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## The University in the American Future

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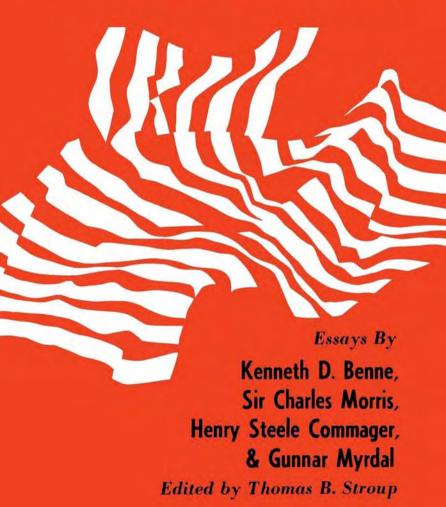




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A CENTENNIAL PUBLICATION

## THE UNIVERSITY

## IN THE

## AMERICAN FUTURE

BY KENNETH D. BENNE, SIR CHARLES MORRIS,
HENRY STEELE COMMAGER, & GUNNAR MYRDAL
EDITED BY THOMAS B. STROUP



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THE CENTENNIAL YEAR at the University of Kentucky has been a time not only for proudly reciting the University's accomplishments and for asserting its place among American universities, but also-and more importantly-for laying plans for her future. If she is to proceed wisely on her own proper course, she must take account of major trends in higher education and examine her obligations and purposes in the light of national and international requirements. What lies ahead will remain perforce in part obscure, in part unpredictable. But careful observation and clear statement of principles enable wise men in part to shape the future. Without such observation and such statements wise plans cannot be laid, and without them no university is likely to find its proper place or fulfill its obligations either to the individual man, or to the state, or to civilization.

It was these considerations which led the Centennial Committee and the University Alumni Association to set up the Conference on Higher Education as the Eighth Alumni Seminar making it a seminal part of the Centennial Program and bringing to Lexington distinguished scholars and educators to deliver the lectures and lead the discussions.

Before the Conference proper was held, Dr. Kenneth Benne, Director of the Human Relations Institute of Boston University, delivered his lecture on "The Idea of a University, 1965" at a special convocation. This lecture

in a sense prepared the way for the Conference, the general subject of which was "A University, A.D. 2000." The chairman of the Conference in charge of planning was Dr. A. D. Albright, Executive Vice-President of the University. The three chief participants were Sir Charles Morris, Vice Chancellor of the University of Leeds, Gunnar Myrdal, Professor of Economics at the Institute of International Economics of the University of Stockholm, and Henry Steele Commager, Professor of History and Director of American Studies at Amherst College. At each of three general sessions one of the participants presented a lecture. Following each lecture, the other two participants commented upon it, and questions from the members of the seminar were entertained.

The papers on higher education in this volume happen to fall naturally into the order in which they appear. Professor Benne's deals critically with the American university of the present and suggests some ways of improving it. Sir Charles Morris's paper which logically follows, relies upon the theoretical and historical backgrounds of higher education in Europe and America to point out problems of the present and propose their solutions, as well as to suggest plans for the future. Professor Commager, out of a brief look at the phenomenal changes in American higher education in the more recent past, especially the educational explosion following World War II which incorporated "non-academic" materials into the programs, draws certain conclusions about the present trends, makes certain predictions (among them that the institutes and social services of universities will be proliferated), and offers certain warnings. Professor Myrdal, concentrating especially upon present economic, political, and social conditions in the world order, emphasizes present trends, predicts that the emphasis will continue to be placed upon practical training, professional education,

and research, and likewise offers his warnings. The emphases of the essays, beginning with Professor Benne's, thus move from more general and philosophical considerations to the historical and social, which have brought about present conditions and trends, to the predictions and warnings.

If a general area of agreement stands out above others in these papers, it is that the concept of the unity of learning has grown dim or has been utterly disregarded in many places, that basic general education has been often neglected, that fragmentation of the fields of knowledge and professionalism have been increasing at an alarming rate—so much so that cross-breeding has become necessary among some of the studies—and that some means must be sought out by educational leaders to rectify the situation or reverse the trend. With more or less emphasis and from his own special viewpoint, each of the speakers dealt with this unwholesome condition.

Perhaps Professor Benne considered it more fully than the others. He finds in the growth of President Kerr's "multiversity" idea an implicit denial of, or disregard for, the values inherent in the concept of basic education and in general or seminal studies; and he especially deplores the apparently complacent acceptance of the trend as predestined and inevitable. Speaking of the American university as precariously held together by three antithetical ideologies-Newman's notion of an institution concerned with the propagation of fundamental knowledge and the training of men in its proper use in their several professions, Flexner's notion of an institution primarily concerned with research and the expansion of knowledge, and the original notion behind the land-grant college as an institution especially designed for training in the applied sciences and social sciences—he calls for a thoughtful reconsideration of purposes and functions by university

administrations and faculties, especially a search for some sort of unity amid the vast multiplicity. He recommends that serious, organized, and sustained discussions of this matter be carried out in every university and that plans be laid for the recovery of "the imaginative consideration of learning."

More hopeful than Professor Benne, Sir Charles, nevertheless, regrets the loss of the belief in the university as a place of maturation and a place where students may get "a capital stock of something intellectual and personal" to draw upon for their thirty or forty years of professional life and a body of fundamental knowledge which they learn to adapt to their needs. He believes the new university, with its emphasis upon the advancement of knowledge, will, contrary to what seems now to be the trend, require a "more elevated level of general education than in the past." In line with this belief, he calls for more research into the nature of man, especially in the fields of theology, metaphysics, ethics, and history-fields now too often neglected. And he believes that, with automation and mechanization resulting, as it will, in greater emphasis being placed upon training for exacting vocations, a broader, as well as a deeper, cultural and general education will be required. We cannot escape the specialized learning and professionalism necessary in a modern society; yet the very fact of high specialization often requires the crossing of the arbitrary boundaries of disciplines: one might say by way of illustration, that the biologist must know chemistry; the psychologist, theology as well as ethics and literature. So Sir Charles can entertain a "Christian optimism" about the future.

