

- Judgment and Social Interaction*, L. Rappoport and D. A. Summers, Eds. (Holt, Rinehart & Winston, New York, 1971).
11. D. Deane, K. R. Hammond, D. A. Summers, *Human Judgment and Social Interaction Program Report No. 131* (Institute of Behavioral Science, Univ. of Colorado, Boulder, 1970).
 12. For similar results, see T. Earle, *Human Judgment and Social Interaction Program Report No. 129* (Institute of Behavioral Science, Univ. of Colorado, Boulder, 1970).
 13. The computer graphics programs were written by P. J. R. Boyle, J. Little, M. Marshall, and J. Wilson.
 14. The study was limited to five subjects for two reasons: (i) the results were clear; and (ii) finances were limited—the cost was approximately \$100 per subject run on the interactive graphics terminal. Full details of this study are reported in K. R. Hammond and P. J. R. Boyle (*Bull. Brit. Psychol. Soc.*, in press).
 15. F. J. Todd and K. R. Hammond, *Behav. Sci.* 10, 429 (1965).
 16. A somewhat different version of this paper was presented at the Conference on Information Systems for the Health Sciences Center, 3 April 1970, at the State University of New York, Stony Brook. The research was supported by National Institute of Mental Health grant MH-16437 and by the Commonwealth Fund. I thank F. Kern, D. Deane, and K. Will for their assistance.

Whither United States Universities?

George E. Pake

Someone has suggested dropping the first letter "h" from the title of this article. Let us hope that is only a bad joke—because some of us consider the university to be the most significant human institution for the future of free men. Yet there are knowledgeable, responsible people who have asked apprehensively, "What is the future of the university?" The question admits of speculation. But I believe that it is not susceptible to real prediction: The university's future hangs in precarious balance, and the direction in which the scale finally tips will be determined by as yet unresolved matters of institutional and, particularly, faculty government.

Where universities are concerned these days, few dare to claim expertise: I claim only involvement. I have spent 39 of my 46 years on a university campus. This is because my elementary and high school education took place in the university laboratory school of an institution now known to everyone—Kent State University. I received the B.S. and M.S. from Carnegie Tech (now Carnegie-Mellon University) and then spent a year at Westinghouse Research Laboratories. This was followed by a Ph.D. at Harvard and faculty positions at Washington University and Stanford University. For the next 7 years I was provost and executive vice chancellor of Washington University. Having just entered industry in 1970, I retain involvement as a new trustee of Washington Uni-

versity. Thus, I have seen the university from the vantage point of student, alumnus, faculty member, administrator, and now trustee. I have seen universities hold to high principle during the McCarthyist assault from without, and I have seen them stagger under recent assaults from within and, occasionally, from without. So much for my perspective.

Power Elements in the University

Whether it is possible at all to understand the present state of U.S. universities is debatable. But anyone who even hopes to understand universities must recognize that the faculty holds the de facto power in the university. Trustees, presidents with their administrative colleagues, and students each, as a group, has a modicum of power. But they can scarcely wield that power without the backing of the faculty, or at least a substantial portion of the faculty. In an ultimate, hypothetical showdown, the trustees probably could assert control by intervening in the firing and hiring of faculty and in the expulsion and admission of students. Even so, there seem to be serious doubts as to whether the courts would permit this exercise of absolute trustee power over administration, faculty, and students if there were the slightest indication that no form of due process was involved. Practically speaking, the trustees who went on such a rampage would likely find it impossible to recruit qualified new faculty and administration.

The philosophical basis for faculty power rests in the professional expertise of teacher and scholar and in the much-heralded principle of academic freedom. The practical basis rests in the implementation of the philosophy through faculty tenure and, since the 1950's, through what has been called the "star system."

Basically, the star system is the quest for well-known, internationally prestigious scholars and scientists, who help attract (i) institutional prestige, (ii) bright young faculty members, (iii) bright young students, and (iv) financial support. The Nobel laureate is the prototype, but of course there are stars in every field of academic endeavor, whether or not the Nobel bequest stipulates the field as one in which prizes are awarded. The nature of the power of these individual faculty stars emerges more clearly as one understands the diffuseness of faculty power generally and the weakness of trustees and administrators in the academic power structure. Such individual stars can exact from the administration commitments to better salaries, to an increased number of student assistants, to new office and laboratory space, and so on, simply by threatening to accept one of the standing offers they have from other star-seeking universities. How often the administrator wants to say, "Go ahead and take it!" That might soothe his frustrations. In fact, it would probably measurably weaken the university less often than faculty, trustees, and alumni may think.

Stated inelegantly but simply, academic freedom is the freedom of the scholar to search for truth, to reach his conclusions with intellectual honesty, and to retain his rights and privileges as scholar and teacher however unpopular his professional conclusions may be. The traditional example is that a Galileo or a Darwin should be allowed to hold his professorship even though the conclusions of his experimental or theoretical research, or both, are held by prevailing view to be heresy.

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I judge that, in the history of U.S. universities, society has been reasonably tolerant of the faculty member whose professional research is unpopular or painful to tender societal nerves. More problems seem to have developed around faculty members whose political activities seem to be launched from the university. In the 1950's, there were attacks on faculty members of acknowledged competence, simply because of their political views and associations. Usually it was not even alleged that these faculty members had tried to use tenure or academic freedom as a shelter for improper proselytizing within the university or outside of it "on company time." That was McCarthyism. Today, if the examples I know are typical, it seems that the issue is much more likely to be related to alleged use of the university as a base of political operation and of faculty tenure as a shelter for political activity.

