the sake of its own reputation as a graduate school? This attitude is sometimes shared by units especially set up for research purposes. Their job is research. Teaching graduate students is from their standpoint beside the point. The desire of the institution to enroll graduate students sometimes burdens the research units with care of graduate students to an extent that actually interferes with their research activities. In other words, admission to graduate work in the fields of formally organized research is not determined by the number that can be used profitably in carrying on the research undertaken.

The institutional defense of its position under these conditions is difficult in the case of organized research units. In the case of individual research the institution seems placed in an even more difficult situation, especially when individual research is carried on as an extra leisure-time occupation. The institution may defend its position legitimately enough by maintaining that association in the university provides the individual professor with the atmosphere of scholarship, and that the university's equipment is made available for his work. Further, the university may well contend that even the professor with a full-time schedule of teaching does not have an overburdensome load. He is left with considerable leisure which he would not have in commercial employment. In addition, the institution is always willing that the professor have full credit for his own work and will frequently promote knowledge of such activity in a way to enhance the reputation of the individual. This is not always true of commercial organizations. Nevertheless these arguments are defensive of practice, not elements of constructive policy with reference to institutional research. They do not satisfy the professor whose position is a full-time teaching one according to accepted standards. He feels that he is being exploited to a certain extent when his personal research work leads the institution to press grad-

uate students upon him. This resentment is increased by the current emphasis upon research as a basis of employment and promotion. As has been many times pointed out, this tends to make the product of research, rather than the human student product, the more important activity in the professor's mind. The field for a wide variety of creative activity tends to be narrowed to only one type, that of research. The result is that the forms rather than the spirit of research control.

Two types of solution for the problems involved in the relationship of research and graduate work are offered. President Butler eloquently summarizes the first of these plans:

A master scholar, with his own grand and well-conceived problem before him for solution, will, if he is wise, associate closely with himself a group of advanced students who, first as hewers of wood and drawers of water, and afterwards as associates and fellow laborers, will light their lamps of scientific and scholarly endeavor at his altar and will gain the inexhaustible stimulus which comes not only from mere training in method, but from association with the rich and fine guiding personality. They will gain the inestimable benefit of being collaborators with their master upon a great central, dominating task, to which they will always look back with satisfaction and admiration.

This proposal is idealistic. It does not provide a method whereby institutions may continue to increase their graduate enrollments. It fails to take into consideration the fact that much research to-day and probably the most far-reaching is not the product of a master mind working alone with its assistants, but the product of a group of master minds attacking various phases of the same problem in cooperation and coordination. Nevertheless, President Butler's statement does indicate the necessity for relating graduate work to research and emphasizes the central position that, in the opinion of many, research should occupy with reference to the development of graduate activity.

Another proposal is that the institution definitely set up an institutional program of research and limit admission of graduate students to those who can be employed profitably in furthering this program. Limitation of the number of graduate students, such as that of Princeton, which will admit only 200, is arbitrary and apparently based on a theory of a correct proportion between the number of undergraduates and graduates rather than upon the requirements of a definite research program. Purdue University in its engineering research approaches more nearly the plan proposed. Upon the basis of the research carried on the number and the quality of the graduate students is determined. In spite of pressure the university refuses to admit graduate students in connection with this research who could be employed only in doing routine testing and noncreative labor, even though such testing and labor may employ the

methods of research. The Columbia University faculty of pure science has established a research committee "to be charged with consideration of the needs and opportunities for research in the fields represented by that faculty, and constituting that committee a supervisory committee for such researches as might be undertaken upon its recommendation." This has many of the elements involved in setting up an institutional program of research. In much the same way the graduate council of the University of Minnesota has at its disposal funds with which it can assist in specific researches. If these funds are, as is frequently the case, devoted to those projects and individual proposals which are related to a specific university program, the plan tends to develop an institutional program of research. In neither the case of Columbia nor of Minnesota, however, is the relationship to graduate work clearly developed. Similar conditions exist with reference to bureaus of business research, such as that of the University of Michigan, the educational research bureau of Ohio State University, and the biological stations at Minnesota and elsewhere. Some of the agricultural experiment stations have worked out the idea with decided success. At the University of Minnesota, for instance, investigations which constitute a true series in the field of plant, animal, and entomological studies provide a program of research, and the admission of graduate students is confined to those of such quality as can contribute to solution of these related problems.