Quite as optimistic is Professor Commager. He welcomes the knowledge explosion to parallel the population explosion which has come upon us since World War II. He thinks of it as necessary if we are to wipe out poverty,

save our natural resources, promote the creative arts, abate race prejudice, and develop an affluent public economy. He believes we must as a nation seek out and "manufacture intelligence" if we are to do these things. Hence the university must become "the powerhouse and clearing house of ideas." But in order for it to become powerhouse and clearing house, it must keep always before it the concept of the unity of learning. To lose this concept, to brush it aside in our rush for the improvements of society, will result in the deterioration of the kind of society we seek to develop. But Professor Commager dwells less upon this point than Professor Benne or Sir Charles.

Professor Myrdal foresees by the end of the century an even richer America than today, a tremendously expanded industry requiring many more highly trained people, far more education for each of the professions, far more training for research, and more for "culture consumption." As a result of such requirements, he suggests that some broadening may take place. For example, the policeman will be educated as a social worker, not merely trained as a peace officer. Yet he finds a warning necessary. One discipline, if studied alone, will result in false conclusions; narrow research, especially that dealing with techniques only, can prove disastrous. The creative mind must not be restricted or narrowed by fragmented or narrow disciplines. Such statement constitutes an implicit acknowledgment of the unity of learning and a caveat against compartmentalization; it also constitutes a similar warning against what Professor Benne calls "bureaucratization" within the university's administration.

The need for liberal learning and a warning against its loss are by no means the only areas of agreement among these notable scholars. All of them expect more national aid for higher education, especially in research and pro-

fessional training. None seemed to fear that such additional aid will restrict the freedom of the university or its faculty. Indeed, the university, if their predictions prove true, may become a sort of Baconian Solomon's House for the guidance of the state and the improvement of man's physical condition. As already implied, all expect our higher education to involve far more research into the sciences, and Sir Charles calls for more in the general area of the humanities. All expect the universities to afford more training for technicians and skilled workers, more institute training, more community colleges. And all believe that higher education must concern itself directly with the improvement of the social and political institutions the world over, so that mankind may enjoy the fruits of scientific accomplishments. New nations now rise out of the backward areas demanding the educational advantages of the old. They must be served-and quicklyelse chaos can come. And one might list other areas of agreement or of mutual concern.

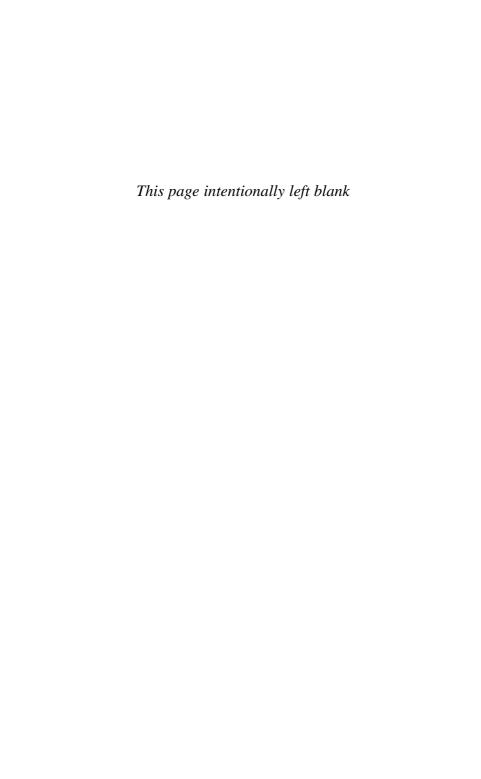
Neglected among the discussions was the subject of the creation of a National Humanities Foundation, now approved by the Congress and signed into law. This foundation may properly serve as a check upon the loss most feared; for if any area is concerned with the unity of learning and the recognition of man's need to master a basic body of knowledge upon which all other learning depends, it is the area of the humanities. Neglected also was consideration of what will be the role of museums, galleries, and conservatories in the educational program of the year 2000; and predictions about libraries and their resources were slight. The impact upon education of the various ecumenical movements now afoot were not considered.

But a more serious lack seemed to be a matter of emphasis. Society was too much with us; the individual too

little. Though implicit in all the papers, and especially in Professor Benne's and Sir Charles's, it was not boldly and explicitly emphasized that only the individual human being can be educated, that with him we begin, that he is the focus of our attention, that the obligation of higher education and the political and social order lies in his fullest development. The good society or the great society will not grow inevitably out of the affluent society, even though we preserve the concept of the unity of learning in the colleges or find an accommodation among the diversities of the multiversity. It will come only when its individual members have become good and great, capable of the highest satisfactions that may come to the human mind and spirit.

And one could list other omissions. But then the Conference lasted only two days, and the subjects involved in higher education are infinite. Certainly the subjects discussed and the projections made by these distinguished men of learning should arouse and stimulate all who learn and all who teach and all who direct both learning and teaching. I hope this brief—and very eclectic—introduction may provide a piquant aperitif for the symposium here following.

THOMAS B. STROUP



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## By KENNETH D. BENNE

MEN AND WOMEN are impelled to pierce the veil which divides the present from the future by various motivations. So it is with us, I would guess, as we seek to forecast the form and function of the university in A.D. 2000. Such forecasting may be seen as "foretelling" or as "prophecy."

If he were moved to "foretell," the forecaster would purport to describe the established ways and manners of that institution which will carry the name "university" a generation from now. Responsible foretelling rests on several assumptions, all of them dubious to me. One assumption is that we now have knowledge of all the determinants operating inside and outside the university, along with knowledge of their strength, which will interact to give shape to the university of the future. I pretend to no such knowledge.

Moreover, I doubt the moral value of such foretelling. Its effect might well be to minimize the assumption of responsibility by those now in charge of universities for making the many decisions concerning university practice and policy which press upon us in 1965. For, if we were to believe that the future of the university is historically predetermined, independently of choices we in the universities make today and tomorrow, we would hesitate to take these choices seriously. We would not probe the values at stake in our choices and agonize, individually and collectively, concerning the issues in-

volved in our decisions. We would underestimate the power of human volition, manifested in serious and thoughtful choices concerning practice and policy, to give meaningful shape to the form and functions of the emerging university.