Of course, the faculty member does have a relationship with his students that can be abused for political purposes. Those purposes can relate either to the national political arena or the intrauniversity arena. The standard statement of principle on this score is the "1940 Statement" of the American Association of University Professors (AAUP) (1).

The AAUP is not a union, in that it does not enter into collective bargaining over salaries. Its local chapters and the national office or its committees will, in effect, bargain collectively with the university administration in behalf of individuals or groups whose rights allegedly have been infringed upon by improper procedures in considering, withholding, or terminating award of tenure.

The AAUP's recommended practices and policies with respect to the awarding of faculty tenure have been adopted, in substance, by many of the nation's major universities. The policy calls for a maximum probationary period (nontenure status) of 7 years as a faculty member, with the institution's being obligated to notify the faculty member in writing no later than the end of the sixth year as to whether he will receive tenure by the end of the seventh year—often called the "7-year-up-or-out rule." Faculty evaluation committees advise the dean and central administration on each candidate for tenure. It is a rare dean or provost who chooses to ignore the advice of these committees, whatever he may think about the wisdom of their judgment.

I imagine an individual dean or provost could bounce one such tenure recommendation, if he has a good strong case, and get away with it—that is, survive in his job. But since no individual has tenure in his administrative post, the faculty members with tenure would probably bring enough pressure on the president to make him consider dropping a dean or provost who bucks faculty tenure recommendations more than once or twice within the space of a year or two.

Once tenure is granted, the faculty member has it until the mandatory retirement age. For example, I was granted tenure as an associate professor at Washington University when I was 28; the mandatory retirement age was 68, and, had I chosen to remain there as a faculty member, the university would have been obligated to employ me for 40 years. Commitments for 30 to 40 years based upon observing a faculty member for 3 to 5 years are not at all uncommon. Some of my industrial colleagues complain that tenure saddles the university with people who aren't mobile and who place personal security above all else. So it can, but the same kind of thing can be said of industry with respect to the unions and seniority. So long as industrial management agrees in collective bargaining to seniority rather than merit priority and to wage increases that exceed productivity increases, the captains of industry would probably be wiser to keep to themselves their advice on how universities should cope with tenure.

Tenure does protect the sincere and honest faculty member, whose scholarly work or outside political activity is unpopular, from unjust deprivation of his livelihood and professional privileges. But it has also protected some incompetent teachers and some unproductive researchers from dismissal. In the past few years, I believe there have been increasing (but still small) numbers of faculty members who use tenure as a shelter for outside political activity rather than for scholarly research, and for indoctrination of students rather than the teaching of subject matter. Failure of the faculty itself to discipline the profession with respect to these political abuses threatens both the philanthropic and legislative support of higher education. It also diminishes the attractiveness of a faculty career in the eyes of intellectually honest young people coming up through the educational process. Whither, indeed, the U.S. university?

Administrative Power

To a large degree the present dilemma of the university is bound up in the fact that administrators, who are expected to bear institutional responsibilities, are in positions of weak authority, whereas individual faculty members can become highly irresponsible while in positions of tenure. No administrative officer of a topflight U.S. university has tenure in his administrative post, whether he is department head, dean, provost, chancellor, or president. The chief academic officer is appointed by trustees, but he may be toppled by trustees, students, faculty, or even, in some instances, alumni or the townspeople adjoining the campus. Of all these constituencies whose support he would like to have, the two most important are the trustees, with the legal power of appointment, and the faculty with the de facto power of the university.

If it is surprising that I do not list students here, it is not because they are unimportant or because they have no influence, but because their influence tends to depend upon segments of the faculty or even on individual faculty members. Without some base of support in the faculty, student movements, whether aimed at beneficial change or at destruction, would have little success. The base of support within the faculty for destructive movements is usually quite small; however, it has an effect way out of proportion to its size because the faculty at large has shown almost no inclination to discipline its members or to hold them accountable under the principles of responsible academic freedom. Thus, a handful of disgruntled or frustrated faculty members can manipulate—or be manipulated by—a group of similarly disturbed students in forays against the administration or the trustees or any group on or off campus.

When confrontations with the administration are engineered by these dissident groups, the administrators have only the power of reason and the power of persuasion, neither of which is of notably high coinage with the disgruntled and disturbed elements. The importance of the issue does not really seem to matter in many of the confrontations that have erupted into larger conflagrations. The term "phony issue" seems apt for describing the particular questions about which some of the largest student movements or even riots have revolved. But so long as even a

few faculty members (and it really is a very tiny fraction of the faculty, often less than 1 percent) lend themselves to the cause, the administration is forced to deal with it as a serious issue—even though it may only be the question of whether the residence hall doors for which students have keys will be locked at 1:00 a.m. instead of 2:00 a.m. on Friday and Saturday nights.

Although administrative signatures of approval are required for faculty job offers and recommendations for tenure, this power must indeed be used sparingly, if at all, to block appointment or tenure. The administrator probably encounters at least once a year a situation in which his firsthand knowledge indicates that the university would be most unwise to grant a particular individual tenure. The *de facto* weakness of the administrator's position means that, if he cannot by indirect and unofficial means persuade the faculty committee to his view, he faces a crisis of conscience in deciding whether or not to be pressured into signing an approval that firsthand evidence leads him to believe would be detrimental to his university.