One difficulty is determination of what the program shall be. In some cases, in harmony with President Butler's statement, the program may be determined upon the basis of the institution having in its staff a man of outstanding ability and qualifications. The graduate work of the University of Maine is largely determined upon this ground and its scope and offerings vary as the staff changes. On the other hand, the proposal is being made with increasing frequency that the scope of an institution's work may be determined for specific fields by national group consultation which will set up a series of related researches. Under this plan a national program would be divided among the institutions best qualified by equipment and personnel to undertake the research. Graduate students interested in one or the other phase of this program would be turned to the institution which undertakes to work out its own special aspect of the problem.

The whole problem of graduate and research work is intimately related to the problem of support. Under present conditions no one has a very clear idea of how much the institutions are spending for research or for graduate work. It has been stated that the average State university in America devotes 5 per cent of its income to re-

search and that the average in Western State universities is 10 per cent. The basis for this determination is not clear. Certainly it does not cover the individual research carried on in leisure time for which the institution makes only vague provision. Before the research and graduate program can be made more satisfactory, separation of the costs of research and of the costs of graduate instruction from the costs of undergraduate teaching must be worked out. This is a difficult problem and is being attacked in very few places.

The survey of land-grant colleges now being carried on by the Bureau of Education has attempted a somewhat elaborate fact-finding inquiry with reference to the costs of research analyzed into its various types. The success of this inquiry will be dependent upon institutional ability to furnish information. It is practically certain that these figures will be very unreliable for many institutions, but it is hoped that the nature of the inquiry will lead to some better bookkeeping system from the standpoint of determining these costs.

#### FINANCING HIGHER EDUCATION

Discussion of college and university support by those who are familiar with education and competent to deal with the problems involved continues, but upon an entirely different plane from that of the popular material with which for the most part the newspapers and magazines deal. This informed discussion consists largely in further initial definition of the problem and of action designed to provide funds in specific cases.

President Cowling, of Carleton College, has contributed to a definition of the problem by attempting to set forth the main items of expense needed to provide for a liberal arts college with 1,000 students; and Richard R. Price, director of university extension in the University of Minnesota, has analyzed some of the problems of support for the State university.

President Cowling attempts to determine the faculty requirements of a liberal arts college of 1,000 on the basis of accepted standards and the special study of 25 leading American colleges. In the same way he analyzes the plant and equipment needs of such an institution. Upon the basis of the figures thus obtained he estimates that a fund of approximately \$8,400,000 would be required to provide income to meet current expenses, annual additions to permanent equipment, payment of scholarships, and a revolving fund for student loans. In addition \$3,600,000 would be required to provide the plant and equipment, together with a reserve for current uses. In other words, an investment of \$12,000,000 would be required to provide education for 1,000 liberal-arts students, exclusive of those activities such as dormitories and research, which may be made self-supporting

or the object of special gifts. He estimates that the annual expense would amount to \$589,000 or to \$589 per student. This does not include an interest charge on \$3,500,000 invested in grounds and educational buildings and equipment which would amount to \$210 per student. The total cost per student would be therefore approximately \$800 per year in President Cowling's estimate. Of this amount he proposes that \$250 be paid by the student in the form of tuition.

President Cowling's estimate is extremely interesting and is a valuable contribution to the discussion of the subject. His terms are carefully defined and it is thus possible to modify and adjust his figures to meet the specific situation of any college if it is desired to do so. Probably the statement will be subject to criticism from the standpoint that the estimates are theoretical and that the figures therefore do not correspond to any specific situation. This is hardly fair criticism, since President Cowling would be the first to disclaim any intention of setting up an absolute standard. His service consists primarily in analyzing the elements of expense clearly and simply and in presenting, subject to considerable variation for specific instances, estimated amounts. If he has erred on the side of generosity it is because he has based his estimates on educational needs, tone, and ideals which are now frequently sacrificed to financial pressures.