I have considerably more respect for forecasting when it takes the form of "prophecy" rather than "foretelling." The "prophet" seeks to summon his audience to quickened and deepened moral concern with the choices that confront them here and now. He seeks to speak for traditional values which seem to him threatened by present historical trends and adjustments in university life. He speaks for new values potential in the current balanced imbalance of university policies and powers. He summons his audience to support and to integrate valid values, old and new, in confronting decisions about what they should do today and tomorrow. In short, he seeks to focus, clarify, and strengthen rather than to discount human volition as a determinant in the processes of history. It is as a "prophet," not a "foreteller," that I speak of and to the American university in 1965.

#### A PRELIMINARY DEFINITION

I hope that my point of view will become clear as I attempt to dissect some of the major confusions, complexities, and compromises in the contemporary American university. But perhaps some preliminary description of my idea of a contemporary university, which might justify for itself a premier place in the life of human learning, will be helpful. Such a foreshadowing may be helpful to readers in assessing, criticizing, and properly discounting the point of view out of which my diagnoses and prescriptions stem.

I gladly build on an idea expressed by Alfred North Whitehead.

The universities are schools of education, and schools of research. But the primary reason for their existence is not to be found either in the mere knowledge conveyed to the students or in the mere opportunities for research afforded to the members of the faculty.

Both these functions could be performed at a cheaper rate, apart from these very expensive institutions. . . .

The justification for a university is that it preserves the connection between knowledge and the zest for life, by uniting the young and the old in the imaginative consideration of learning. The university imparts information, but it imparts it imaginatively. At least, this is the function which it should perform for society. This atmosphere of excitement, arising from imaginative consideration, transforms knowledge. A fact is no longer a bare fact: it is invested with all its possibilities. It is no longer a burden on the memory: it is energizing as the poet of our dreams, and as the architect of our purposes.<sup>1</sup>

We may embrace Mr. Whitehead's justification of the university as a zestful and responsible place shaped for "the imaginative consideration of learning"—a learning disciplined to fact but stretching imaginatively into the construction and reconstruction of objects of aspiration and commitment-dreams and purposes-personal and social. And I do embrace it. But we need not and should not accept uncritically the "representative anecdote" out of which his idea arises. For this is the residential teaching university, somewhat after the traditional British model -a place where the young meet the old in various campus relationships. To accept it uncritically would be to prejudice, by definition, the place of research functions, professional functions, and extension functions, along with general teaching functions within the university. And I believe that all of these activities properly belong to that

institution today. The task is to achieve a meaningful interrelationship between the functions.

Cannot Mr. Whitehead's "imaginative consideration of learning" be extended meaningfully to the creation and construction of new learnings out of the disciplined and imaginative interplay between older learnings and new experiences? And does not this define what research and scholarship, shorn of mystique and technical apparatus, are as human enterprises? That the "imaginative consideration of learning" in research and scholarship is often limited to participation by members of some specialist community makes their processes no less or no more "imaginative" than the ideally more inclusive references of learning processes in general or liberal education. These specialist activities furnish the "facts" which men employ in liberal education in energizing and testing the poetry of their dreams and the architecture of their purposes. Productive research and scholarship, therefore, belong in the university. Questions concerning their proper interrelations with its teaching mission set some of that institution's severest contemporary problems. But "solving" these problems by eliminating an element essential to their adequate solution is a "solution" in name only.

I feel we must similarly stretch Mr. Whitehead's criterion to include the extension activities and the professional school programs of the university Here, as with specialized research and scholarship, the stretching of the criterion is not designed to bless all activities now carried on in extension or professional school programs as essential to the life of a university or contributory to its central purpose. Ideally, the aim of professional and extension programs is to infuse the university's ideal spirit of imaginative rationality into the surrounding culture and society. The aim at the same time is to bring considerations of human need and importance into the deliber-

ations and decisions of the university. For only in the arenas of practice and action is the criterion of "human need and importance" given substance, if not form, just as truly as the idea of "objective and valid knowledge" finds its operational definition most nearly in research and scholarship. The university must hold together in some meaningful, working, though frequently conflicting, unity the criterion of "human importance and need," the criterion of "objective and valid knowledge," and the criterion of the "imaginative consideration of learning," in deciding what it should be and do. Professional and extension programs are required to make this trifocal vision possible.

On another occasion I commented on the tension between the center of the university—defined roughly as its graduate school and its college of arts and sciences—and its periphery—defined, again roughly, by its professional schools and its extension activities.

The distinctive virtue of the university center is to discover and communicate precise, accurate, sufficiently qualified statements about any number of things and events. The center maintains tentativeness with respect to matters of knowledge where tentativeness is needed and attacks with vigor knowledge claims which incorporate insufficient evidence and intellectual rigor. A university could not be a university without this virtue.

The periphery of the university has its distinctive virtues too. Typically it is closer to the interests, concerns and maintenance and growth requirements of other parts of the society than the center is. Members of the periphery cannot dispense with the category of human and social importance in their work; indeed they must define and redefine this category in their responses to the urgencies and emergencies of the part of society they serve, in making their judgments about teaching and about applied research. In a real sense they must bring

the wider society to the university—they must mediate between the wider society and the center of the university.

The sins of the center, were there only a center, are very real too. If there were only a center to the university, scholar-ship and research would become trivial, unimportant (as measured against the problems of men), but ever so accurate and refined. Byzantine learning would tend to take over. Students would be brought up with the notion, so far as the university was concerned, that rats occur only tame, white and in cages, never grey and savage in barns and docks, that chemicals occur only in bottles on shelves in chemically pure state, never in rocks and ores and smelters, that poets are to be found only between covers on library shelves, never in garrets and bars and bohemias. The center needs the periphery to save the university from social and moral trivialization.

The sins of the periphery, were the periphery to take over the university, are equally real. Under the pressure of the practical urgencies and emergencies communicated to them by their clients, the periphery would tend to replace logic with rhetoric, rigorously tested statements with wish-fulfillments, critical caution with fulsome moral edification. There is always a tendency for people who live near the periphery to embrace ideas because they meet the "felt needs" of an outside profession or public without submitting them to the intellectual testing which sound ideas require. The periphery needs the center to save the university from intellectual barbarization.