A significant power of the university's central administration lies in the influence it has in the appointment of deans and, to a lesser extent, department chairmen. However, once these positions are filled, the incumbents may act quite independently, depending upon the persuasiveness of the central administration. In addition to the power of persuasion, which varies among individuals, a university chancellor, president, or provost has two indirect but quite real powers that can operate with respect to academic issues. One is his power of the budget, through which he can to some extent control the degree of success a department chairman or dean has in negotiating an increase in the department's or school's annual budget. This budgetary power is weaker than one at first supposes: note that the administrator attempts to wield this power over groups of faculty with tenure. However, another dilution of this power is the project research (or sometimes teaching) grant from outside agencies, usually federal. It is not uncommon for more than 50 percent of the total budget of some departments to come from outside sources. The professors who have these external project grants are, of course, subject to university and granting agency regulations. Even though faculty members com-

plain that the required procedures are restrictive and a nuisance, the professors nevertheless are able to use their grant funds to cushion the effects of many budgetary decisions attempted in the university front office.

The second indirect administrative power—and the one I believe to be more important to the healthy evolution of the university—is the power to appoint members of faculty committees (except in institutions where faculties elect them). Faculty committees make many decisions that are critical to the institution. For those few decisions made by the faculty at large, committees determine the framework within which the faculty decides. Committees settle upon candidates for key administrative and faculty posts, and they develop and recommend new degree programs. As we have seen, they also make recommendations on tenure for individual faculty members.

Now even the faculty of a mediocre university contains an appreciable number of gifted people with scholarly talent, concern for students, experience in human affairs, dedication to principles of freedom and tolerance, and good judgment. It is possible that the better university has a higher proportion of such people than the mediocre university, but either kind will serve as an example for the next point. If the membership of many of the key faculty committees has been determined by the president, chancellor, or provost, then that administrator can indeed make his mark on the institution. Given even 5 years (10 years would be better), an able administrator can, through his appointments, carry his institution very far forward indeed. The reverse is equally true. I have found that a situation somewhere between these two extremes can be brought about by having the faculty elect these committees. The committees would not be as bad as those a bad administration would provide, but even a responsible and attentive faculty electorate will not come close to achieving the quality and coherence in its sequence of committee assignments that a good administration can provide. And the typical faculty electorate is susceptible to whimsy and inconsistency, as is any group of human beings whose primary interests are in their narrower professional commitments.

But the point here is not the possible shortcomings of faculties as electorates; rather, it is that an able administrator

has, in the power of committee appointment, what I regard as his best potential for achieving institutional progress. A faculty that views itself primarily as a body politic, instead of primarily as the chief instrument of teaching and research in the university, may feel that it should seize this power through an elective process, but such a trend assures a mediocre university.

Trustee Power

Someone who knew a great deal about universities once wrote that the agenda for each university trustee meeting should consist of one item—a vote of confidence in the chancellor or president. If confidence is voted, he should then proceed as best he can with administration of the university. If no confidence is voted, then the trustees have a second agenda item: to find a new leader for the institution.

In reality there will, of course, be other items on the agenda. Trustees certainly have very important responsibilities with respect to investments and business matters that affect the university's financial resources. Trustees have other vital roles to fill. They should continually defend the man in whom they have voted confidence against the carping of people in the community who do not understand the president's role and who mistakenly assume that he can, at will, hire or fire faculty and admit or expel students. In seeking the community's financial support, the trustees' moral support of the president may weigh more heavily than their financial support of the institution. Clearly, trustee moral support is likely to be accompanied by trustee financial support.

Many trustees come, quite appropriately I believe, from positions of high responsibility and accomplishment in business and the professions. But, because many of them have also had experience on the boards of directors of business corporations, they can, understandably, have misconceptions arising from their drawing too many analogies between business corporations and universities. In the first place, the president or chief executive officer of a business corporation has considerably more *de facto* power with his executives and managers than the university president has with his faculty members.

A substantial majority of the board members of a given business corpora-

tion are themselves experienced executives. Many, in fact, are officers of the corporation itself. For a university board of trustees to be analogous, it would consist mostly of university presidents, chancellors, provosts, and vice chancellors or vice presidents, with many of these administrators coming from the university itself. But this is not the makeup of a university board of trustees. Thus the university trustee knows far less about universities in general, and about his own in particular, than the corporate board member knows about his business corporation.

For a businessman accustomed to some degree of influence in his corporation, serving on a board of trustees can indeed be a frustrating experience. Trustees receive tremendous buffeting from their communities, their spouses, and their nontrustee business colleagues in the downtown clubs. They must take it, counter it, and give generously of their moral and financial support to the university. For this, they deserve gratitude, sympathy, and understanding—but not more power. Theirs is a noble calling but, as with Gilbert and Sullivan's policemen, their lot is often not a happy one.

Student Power

I have mentioned students last among the intrauniversity power elements, but not because they are unimportant. Students are the group that distinguishes a university from a research institute or from a number of other institutions of modern society. The university exists to serve students' educational needs in the intellectual sphere. Social and other needs, however important, are at best secondary: a university is not a social club, political party, or church. Student power has always existed on campuses, but it is not the ability to smash windows and melt into a crowd or to hurl a rock without being identified. Legitimate student power has some limitations: each student is a transient in the university and, to the extent that he seeks a degree awarded by the university, his bargaining position may have some elements of weakness.

To perform its educational function, the university places the student in a relationship to the tools of learning and to people who have proved themselves capable of learning and who can sometimes teach others to do so. From that point on, it is up to the student.