Doctor Price briefly reviews the beginnings of support for State universities, and, upon the basis of figures collected by the United States Bureau of Education, estimates that 2.77 per cent of our national income would pay the cost of all support for public education. Of this amount a relatively small proportion goes to the support of higher education. The percentage of this support from various sources is analyzed by Doctor Price and each of the means of support discussed in some detail with reference to possibilities of increase. He emphasizes, in conclusion, the need for a careful budgeting system in order to control "unsymmetrical developments," economy in construction of buildings, and reform of taxation policies.

Gifts to the support of private institutions have continued to provide examples of extraordinary generosity and to emphasize the interest of alumni in the institutions in which they obtain their training. These sources of support are handicapped, according to President Murlin, formerly of DePauw University, by increased demands upon alumni for support of institutional activities that are not strictly educational in character. President Murlin calls attention to the fact that, while fraternity houses make a real contribution to the needs of the university student body, the amount invested in this way is large and that the source of a large part of these funds is con-



tributions from the students and alumni. Since this is so, it is difficult for the university to appeal to the same group for gifts that directly contribute to the financing of the educational program of the institution. Similar demands are made upon alumni in support of athletic programs and to a lesser degree for support of other activities. If, as seems probable, the independent solicitation of funds of this kind interferes with requests for educational funds from the same sources, the need for university and institutional control of these related activities is emphasized.

Increase of tuition and of other student fees continues, although at a somewhat slower rate than during the preceding biennium. In this connection the increase of fees by the Massachusetts Institute of Technology from \$300 to \$400 is noteworthy inasmuch as the corporation is taking cognizance of the burden which this increase places upon needy students of good ability. The authorities of the institution have favored turning back part of the tuition into a loan fund from which such students may borrow at a low rate of interest. It is interesting to note that the \$400 fee will place a much larger proportion of the burden of operating cost upon the student than is proposed by President Cowling in his analysis of the cost. Horace S. Ford, bursar of the Massachusetts Institute of Technology, states that the actual operating cost per student is \$790. With the \$400 student fee the proportion borne by him will slightly exceed 50 per cent.

The number of treasurers' reports emanating from private institutions that show, during the biennium, an actual profit from the sale and purchase of securities in which endowments are invested demands notice. The significance of these facts can not be accurately determined. It may be that better and more careful management of institutional funds accounts for profits of this character. If this is true it is an encouraging sign, since low return on institutional investment has been due frequently to lack of knowledge of the more profitable market which has a sufficiently large degree of safety. However, the number of cases in which institutions report profits of this kind makes possible the conclusion that the general rise in market prices of securities has been felt by the institutions without any special effort or virtue upon their part. If this should prove to be the case, it is highly desirable that the institutions recognize the fact. Increased return from endowment investment, under conditions of the securities market which have prevailed during the past two years, may very easily lead to commitments and budgeting of expenditures which can not be maintained if a period of depression should be encountered. The seriousness of the situation is probably not so great as the figures indicate, since reports

of profits from increased market values do not usually show a corresponding increase of income from investments apart from these profits. It is, of course, highly desirable that no speculative management of endowment funds creep insensibly into college finance.

Several interesting developments have taken place in connection with support of higher institutions by taxation. It is impossible to summarize all of these changes, but a few may be mentioned. In 1927 in Florida legislation was enacted which provided for a tax upon gasoline and other petroleum products. Of the amount yielded two-thirds will be placed in a special fund to be known as the public free school fund and one-third will be placed in a special fund to be known as a permanent building fund for State institutions of higher learning, experiment stations, and other institutions under the management of the State board of control. In addition a tax of one-fourth of 1 mill upon the dollar is levied upon all assessable property in the State, and of the returns from this tax one-third is also to be placed in the same special building fund. Further, one-third of the interest collected on State funds deposited in the banks of the State is placed in the same fund. These taxes are intended to provide adequately for a building program for the higher institutions in Florida.