The arts of creative university management and organization are to use the conflict and tension between center and periphery so that the university can at once keep alive to categories of human need and importance and maintain standards of intellectual and symbolic rigor.<sup>2</sup>

I have said enough to indicate that I accept the current incorporation by the university of general teaching functions, of specialized research and scholarly functions, along with the training of new specialists, and of professional

and extension functions, both in the education of professionals, in extramural consultation and teaching, and in applied research. All seem to me necessary in realizing fully the idea of a university in 1965 or in 2000.

At the same time, I deplore the fragmentation and segregation of specialized persons, groups, and roles which tend to characterize both the conception and organization of these functions in the contemporary multiversity. I object to the lack of continuing attention to the development of a common purpose and tone which might infuse its varied, specialized functions. This lack tends at once to reduce significant internal communication concerning questions of aim and responsibility to a dangerous minimum and to dissipate the effective impact of the university as an institution upon its social and cultural environment. I am saddened by the inability of many university people to think dialectically about conflicts of viewpoint and interest in which they are involved within the university and so to use conflict to create deeper community and broader vision within and among themselves and their colleagues. I am brought almost to despair by administrators and faculty members who identify the quest for community within university life with the suppression of differences, who oppose "cooperation" to "academic freedom," and who confuse the voice of outside fund-granting and contracting agencies with the voice of wisdom at best, and at worst with the voice of historic inevitability whether wise or not.

It is this point of view which leads me to admire and respect the accurate, honest, and vivid descriptions by Clark Kerr in his *The Uses of the University*<sup>3</sup>—descriptions which lead him to rename that institution a multiversity. It is the same point of view, however, that leads me to reject Kerr's view that this multiversity and all that it represents—good and bad—is somehow predetermined by

irreversible social and historic forces. I will use President Kerr's book both as a source of documentation and insight and as a worthy opponent in much that follows.

#### THE ROOTS OF DIVERSITY

In the course of its evolution American higher education has incorporated three distinct basic ideas of a university. One of these may be represented by John Henry Cardinal Newman's idea of a university as a place for liberal learning; a second has been clarified by Abraham Flexner in his notion of the modern university as an organization for the stimulation and support of rigorous, specialized research and scholarship; the third emerged from the distinctively American vision of the land-grant extension university. These ideas have never been fully integrated into the thinking and valuations of university men and women about university policy and practice. The fact that these ideas have not been fully integrated but operate in uneasy and unstable compromise, with their proponents distributed unevenly in various parts of the university system, helps produce and maintain the multiversity which today masquerades under the name of university.

When I mention Cardinal Newman's idea of a university as a current influence upon the thinking of administrators, faculty members, or students, I do not mean that most of these have studied Newman's writings and been influenced directly by them. (I might wish that more university people had read and discussed his idea in relation to currently contrasting and competing ideas about university education. In fact, I consider it a scandal that so few of those whose lives are intimately bound up with an institution have studied its history, its conflicting utopias and ideologies, its shifting interconnections with its en-

vironing society and culture. From a liberal education point of view, ignorance of education has never seemed to me a virtue in those who direct it, participate in it, and live by it. Indeed, this ignorance, which is, I believe, widespread, may be the source of at least some of the universities' current confusions and difficulties.) I refer rather, when I speak of Newman's idea of a university as an influence upon American higher education, to the living, though now highly attenuated, tradition of liberal learning out of which Newman's thought emerged as an articulation, clarification, and reconstruction of the idea underlying that university tradition. This tradition still flows through the minds and persons of some men and women in American universities, however it was communicated to them, and shapes their views of what is right and proper for a university to do or not to do. And so it is when I speak of Flexner as an influence or if I were to speak particularly of Cornell, James, Patterson or some other pioneer in the "land-grant" tradition.

We may begin with Newman who has come to be widely identified as the classical exponent of liberal university education. He remained true to the implicit idea of a university which he had experienced at Oxford—the Oxford from which he was excommunicated after his conversion to Roman Catholicism.

It was in 1852—over a generation after the founding of a research university at Berlin and ten years before the passage of the Morrill Land Grant Act by the U.S. Congress—that Newman formulated his idea of a university in a series of discourses to Irish Catholics in Dublin. His discourses were designed to persuade the members of his audience that they should establish a university there—a place for the free and comprehensive intellectual development of those who came to it for tutelage. He urged, perhaps over-urged, the intellectual side of stu-

dent development out of his concern that his Catholic audience might make of their university a place for the propagation of Catholic faith. This Newman found antithetical to the idea of a university where universal knowledge is communicated in a spirit of dedication to truth, not to the furtherance of any particular ecclesiastical, vocational, or practical interest.

Newman's university is essentially a teaching institution. But Newman did not seek for his students an accumulation of knowledge as informational matter. His aim was a general intellectual proficiency, and he spoke of persistent habits of mind as the goal of instruction. His university-educated man

apprehends the great outline of knowledge, the principles on which it rests, the scale of its parts, its lights and shades, its great points and its little, as he otherwise cannot apprehend them. Hence it is that his education is called "Liberal." A habit of mind is formed which lasts through life, of which the attributes are freedom, equitableness, calmness, moderation and wisdom; or what in a former Discourse I have ventured to call a philosophical habit. This then I would assign as the special fruit of the education furnished at a university, as contrasted with other places of teaching or modes of teaching.<sup>4</sup>

The enlargement of mind which Newman sought required the thoughtful activity and participation of the student—"a making the objects of our knowledge subjectively our own . . . a digestion of what we receive into the substance of our previous state of thought." Enlargement and illumination come not through mere additions to previous knowledge but through "a comparison of ideas one with another." "A truly great intellect . . . is one which takes a connected view of old and new, past and present, far and near, and which has an insight into the influence of all these one on another; without which

there is no whole, and no centre. It possesses the knowledge, not only of things, but also of their mutual and true relations. . . ."<sup>5</sup>

Newman was well aware that the wisdom he proposed to develop in students was no substitute for specialist development in an art, science, or another calling. He did believe that liberally educated men could enter into a specialized calling without losing the qualities of judgment, ease, grace, and versatility in symbolic affairsqualities ideally acquired in university education, that they would be better able to see their calling in its broadest, appropriate relationships to other callings and specializations than if they had been deprived of the opportunity to develop a philosophical habit of mind. As he put it at one point, the function of liberal university education is to help make a man. He believed that professionals and other specialists should be men before they are specialists and remain men even after they specialize. In modern jargon, he feared an overidentification of men of learning with their specialist roles and a loss of their humanity in this overidentification. Without a development of their essential humanity, the specialist, Newman believed, is "absorbed and narrowed by his pursuit" and becomes lost in extravagant rivalry between his study and other studies.