The university was conceived of as a place of opportunity for those who want to learn, not as a manufacturing enterprise guaranteed to mold learned people out of intellectually passive, if sometimes politically active, matriculants. Incidentally, this entire learning opportunity is placed before the student by society at considerable financial and human cost, with only a small fraction of the financial cost being borne by the student himself.

However, assuming the student wants to learn, he has a right to expect consideration, concern, and a reasonable amount of responsible attention from the faculty and administration. Over the years students have had many legitimate complaints on this score. When necessary, the particular group of students affected should band together to bring particular, specific defaults on the part of the university to the attention of the administration or faculty leaders. Students should have considerable power in this respect—and in the better institutions they always have had.

In recent years, there has been widespread representation of students on many key university committees. Where they have been appointed by faculty or administration, this has often been helpful. Where they have been elected by students or appointed by elected student leaders, the performance is variable. Delays in elections or appointments are common, holding up the functioning of university committees. It is not uncommon for students to regard student government as "Mickey Mouse" or as a pastime for those who would rather play at politics than work at learning. In such cases, the student government tends to be neither representative nor responsible. The elected or appointed committee members, therefore, may delight in throwing sand in the gears, and the whole institution can be paralyzed, or worse. Responsible citizenship in the student electorate inevitably diverts some of the energies of the serious learner away from his studies, and this poses a real dilemma for student democracy. (The same dilemma occurs with faculty teacher-researchers who begrudge the time required for participating responsibly in faculty democratic processes.)

It is now fashionable in some institutions to put a few students on the board of trustees. I have not yet heard whether such students participate in the formal trustee vote that awards them a degree, but this conflict of interest is

of limited consequence if the trustees have, as they should, delegated the determination of degree qualification to the faculty. There is, nonetheless, a disturbing note here. Students would not think representatives of Boeing should sit on a high government commission studying the possible award of the SST contract to Boeing, even though the full report of the commission might ultimately be made public. The important point is that a separation of powers is desirable, just as it is in our national government, and I see no more logic in installing a few students as voting members of the board of trustees than in giving a few trustees tenure on the faculty.

Alumni and Community Power

Alumni usually do not attempt to involve themselves directly in the internal academic affairs of the university, with the exception, perhaps, of the quasi-academic programs in athletics. Individual alumni, of course, may be appointed to the board of trustees or regents. But the real basis for alumni and community power rests in the moral support and the financial support the alumni and the community can provide.

Here the universities find themselves at the mercy of the local newspaper and, often more devastating, the local TV newscast. The slightest indication from one student phone call that a protest or demonstration is planned will bring all the camera trucks, whereas an award of major national significance to a scholar of the university is very likely to be ignored. Townspeople hear nothing about the university people who do their jobs well.

The news media make some effort to chronicle the day's events in the stock market or in major league sports. But they make no effort to give such an overview of the work of the local university. This poses a public relations problem for trustees, administrators, faculty members, and serious students who wish to nurture the delicate flower of an intellectually free, tolerant, and educationally productive university. Alumni and citizens in general must be given the opportunity to see the real university, not the one presented by the TV news or the strident press. Responsible members of the university community, particularly the trustees and the faculty, can be more imaginative

and helpful in this regard. Administrators, when not totally overcome by fatigue, are doing all they can, if my observations are accurate.

One can make a case for considering the state or federal government as a seat of power in this analysis of the university power structure. I shall, however, oversimplify the case by lumping them in with the very large national community that relates to the universities.

The ebb and flow of forces within the power structure described here has determined the evolution of the U.S. university. When one asks "Whither the university?," he is seeking a prediction of how these many forces will array themselves about the several critical issues, as well as how intensely and, from their parochial view, how effectively they will exert themselves. Even after the cursory descriptions of the power seats given here, it should be understandable that predictions are not possible.

The Role of the University

The role of the university is to provide in a free and tolerant atmosphere the opportunity for students and faculty to acquire knowledge and intellectual perspective. This implies that the responsibility of the faculty member is to engage in a balanced program of teaching and research: he has the responsibility for teaching (which, it is hoped, he enjoys and regards as a privilege) and the opportunity for discovery through research. For the student, the opportunity is entirely for discovery, through learning and research. His only obligation is to himself or, in a larger sense, to society, as he accepts the opportunity provided by society to prepare himself for responsibility later on in the real world. The last phrase is critically important: the academic institution that I feel is so essential to a free society is a sheltered, intellectually free, preparation ground for students and faculty engaged in zealous learning. As such it is not the real world, although human strengths and frailties that affect the real world will surely occur, too, in the university microcosm.

One should note that the preparation ground idea does not apply just to students. The institution's faculty has a relevance to the real world through occasional consulting roles in social in-

stitutions, business, and government. But I believe that the faculty may well have its greatest impact on our present society through a kind of social dynamic that I have not seen much emphasized—the steady flow of faculty members each year into positions of full-time responsibility in social service institutions, in business, and in government. These transfers from university faculties have a great impact on society because they often represent moves into leadership in the real world.

My view of the university as a sheltered preparation ground separates me (and most university faculty members, administrators, and even students) from the increasingly noisy chorus of voices that proclaims the university a here-and-now thing that should be an active political force in the several major social and political issues confronting the nation at any given time. Such a role obviously removes the element of shelter; the university would have to step down from the gallery of spectators and analysts into the arena with the contenders, where it would certainly be attacked by those who conscientiously differ with its position. An activist role for the university would also eliminate academic freedom, for the institution cannot advocate its chosen viewpoint with maximum effectiveness while permitting opposing views to flourish within its ranks.