In this connection the long campaign of Rhode Island State College to secure money for an adequate building program has been successful through approval by a State referendum of a bond issue for \$600,000. This proposal is of special interest, since of the seven bond propositions which were submitted to the people of the State the affirmative vote for the Rhode Island State College issue was larger than for any other of the bond proposals, except that for a bridge in Providence which practically every citizen in the State is compelled to use. This popular approval for the State college constitutes a recognition of the work of this publicly supported higher institution, which is encouraging to the cause of public higher education in Rhode Island.

The mill tax as a method of support for higher institutions continues to be advocated, although experience has shown that it frequently does not operate according to the theory. The failure of the mill tax to provide funds adequately has in large part been due to failure to increase assessments on property in accordance with actual increase in value. Part of the failure has also been due to the growth of intangible property and the failure of the mill tax to reach this class of wealth. In Oregon this condition is being corrected by legislation. In Michigan, where the university has for many years enjoyed the mill tax, the operation of the tax was limited in 1923 by imposing a maximum of \$3,000,000 a year. In 1925 the maximum

was raised to \$3,700,000. Under this plan of limitation the theory that support for the university would increase in accordance with the increase of wealth of the State was, of course, defeated. In 1927, however, this limitation was removed and the mill tax is permitted to work as it was intended. With the increase of assessment on taxable property, the mill tax in 1927-28 produced \$4,625,000, which provided an increase of \$925,000 in the operating income of the university.

One of the interesting developments in the relations of the university to the State is President Frank's procedure and policy in presenting the needs of the University of Wisconsin to the legislative joint finance committee. Two points are of special interest. President Frank emphasized that for the preceding year only 52.2 per cent of each dollar the university received came from the taxpayers. The remainder came from grants from the Federal Government, gifts, interest, student fees, dormitories, and similar activities. The true situation has been obscured in Wisconsin because income from sales and fees are paid into the State treasury and appear as new appropriations. This gives the public the impression that the entire amount is derived from taxes. Over \$900,000 is thus returned annually by the university to the State treasury. The second point emphasized by President Frank in the presentation to the committee is the fact that the university is not a self-promoting enterprise but is developed from the demand of the people themselves. In other words, the responsibility for the support of the university and its activities rests fundamentally, not with the president or the regents, but with the legislature itself. The legislature must recognize its responsibility to the people for this enterprise and render accounting to the people for the conduct of the university.

A matter deserving special attention in connection with the relations of the university to the State concerns the control of policy by State authorities. In Minnesota the State government organized a commission on administration and finance which was set up by law with a department of administration and finance. Apparently the law endowed the commission with full power to require a pre-audit of all moneys belonging to any institution, agency, or department of the State, and after the money had once been appropriated it was endowed with power to prevent any expenditures except with the consent of the commission. Thus the department of administration and finance became a kind of superboard over the regents of the university and might question the expenditure of money for purposes to which the board of regents allotted it. It would thus be in a position to define both the policies and procedures of the board of regents and what it might and might not do. The

board would become a board without power, for as soon as "the board of regents can not longer administer the income of the university in ways which the board believes will best promote the interests of the university, it becomes impotent." Since the University of Minnesota is established by constitutional authority and the board of regents is created and its powers defined by the Constitution, the question was taken into the courts. The decision recently returned held that the act of the legislature in setting up the commission on administration and finance was unconstitutional in so far as the university was concerned. Inasmuch as the funds of the university are not derived solely from State appropriations but are also derived from the Federal Government, student fees, income from trust funds, gifts, and service enterprises, control by such a commission on administration and finance would seem extremely difficult. This decision is significant for other State institutions which have felt or are feeling the attempts of political powers to determine university policy by control of the purse strings.

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