It is not that Newman failed to recognize other possible types of learning and teaching than that which he considered essential to a university. Rather, he was unable to conceive a university in which the liberal learning and teaching which he envisioned was not at the center of its concerns. He recognized the importance of research and professional practice, but, if they were to be a part of his university, they would need to contribute to and build upon the liberal teaching and learning which were at its heart.

Newman's idea can be criticized from many viewpoints. His psychology may be seen as faulty, separating, as it seems to do, "intellect" from other aspects of human development. He may be criticized for his exclusive focus upon past knowledge as a basis of wisdom rather than upon new knowledge, to be invented, discovered, and tested as well, upon the present and future time focus which characterizes empirical research. He may be seen as merely proposing an impossibility in an age of knowledge explosion and increasing specialization and fragmentation of knowledge which has lost forever, it may be claimed, its center. He may be seen as neglecting and opposing the inescapable and desirable involvement of the university in its contemporary society. He may be considered innocent about the problem of parts of a pluralistic and fragmented society pressing their claims upon a university for attention to special interests and, in effect, demanding illiberal education of various sorts.

Yet, for me at least, his question remains central. Can a university maintain integrity and effectiveness as an institution if it forsakes the quest for the interrelated meaning of various branches of knowledge and the cultivation of persons able to see these relationships and use them in their thinking and choosing, difficult as the quest and the cultivation may be? Or does a university which has forsaken this quest tend to become a loose collection of competing departments, schools, and technical institutes, largely non-communicating because of the multiplicity of specialist jargons and interests and held together, as Robert Hutchins once said, chiefly by a central heating system or, as Clark Kerr amended, by questions of what to do about the parking problem?

The question may also be put from the standpoint of university students. How can students, men and women, seeking to become persons in some integral and inclu-

sive, some intellectually informed and illuminated meaning of "personality"—rather than primarily candidates for filling the specialist manpower requirements of one bureaucracy or another-how can such students learn to be persons from specialist professors who have surrendered the quest for greater integrity and wholeness in their own intellectual lives or who indeed have never undertaken the quest? Clark Kerr has said somewhere that Newman's ideas still live as a somewhat wistful hope in the parts of the university concerned with undergraduate teaching. I believe this is true, though I find that the hope is increasingly forlorn even among devoted teachers of undergraduates, of whom we still have more in the contemporary university than we deserve, in light of our lack of planning for their nurture and development. Trained in graduate school, where an idea of a university quite different from Newman's is established, teachers of undergraduates find it increasingly easy to trim undergraduate instruction to the preparatory requirements for specialist work in the graduate school. The "good," up-to-standard undergraduate course in chemistry or botany or anthropology becomes, on this view, one that lays the foundation for a career in chemistry or botany or anthropology. For those students who have not made such a career choice the information set out for learning becomes a burden upon the memory rather than an energizer of the poetry of dreams and of an architecture of purpose, to use Whitehead's language. The training offered, with eventual admission to a specialist career in a research discipline as the goal for survivors, is no less "vocational" in character or effect than a course offered with the requirements of some practical profession in mind. Neither serves the purpose of liberal education as Newman conceived it. It is because of the steady encroachment of the graduate school upon the liberal arts college that Earl McGrath

has seen a threat to the very idea of liberal education in contemporary universities and that Jacques Barzun seems willing to concede its demise.

I am not willing to concede an end to Newman's idea until I have been convinced that, if encouraged to do so, the administration, faculty, and students of a contemporary university lack the historical imagination, the intellectual and organizational inventiveness, and the visceral stamina to conceive and attempt the resurrection of Newman's idea in forms more relevant and appropriate to the vastly changed conditions of intellectual and institutional life in which we live.

An interpreter more convinced of historical determinism than I—Mr. Kerr—is willing to argue that Newman's idea was passé even before or shortly after it was enunciated. "[His] beautiful world was being shattered even as it was being so beautifully portrayed. . . . When Newman wrote, the German universities were becoming the new model. The democratic and industrial and scientific revolutions were all well underway in the western world. The gentleman 'at home in any society' was soon to be at home in none. Science was beginning to take the place of moral philosophy, research the place of teaching."6

It was the modern German university, typified by the University of Berlin, an institution rising out of the humiliation of Prussian defeat at the hands of Napoleon, which first represented a university dedicated to the advancement of knowledge, the functions of scholarship and research. In Germany, this advancement was initially dedicated, as in Fichte, to the regeneration and strengthening of the German Fatherland. It purchased the freedom to seek and publish new knowledge through detachment from the life of its social environment, at the expense of direct moral engagement in the practical affairs of the German *Volk* and their political leaders. It was perhaps

this non-moral stance of the German multiversity that made it easy prey to the uses of Hitlerism in the twentieth century. But that is to get away from or at least ahead of the present story.

In the early nineteenth century news of the excitement of a spirit of intellectual discovery in the modern German university spread to this country and attracted vigorous minds in scholarship and research to study there. The new idea of a university came home with those Germantrained American students, and pressures on American universities to incorporate research and scholarship into the heart of university purpose and structure increased. Most older universities in America had begun as colleges dedicated either to the training of ministers, to the propagation of one religious faith or another, or to the pretraining of members of other learned professions. These colleges were teaching institutions and their curricula were classic curricula with a religious overlay. Graduate studies began to be honored in these institutions only after the middle of the nineteenth century. American Ph.D. degree was granted at Yale in 1861.

It was Johns Hopkins University, founded at Baltimore in 1876, which first freshly institutionalized the German model in this country. Graduate studies, research, and scholarship were its raison d'être. Undergraduate instruction was an appendage to the basic structure of the university. Significantly, thirteen of the original faculty of fifty-three professors and lecturers had earned their doctorates in German universities.