Pivotal Issues for the University

There are four questions upon which the future of my kind of university will depend: (i) Can society find effective financial mechanisms that will support the university? (ii) Will the faculty accept its inherent responsibility to preserve academic freedom within the university? (iii) Can the extension of educational opportunity be free from economic, racial, and cultural discrimination? (iv) Can effective mechanisms of internal governance be devised for the university?

One of the most touted accomplishments of American democracy has been the widespread availability of higher education. The state college or university, with its very low fees, provided the opportunity for higher education to practically every high school graduate who wanted it, and the public junior college now makes the opportunity even more readily available. Along with this public system we have also had our

system of private colleges and universities. Although these institutions have needed to charge higher fees, their freedom from the broad obligations of the tax-supported institution, as well as from the accompanying pressures to be all things to all students, has permitted them to develop individuality and a freedom from the weight of numbers of students. Such diversity was once universally thought to be a good thing; many educators still believe it. Private philanthropy supported the private institution to a generally adequate extent. As one consequence, those few students who had demonstrated really exceptional learning ability and who wanted to work at learning could, through scholarship aid, attend a private institution as cheaply as the state university or college.

To the extent that the noisy groups succeed in pushing colleges and universities into the harsh real world of political, social, and economic activism, both the tax support for state universities and the philanthropic support for private institutions will dry up. No taxpayer wants his legislature to tax all of the people in order to support a particular political entity within which the taxpayer has no voice. And no philanthropist wants to give away his resources to support political action with respect to which he has no voice. After all, there are always hospitals and charities that offer the satisfaction of philanthropy with little risk of supporting unwelcome political actions. So the current wave of student and faculty effort to politicize the university strikes at the roots of its financial support.

As if that were not bad enough, the general inflation in the cost of education has accelerated. In the bidding for services of faculty members—even those who don't qualify as stars—salaries have been pushed upward and teaching loads downward, with a steep increase in the cost per credit hour of instruction. Many universities during the decade of the 1960's doubled the average faculty salary while reducing the teaching load in numerous departments by half. I would be the first to agree that, in many such institutions, the initial teaching load was too high for effective class preparation and for adequate attention to individual students, but the fact remains that the cost per unit of instruction in those departments rose by a factor of 4 in 10 years. As was stated so well by Provost William Bowen of Princeton

when he was an economics professor, the education "industry" has yet to find a way to use technology to increase the teaching productivity of the individual faculty member. This remains a major challenge to educational institutions and to the industries that are beginning to focus on education.

Another factor in rising university costs is the library. The explosion in published materials puts every university library in an impossible race to try to keep up with the rate of publication of books, periodicals, and public reports. A maximum effort means that the particular institution falls behind less rapidly than the others do. The cost of this escalating effort grows at a rate paralleling the arms race, with no end in view.

There is a new, rapidly increasing cost of higher education: the computer. Since the advent of this marvelous device, every university has had to add computer services to the other services it has provided. The cost of the computer center is comparable to that of the library, both in magnitude and escalation rate. The computer permits many advances in the natural sciences, the social sciences, and even the humanities. But this technological advance has not rendered any department or teaching position obsolete. Instead, the university has had to add a new department: computer science.

With the heightened concerns for equal opportunity, universities have been faced with the costs of laudable efforts to provide all-encompassing scholarship aid to disadvantaged students. This has imposed higher costs than before, but the costs have been further increased on some campuses as the equal opportunity movement turned itself inside out with demands for black studies programs, black residence halls, and so on.

I might also mention the damage to university facilities by rioting or bombing protesters, with attendant increases in the cost of security forces and with the sharp rise in insurance premiums or in the costs of building repairs when insurance policies are canceled.

On the income side, what can the university find that will escalate as rapidly as these costs of faculty, library, computer center, social benefits, and campus destruction? For the private university, there is only tuition, which is already so unbearably high that each increase threatens to reduce total income by discouraging too many stu-

dents. For the state university, there is the opportunity to persuade the legislature to appropriate more funds. While the university president is on the brink of physical exhaustion trying to do this, a few bands of carefree students and faculty are undoing his work many times over by means of some kind of outrageous performance or statement, usually before the local TV news crews.

In the face of all this madness, it is not surprising that many of the most capable human beings I have ever known are fleeing from university administration. But that simply intensifies the seriousness of the question: How is higher education to find viable sources of financial support? In recent years, many universities have looked to some form of federal support. But federal support seems rather unlikely while the Vice President is launching broadside attacks on students, faculty, and administrators and while Congress is subject to the same disaffection as the state legislatures.

If I had a solution to these financial problems, I should drop everything to pursue its adoption. More financial support would seem to help, but without effective administrative control over the birth of new programs and the death of old ones, any new dimension of financial support is likely to be only a palliative. Part of the dilemma, I believe, is that there are no direct incentives for those who run up the academic costs—faculty primarily, but also students—to keep costs down. A faculty member who is demanding the creation of a new department or an increase in salary one day, may be in the news the next evening making statements that most of the community (including prospective donors) are certain to regard as outrageous. He leaves to the administration and the trustees the burden of trying to overcome such obstacles in order to raise funds.

I have one plan to try to put the incentives where they belong. It is somewhat similar to a well-known retirement plan for college teachers, in that it would state each faculty salary in terms of shares or units. For example, let us suppose that the value of a unit is \$10 in a given year and that a particular faculty member has a stated salary of 1500 units. There would be a fixed total number of salary units for the whole faculty. Whenever a new position was pressed for, say, to bring in a new faculty member at 1000 units, each member of the existing faculty

would have to give up a prorated portion of his units to contribute to the new salary. Thus our 1500-unit man might receive only 1496 units next year, having given four units to help form the salary of the new man. If the value of a unit goes up, the 1496-unit salary might be worth more dollars next year than the 1500 is this year.

But the most important feature, I believe, would be the assignment of the unit value for a given year on the basis of the *previous* year's university income from tuition, endowment income, gifts, and grants. Thus, each professor would know that the actions he takes this year will affect his salary next year. If he creates a public outrage for no sensible academic purpose, he will experience real pressure from his faculty colleagues. If his actions are a legitimate exercise of his academic freedom, and if some unenlightened donors withhold donations, the faculty will support their colleague in his legitimate actions by sharing directly the cost of preserving essential freedoms. Paying in that way for their freedom might help them to appreciate it more. Whether or not it had that effect, the university would not be forced to specify in advance salary rates that it later might not have the funds to pay. And the faculty would have real incentives to help to hold down instructional and other costs, knowing that the value of each salary unit or share would benefit in the succeeding year. They might also find additional incentives, at least in private universities where tuition income is critically important, to prepare their courses conscientiously, with a view to attracting students to the university and keeping them interested.

Whether this system of a fixed pool of salary units is really practical is questionable. It points up, however, significant features of the present placement of incentives in the university and of their relation to the university financial dilemma.

A similar approach might be taken toward tuition. Financial events of the previous year could determine the amount of each tuition unit to be paid. Of course, the incentives here are still not properly placed; in most cases, the parents, not the students, pay tuition. In fact, if we are to eliminate financial barriers to admission to higher education, it seems inappropriate to use the unit share system for tuition. It would be preferable, instead, to have a state scholarship program that would pay

the tuition of any school to which a qualified student resident of the state gains admission. The number of students to qualify in each state would then be determined by a state scholarship board, through tests and high school records, and by the total sum the state legislature appropriated. This would give the student maximum freedom to choose the school right for him, whether or not it happens to be public or private. And it would let the states set the qualifications for a student to retain scholarship aid. Institutions could pass the increased costs of education on to society as a whole, not to the parent who happens at a particular time to have a son or daughter in college. I would hope some upper limit or other incentive would be provided by the state scholarship program for the college or university to hold costs down, but building that incentive into the program is a challenge. Something is needed to avoid rewarding inefficiency.

There are other complex elements in the university financial problem that I have not touched upon: the siphoning off of general university funds by federal programs that do not meet their full costs is an example (2). I have given here a capsule view of some of the factors on which the university financial future turns.

Preservation of Academic Freedom

Whether the principles of academic freedom are applicable to a particular campus controversy or not, you can be sure someone will dream up an angle that attempts to make it an issue of academic freedom. Perhaps the closest analogy to this situation that the ordinary citizen encounters is the knee-jerk reaction of the journalistic world to any criticism: call for defense of freedom of the press. There is good reason why these inventive protagonists attempt to cloak themselves as defenders of academic freedom or freedom of the press: both are precious essentials in a free society and *must* be preserved. But the privilege of a freedom carries with it a responsibility. It is my observation that these freedoms are more jeopardized by failure of the faculty and the press to meet the concomitant responsibilities than by attacks launched from outside their respective sanctuaries. The attacks will always come, but they will be effective only to the extent that the faculty or the journalists fail to police their own ranks.

The AAUP's *1940 Statement of Principles on Academic Freedom and Tenure (I)* is, in effect, the code of faculty behavior and rights under principles of academic freedom. Under the heading of academic freedom, the following three paragraphs appear:

(a) The teacher is entitled to full freedom in research and in the publication of the results, subject to the adequate performance of his academic duties; but research for pecuniary return should be based upon an understanding with the authorities of the institution.

(b) The teacher is entitled to freedom in the classroom in discussing his subject, but he should be careful not to introduce into his teaching controversial matter which has no relation to his subject. Limitations of academic freedom because of religious or other aims of the institution should be clearly stated in writing at the time of the appointment.

(c) The college or university teacher is a citizen, a member of a learned profession, and an officer of an educational institution. When he speaks or writes as a citizen, he should be free from institutional censorship or discipline, but his special position in the community imposes special obligations. As a man of learning and an educational officer, he should remember that the public may judge his profession and his institution by his utterances. Hence he should at all times be accurate, should exercise appropriate restraint, should show respect for the opinions of others, and should make every effort to indicate that he is not an institutional spokesman.

The section on academic tenure describes the general features of the recommended probationary period (not to exceed 7 years in most cases), and then includes a paragraph on termination for cause:

Termination for cause of a continuous appointment, or the dismissal for cause of a teacher previous to the expiration of a term appointment, should, if possible, be considered by both a faculty committee and the governing board of the institution. In all cases where the facts are in dispute, the accused teacher should be informed before the hearing in writing of the charges against him and should have the opportunity to be heard in his own defense by all bodies that pass judgment upon his case. He should be permitted to have with him an advisor of his own choosing who may act as counsel. There should be a full stenographic record of the hearing available to the parties concerned. In the hearing of charges of incompetence the testimony should include that of teachers and other scholars, either from his own or from other institutions. Teachers on continuous appointment who are dismissed for reasons not involving moral turpitude should receive their salaries for at least a year from the date of notification of dismissal whether or not they are continued in their duties at the institution.