Friedrich Paulsen sought to abstract the idea of the nineteenth century German research university in his now classic work on *German Universities*, published just before the turn of this century. But Abraham Flexner may be seen as the prophet of the idea of a "modern" university in America, just as Johns Hopkins was its pioneering

institution here. Daniel Coit Gilman, first president of that institution, was a culture hero for Flexner, and Flexner called the founding of Johns Hopkins "the most stimulating influence that higher education in America had ever known." What Flexner found stimulating was that the modern university does not set itself apart from the main currents of social evolution. It does not contemplate historic knowledge in the round, seeking to shape out of such contemplation minds capable of sound and balanced judgment in a changing world. It places itself within the stream of changing knowledge, stimulating it, supporting it, adding to it. "I am undertaking . . . to discuss the idea of a modern university. In the word 'modern' I am endeavoring to indicate in the most explicit fashion that a University is not outside the general social fabric of a given era. . . . It is not something apart, something historic, something that yields as little as possible to forces and influences that are more or less new. It is on the contrary . . . an expression of the age, as well as an influence operating upon both present and future."7

Already, when Flexner wrote, the entry of natural science into the university had created departments there, and new departments continued to appear as new research fields were staked out. Institutes, some devoted exclusively to research, had come to the university. Graduate schools tightened their hold on the center of the university. The "philosopher" effloresced into many researchers in many laboratories. Medicine was taken out of the hands of the profession and put into the hands of scientists (and Flexner's critical imagination played a large part in this transfer of power). Instead of the generalist as the crown of university effort, technically skilled specialists, aware of the latest in their fields, each capable of contributing to the new in his field, became the prize of university achievement. The university was ideally, for Flexner, "an

institution consciously devoted to the pursuit of knowledge, the solution of problems, the critical appreciation of achievement and the training of men at a really high level." Since no individual could master even one subject, excellence was measurable only in specialist terms. For Flexner, Newman's liberally educated man was a figment from an outmoded past.

Yet even as Flexner wrote in 1930 he found much in American universities that he deplored and which he thought had no place there. And these deplorable activities came not from the dead past but rather out of the immersion of the university in its time and place, an immersion which in idea, he seemed to favor.

A genuine university is, I have urged, an organism, characterized by highness and definiteness of aim, unity of spirit and purpose. But it is quite obvious that the institutions which we have used for purposes of illustration [Harvard, Columbia, Wisconsin among others]-the best that we possess-are not organisms: they are merely administrative aggregations, so varied, so manifold, so complex that administration itself is reduced to budgeting, student accounting, advertising, etc. Such aggregations, even though called universities, simply do not possess scientific or educational policy, embodied in some appropriate form. In connection with them it is absurd to speak of ideals. They are secondary schools, vocational schools, teacher-training schools, research centers, "uplift" agencies, businesses-these and other things simultaneously. In the reckless effort to expand, and thus to cater to various demands, the university as an organic whole has disintegrated. . . . Their centres are the treasurer's office, into which income flows, out of which expenditures issue, and the office of the registrar who keeps the roll.9

So Flexner's university, like Newman's, would have boundaries to sustain it over and against the society in which it functioned, and to support university people in developing organic unity of purpose. But his principle of exclusion and inclusion was different from Newman's. Actually two principles of selectivity operated in Flexner's thought in his determination of which activities belonged in the university and which did not. The first stemmed from his strong liberal faith in research science as the best hope for the future of man in a complex and divided world. He voted strongly for one of C. P. Snow's two cultures—the scientific. It is true that he paid homage to the humanistic disciplines, but these, too, for him had to become "research" disciplines if they were to merit a place in his "modern" university.

For Flexner, like a good liberal positivist, the new, the modern life was to be based on science, and "true" science was conceived after the natural science model. The university contributed to social progress by stimulating and supporting scientific research in various fields where knowledge is considered possible and is somehow judged desirable. How were fragmented and specialized knowledges to add up to any pattern of wisdom? Flexner did not say. And such questions were no major concern to men judged worthy of inclusion in his modern university. If pressed, Flexner would probably have answered, as most positivistic scientists will answer who admit that the question has meaning, that somehow provisional and tentative scientific answers to specialist questions will add up eventually and somehow into a pattern of wisdom-meanwhile we do not yet know enough to answer such questions. The answer betrays a faith in inevitable progress or cosmic bookkeeping which is no longer as convincing to most thoughtful men as it was to many in 1930.

Flexner's ideas, whatever his broader intent, have done much to confirm the positivist, scientistic temper in the modern American university, where this temper still

reigns supreme in most graduate schools and in many graduate departments. The specialized research contribution of the modern university has been stupendously impressive and valuable. As industrial and government elites have become convinced of the power implicit in abstract scientific findings, they have moved to erect a scientific establishment in which men from the graduate schools and research institutes of universities play a major role. The grant system through which the efforts of such scientists have been purchased, supported, and rewarded has put emotional strains upon the integrity of universities as social systems. Various internal strains have increased-strains between undergraduate education, graduate training, and research, strains between the sciences and the humanities, strains between the graduate disciplines and the applied schools and extension services. And, as the university has acquiesced more or less uncritically in the benevolences of the grant system, the quest for unifying meanings within our proliferating knowledges and within the processes of their utilization has become more and more neglected and unrewarded. Yet this quest alone can restore a greater measure of integrity to the university.

The other principle of selection in Flexner grew out of his conviction that it was the service motivation of the university, the desire of its administration and some members of its faculties to assume responsibility for helping solve the problem of various segments of our segmented society, that threatened the integrity of the university in America. Flexner believed that the university must be at once free, relevant, and *irresponsible* in its response to social problems in its environment. An extended quotation from Flexner on this point will help both to illuminate his idea of the modern university and to clarify a continuing university dilemma.

As long as evolution proceeded slowly over centuries, men could feel their way and make adjustments imperceptibly on an empirical basis. But the restraints which for centuries slowed down or limited adjustments have been largely removed. Societies have to act-intelligently if possible-if not, then unintelligently, blindly, selfishly, impulsively. The weight and prestige of the university must be thrown on the side of intelligence. If the university does not accept this challenge, what other institution can or will? In this present-day world, compounded of tradition, good and bad, racial mixtures, nationalistic and internationalistic striving, business interests, physical forces of incredible power for good or ill, emancipated workers and peasants, restless Orientals and noisy cities, conflicting philosophies-in this world rocking beneath and around us, where is theory to be worked out, where are social and economic problems to be analyzed, where are theory and facts to be brought face to face, where is the truth, welcome or unwelcome, to be told, where are men to be trained to ascertain and tell it, where, in whatever measure it is possible, is conscious, deliberate, and irresponsible thought to be given to the task of reshaping this world of ours to our own liking, unless first and foremost in the university? The wit of man has thus far contrived no comparable agency.