Most faculty members in the United States today would, I believe, acknowledge privately that there are a number of major universities, often including their own, in which one or more faculty members are widely known to abuse the privilege of the classroom by introducing controversial matter that is not related to their subject. Where this is true, the students know it most directly (although few students have read, or perhaps even heard of, the 1940 statement). Because students discuss with their professors the classes they take with other professors, faculty members usually hear quickly about a colleague who violates the principles of the 1940 statement.

Although the AAUP statement describes hearing procedures that can lead to a recommendation for termination of tenure, I know of no instance in which a faculty has initiated tenure hearings because of abuses of academic freedom. I have recently read of dismissal hearings against four University of Wisconsin (Milwaukee) professors. If the written account is correct, charges were brought by the former president of the university, not the faculty. Why are faculties so reluctant to discipline one of their members for using the classroom to urge political action or to press viewpoints that are beyond his professional competence?

One reason is that these transgressions of academic freedom today are often pursued in opposition to the war in Indochina. Because of the almost universal abhorrence of that war by young university students of draft age, and by faculty members who have dedicated their careers to working with that age group, faculty members cannot, as a group, bring themselves to take punitive action against one of their colleagues whose violation of academic freedom is in an effort against the war. Because of this emotional commitment to a particular viewpoint in a particular situation, the faculty may have sold a basic principle of academic freedom down the river. Make no mistake: I consider our involvement in Indochina to be the most tragic and counterproductive policy this country has undertaken in my lifetime. It has not only torn Indochina into shreds, it may well have dealt similarly with our precious freedoms at home—academic freedom being perhaps the most vulnerable.

If faculties hesitate to uphold the responsibilities of academic freedom, the external world can hardly be expected to rally to the defense of aca-

ademic freedom when the next Joseph R. McCarthy attacks from outside. There may still be time for faculty and students to save the university from the situation they have allowed to develop within it. To do so, they must demand adherence to the AAUP's 1940 statement as the price of individual retention of tenure. Any group of students or faculty, or both, that attempts to curtail free and open access to the university or to interfere with scheduled classes or other regular academic events must be set down by legal and fair means. Faculty and students must protect the freedom for all points of view within the university and the rights of all members of the university community. The real test of whether or not one believes in a principle occurs when adherence to that principle forces him to allow others to defend a viewpoint or a person he opposes.

In this test of faculty-student dedication to their freedoms, it would be counterproductive for the administration or trustees to interfere. If faculty and students cannot find the inner strength to save their freedoms, the freedoms are unlikely to be saved at all. And so I urge administrative restraint, which can usually be counted upon, and trustee restraint, which is more to ask and to expect. Most of all, faculty members and students must reaffirm the principles of academic freedom through intrauniversity actions in defense of them. A clear reliance by the faculty upon principle rather than expedience is essential to the preservation of academic freedom.

The students have a similar crisis. In their understandable frustration after Cambodia and their horror and outrage at the Kent State shootings, there were moves by groups of students to shut their universities down. What relevance the so-called strike had to Cambodia and Kent State is very hard to understand, but let us suppose for the sake of argument that it was relevant. Most members of the university community, not seeing the relevance, preferred to go about their usual business of teaching, learning, and research. Then, on a number of campuses, the strikers attempted to keep other students and faculty from coming onto campus, from using their offices and laboratories, and from using the library. Which group was in the majority is not even pertinent. The frightening fact is that strikers sought to circumscribe the freedoms of those people who preferred to go about the normal business of the university. For

the most part, the strikers were unsuccessful in shutting down universities; but they were usually permitted the attempt at abridgement of individual freedoms. Again, because so many of the university community members oppose the war, they felt unable to prosecute others for this totalitarian breach of academic freedom. For expedience, a principle was lost, and it may take years to reestablish it firmly.

The various forces arrayed around the university push in very different directions on the academic freedom issue. No one can predict how the university, under tremendous strain from faculty, students, trustees, alumni, and the community at large, will move, warp, or fracture under these forces.

Equality of Opportunity

With their history of elaborate programs of loans and scholarship grants, colleges and universities have attempted for decades to give all deserving students an opportunity to go to college. The dramatic change has been in the definition of the deserving student.

It was hard enough to apply the criteria objectively and effectively when one simply sought to measure the capability of a high school graduate to do academic work. But once it was widely recognized that his capability may have been limited by poor earlier education as a consequence of his social or cultural background and the prejudices within our society against minority groups, colleges and universities have felt internal and external pressures to take on the incredibly difficult task of compensating, after the fact, for society's failings. That is a great deal to ask of insolvent institutions wracked by internal tensions and external hostilities.

Again a principle is at issue: equality of opportunity. The traditional view of the university as a free and open institution, hospitable toward and tolerant of all viewpoints, contains considerable potential for welcoming minority views and cultures. But there are threats to this freedom and openness from two sides. First is the pressure for the adoption of a political or social position to be identified with the institution as a whole. How could a university that, for example, took a position favoring one side or another in the Arab-Israeli tensions be equally hospitable to the different cultures involved? The second threat is from those who want separatist

academic programs and racially segregated residence halls, both of which are inconsistent with equality of opportunity.

If society has defaulted on the principle of equal opportunity by failing to extend to all races the same opportunities, how can the university help by not welcoming all races into all programs and all residential units? Some people feel that a period of favoritism, as overcompensation for previous discrimination, is an essential adaptive step before we can return to some kind of balance. However, I am very uncomfortable about deliberately violating the principle of equality in one direction as a cure for previous violation in another—we would still be unprincipled. The secure future of a university is difficult to visualize unless the university's cardinal principles remain intact.

Internal Governance

Unless universities can devise effective mechanisms for internal governance, they will have no means for wrestling with the three preceding issues, and the outlook will be bleak. I believe that universities now lack such mechanisms. By its very nature, the large and complex university community cannot react to any crisis or assault upon it except by delegating the power of decision-making to a small group, presumably the administrators, with advice from faculty, student, and trustee groups. Yet today any vociferous minority of faculty and students, or even alumni, can pretty well prevent an action it does not like. The administration is impotent; and among faculty, students, and the community, confusion and noise prevail. Any small group that launches a calculated and carefully planned assault on the university has a good chance of bringing learning to a halt. The institution is too weakly governed to be able to respond.

How does it happen that universities, which once could manage, now cannot? There is no simple answer, but I keep coming back to the faculty. The faculty holds the power in a practical sense; the trustees hold it in a legal sense. If the faculty were to responsibly delegate power to the administration as effectively as the trustees have in recent decades, I believe that able university administrators could, in fact, cope with today's crises. But the faculty has been unwilling to do so. As the faculty has become larger, more unwieldy, and

more concerned with individual professional pursuits, it has also become less able to exercise its powers. Where small student or nonstudent elements have brought whole institutions to a halt, they have thrived on this vacuum of power.

If the faculty delegated some of its powers, the university could be protected against unjust or autocratic administrators by having the faculty participate in periodic votes of confidence. These votes would involve the president or chancellor, and the second-ranking academic official (provost or academic vice president). At least a 2-year period should be granted between votes. With so many selfish interests engineering confrontations all around the calendar, it is too much to hope that any university's chief executive can handle them all flawlessly. But he should, on balance and over time, handle them well enough to merit a vote of confidence from the faculty. If he cannot merit that, then someone else should pick up the delegated powers. The delegation of substantial power to the executive, accompanied by protection of the faculty through its right of recall after a specified period of tenure, could be a vital step in preserv-

ing the campus as a free intellectual arena.

The forces for constructive change within the university, in my experience, are the administration, the students, and the trustees. With some exceptions, the greatest inertia lies with the faculty; I suppose it will continue that way for as long as faculty tenure remains as entrenched as it is today. (The students never seem, as a group, to understand that their natural ally for constructive change is the administration. Faculties have effectively let the administration bear the brunt of pressures that more properly should have been put on the faculty itself.)

I foresee no constructive modification of the faculty tenure system. There might, however, be a rash of trustee and regent actions attempting to revoke tenure. Such a wave of reaction would be fatal to essential academic freedoms; and it would sound the death knell for free universities. Again, I feel that reforms need to spring from within the faculty, if only it will meet its responsibilities.

Would I suggest, then, some kind of tenure for administrators in their administrative posts? Perhaps. But, as with racial discrimination, there is the

uncomfortable feeling that two wrongs (two systems of overly entrenched tenure) won't really make a right. Limited tenure (say 10 years) for the president and first vice president might well come about, if for no other reason than the increasing difficulty of convincing able men to accept the jobs. Perhaps a more practical suggestion is that the president (or chancellor) be given more explicit power over the academic structure. He might, for example, have the power to reorganize the department-school structure of the university. Even if he could not terminate tenure for an individual professor, he could rearrange the academic units within which the professors serve. If that sounds drastic, let me stress the fact that the threatened withering of our universities through loss of financial viability and violation of academic freedom within the university is not a Sunday School picnic. At issue is the survival of what have been, up to now, the freest institutions of our free society.

References

1. See, for example, a recent interpretive article on the AAUP's 1940 *Statement of Principles on Academic Freedom and Tenure* [AAUP Bull. 56, 26 (1970)].
2. G. E. Pake, "Basic research and financial crisis in the universities," *Science* 157, 517 (1967).

The Animal Welfare Act of 1970

More species are protected, protection is extended, and experimental design is not interfered with.

Maurice B. Visscher

A major piece of legislation in the animal welfare field passed in the closing days of the 91st Congress and was signed into law by the President on 24 December 1970. It has a rather long legislative history, having been developed out of hearings and action by a subcommittee of the Committee on Agriculture of the House of Repre-

sentatives in connection with a bill introduced initially by Representative Whitehurst. The final bill, H.R. 19846, was introduced by Representative Purcell, chairman of the subcommittee, on behalf of himself and 17 others, including Representative Whitehurst. Legislatively it was presented as an amendment to the 1966 Poage Act, P.L. 89-544. The new act will be known as P.L. 91-579.

There are numerous important

changes made by this new act. First, its title has been changed to eliminate the misconception that animals employed in scientific laboratories are more deserving of assurance of humane treatment than are animals used for other purposes. The act covers animals in zoos, circuses, carnivals, and exhibitions and those held by wholesale pet dealers, as well as those used in scientific study.

The major changes affecting laboratory animals in the present law, as compared with P.L. 89-544, are that it (i) includes additional species of warm-blooded animals and (ii) covers conditions for housing and care throughout an animal's stay in a research facility. The earlier act covered a limited number of species of mammals, and confined the authority of the Secretary of Agriculture over conditions of housing and care to the periods when animals were in stock and storage. The act of 1970, however, provides a specific prohibition against any interference by the Secretary of Agriculture with the design or execu-

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