The urgency of the need is not . . . without its danger. The history of the more manageable sciences contains a warning which the social scientist will do well to heed. Chemistry made no progress as long as men were concerned immediately to convert base metal into gold; it advanced when, for the time being, it ignored use and practice. . . . To be sure the social scientist must find his material in the thick of events; but qua scientist, he must select and approach and frame his problems, from the viewpoint of science, without incurring the responsibility for policies. In the social as in the physical sciences, the university is, insofar as scientific effort to understand phenomena is concerned, indifferent to the effect and use of truth. Perhaps, in due course, use and theory may in the social sciences also prove mutually helpful; perhaps social experimentation, involving application, may prove the only

laboratory. But even so, it is one thing to incur responsibility for policies, and quite another to set up an experiment primarily in the interest of ascertaining truth or testing theory. The modern university must neither fear the world nor make itself responsible for its conduct.<sup>10</sup>

Flexner doubted that a university could serve responsibly the agencies of a divided and fragmented society, with the various moral and practical values which these agencies stand for, and remain true to its own central value of truth-finding and truth-telling. In remaining faithful to its own central "pure research" values, it must be irresponsible toward the conflicting practical values which define the problems of the world outside the university. Ideally, institutions, persons, groups in the world outside the university must remain *subjects* of university-managed studies and experiments. If they are to become *collaborators* with university people in solving problems, truth value must fall victim in the process of collaboration, or so Flexner seemed to believe.

Collaboration between outside agencies and university people in projects of applied research or education results in loss of fidelity on the part of university people to truth value and introduces the fragmentation and meaninglessness of the outside society into the life of the university. It is for this reason that Flexner would exclude applied research and educational enterprises from the university. We cannot dismiss lightly Flexner's fear for the dwindling integrity of the university. To become a service station for outside agencies on their various terms, however powerful, benign, and meritorious these agencies may be—governments, businesses, churches, or foundations—may rob the university of its autonomy and integrity as an institution devoted to intellectually valid scholarship and research, to intellectually valid, fearless, and

imaginative teaching and learning. The university must look to the conditions of building and maintaining its distinctive autonomy within its society.

But does collaboration between universities and outside agencies necessarily mean working on the terms of the outside agency? Cannot the university maintain its autonomy within processes of responsible collaboration with other agencies of its society? Can other agencies acquire augmented respect and commitment to the values of truth-finding and truth-telling, to the values of intelligence, in dealing with conflicts and problems-values for which the university uniquely stands? Indeed, can these intellectual values permeate the society of the university without its responsible collaboration, on jointly defined terms, with other agencies of the society in attempts to clarify, understand, and solve social problems? Can university-based social scientists get the data they need for developing valid theories of social processes from the vantage point of irresponsible observers alone? Or must they learn to talk and walk with non-university men and keep their virtue? Did Flexner adequately assess the sources of fragmentation within university life in attributing these exclusively to the pressures of the fragmented society upon the university? Or are there divisive and fragmenting forces operating within the life of learning itself which must be faced and dealt with directly?

These questions must be faced and answered as we work out more adequate answers than Flexner was able to imagine concerning proper relationships between the university and the powers and principalities of its social environment. But adequate answers must embody Flexner's dogged conviction that the university must build and maintain its own distinctive community of values if it is sanely to make its desperately required contributions to contemporary society.

Some at least of the applied educational and research activities which Flexner found inconsequential and incredibly absurd in university settings were given a legitimate place in higher education through the idea of the land-grant university. And this is the third major idea which the contemporary American university holds together in uneasy and unstable compromise with the two other ideas already discussed. The idea of a university which emerged out of the Morrill Act of 1862-an act that granted land to state colleges and universities for establishing instruction in agriculture and the mechanic arts-was both revolutionary and basically American in its conception of the higher learning. It was an idea rooted in populist democracy, whereas the ideas already considered were elitist in origin and conception, however differently they defined qualifications for members of their elites.11 Morrill himself, Cornell, James, Kentucky's own Patterson, along with many other pioneers in the landgrant tradition, conceived of a higher learning available to all young men and eventually to all young women as well, whatever their class or place of origin-a learning opportunity limited ideally only by their capacity for and interest in learning.

The idea was democratic in another sense. In admitting agriculture and mechanic arts into the circle of university studies, the land-grant idea broke the hold of classic humanistic disciplines and of the new basic research sciences that were elbowing their way into the university as exclusive subjects of university concern and responsibility.

Although, in the early years of the land-grant institutions, a crude utilitarianism pressed the college and university to neglect the knowledge and rationale required for intelligible instruction over and above apprenticeship in a vocation, a more constructive response came to pre-

vail. This response was to direct research and scholarship toward providing answers to the unanswered questions growing out of practical pursuits, in effect, to develop a knowledge base relevant to the study and practice of agriculture or engineering and indeed to the improvement and often radical renovation of these practical arts. While, in the field of agriculture, for example, many ideas were drawn from relevant "basic" disciplines already in the university in developing a knowledge base for improved agricultural practices, the intellectual influence was by no means all one way. Men of agriculture, working in fields so diverse as plant and animal genetics, soils chemistry, agricultural economics, and rural sociology, to name a few, have contributed both problems and ideas to the "basic" research disciplines of genetics, biochemistry, economics, and sociology. The development of bodies of subject matter worthy of university study has proceeded in other applied fields within the land-grant university as it has in agriculture. And other American universities besides land-grant institutions have developed in comparable ways, providing places for the evolution and intellectualization of new professions under university auspices, often with the grudging sufferance of Flexner- and Newman-minded men in the central research and scholarly disciplines of the university.

The barriers to even more fruitful exchange of ideas, information, and aspirations between basic and applied disciplines, where they have not been overcome, are, in my opinion, largely social barriers established in the status and prestige systems of university organization rather than barriers inherent in the intellectual pursuits themselves. The internal democratization of university organization has never been fully accomplished even in land-grant universities. The established elites are not coincident with the natural elites of talent—a coincidence which Jefferson

hoped would emerge out of a universalization of educational opportunity.

The land-grant idea of a university democratized the higher learning in still another way as the idea evolved. The democratization stemmed from the removal of the age barrier to participation in learning under university auspices. The Agricultural Extension Service is our most notable example of this democratization. It grew out of an effort to speed the adoption and wider testing of new knowledge through providing opportunities for continuing education, off and on campuses, to the consumers and producers of the fruits of new knowledge-based practices. It opened up in turn a way of making known to university teachers and researchers the needs of populations distant from the university.

We may applaud this democratization of university services to various populations within our society. I certainly do. We may be impressed, as I am, with the tremendous contributions the applied schools and extension services of American universities have made in forging new bases in knowledge for improved practices in agriculture, engineering, school education, and commerce and in communicating these new bases for practice to adults on the job as well as to young people on campus. But we should not be blind to the additional difficulties these far-flung activities have introduced into the working out of valid bases of integrity by the contemporary university. There are the general difficulties named in my earlier discussion of the relations between university center and periphery. More specifically, the identification of extension workers and professional faculty members with various segments of our divided society brings these divisions into the university to complicate further its own internal problems of fragmentation and segregation. As the faculty members identify themselves more fully with

the groups they serve and with their values than with the university and with its values, so the necessary boundaries between the university and the society it serves and, ideally, leads are further breached. Such faculty members will not be psychologically available to work with their colleagues in the grueling task of defining and redefining the mission of the contemporary university. This was a problem with which Flexner was seriously concerned, as we have seen.

It is not wrong, in fact it is inevitable and desirable, that members of the multiversity sustain and integrate multiple memberships, whether these memberships are with learned societies, professional associations, political parties, or whatever other association. But if the primary vocational identification of the faculty member is not with the university, the society of that institution comes to be made up more of resident aliens than of citizens in any meaningful sense of that term. The temptation of university workers in the peripheral parts of the university system to become resident aliens in the university is often great. (This is becoming true of many scientists near the center of the university as well under the impetus of outside grant policies of government and industry.) The burden for sustaining significant membership in the associations of the university does not of course rest with the individual faculty member alone. It rests also upon the creation, within the social organization of the university, of attractive opportunities for all members to share significantly in the determination of the shape of university affairs.

#### THE ROAD TOWARD RECONCILIATION

If the idea of Newman still offers hope and direction to some of the members of the university devoted to under-

graduate education and if Flexner's idea still furnishes a major rationale for devotees of graduate education and of university research, the land-grant idea is perhaps most alive in those responsible for the professional and extension programs of the university, in many alumni and other clients of continuing university services, and in students who come to the university to improve their non-academic vocational skills and to elevate their social status. Are there ways to use the tensions between these various parts of the multiversity to press toward some defensible and rational reconciliation of these divergent ideas that can lend greater integrity to university life? It cannot be a unity purchased at any price. It must be an integrity which accepts variety and difference in orientation and discipline as a positive value rather than a disvalue. It must be an integrity achieved through continuing dialogue concerning the central mission of the university. And this dialogue must accept the fact that serious discussion of the way toward greater integrity within the university is inseparable in idea from serious discussion of the way toward greater integrity in our national and world society as well. The university alone, among our institutions, has resources required to develop rationales for a more effectively integrated society and culture. But, in order to utilize these resources with optimum effectiveness in the larger task, it must look seriously toward justifiable bases for its own integrity. It is important that we see both tasks as intertwined.

We are hindered in launching the needed quest for greater integrity by statements and viewpoints like those of President Pusey of Harvard University which, in effect, deny that universities confront a serious problem of threatened disintegration, which assert that an adequate community of value and commitment already exists within the American university.

Is there a central dominating idea enlivening the American university today? The answer is, most certainly, yes. For such an idea is formed in the devotion to learning which permeates the whole community and in the recognition of learning's importance for a full manner of life. . . .

Though scholars today often appear to pursue separate ways within universities—quite unaware of their colleagues' existence, certainly without all quarrels adjusted—still by and large they all are, and know they are, working in a common vineyard. They know that it is not their specialties but "learning" in its double sense—both as a constantly developing field of knowledge and as an intellectual process—which they have in common. The connecting link for all within the university remains learning thus understood, a compact of knowledge, effort and hope.<sup>12</sup>

I consider such statements (and they are made not infrequently by university leaders other than President Pusey) falsely reassuring and deeply misleading in masking the contemporary crisis in the American multiversity. To accept the crisis is the first step in moving creatively through it.

To accept the multiplicity of muted and anomic voices within the university—voices which speak of different hopes and different despairs for the future of the university and of human society and culture more generally—and to seek to join these voices in significant dialogue is itself to achieve a considerable step toward integration. If the necessary thoughtful and continuing dialogue is released and supported—a dialogue concerning the ideas and ideals which best give meaning to the university—this is in itself a partial realization of the university's educational function. For men and women engaged in the dialogue will need to raise and deal freshly, imaginatively, and responsibly with questions concerning the nature of knowledge and of wisdom and of the relations

between the two; concerning the idea of the educated man; concerning the relations between the creative arts, the humanities, and the sciences in the higher learning; concerning the relationships between knowledge and society; concerning the social, moral, and intellectual responsibilities of men of knowledge; concerning the ways in which knowledge can be most wisely applied in action; concerning the relations of university study to the major human issues of our time-issues of race relations and human rights, issues of war and peace, issues of automation and the new leisure, to name just a few. In thus joining serious dialogue concerning the idea of a university, the university will at once be furnishing a fundamental educational experience to the participants in that dialogue and be moving toward more common bases for decisions about policy and program.

Students, faculty members, members of the administration, and alumni should be involved in this continuing dialogue. The widest divergence of viewpoint and orientation should be included in the groups organized to support it. Status and prestige should be relaxed within the processes of intellectual exchange and moral encounter which will characterize the dialogue. The dialogue should take place on university time. If necessary, academic credit should be given to students for participation and "merit badge" points to participating faculty members for pay increases and promotions. What I am trying to recommend is that the effort, if undertaken at all, be taken seriously and that the external badges which publicly define the university's system of rewards must attach to it if the effort is to be taken seriously, at least in the beginning. If we can believe that the future of the university, not to mention the future of mankind is at stake in such study and discussion, they cannot be taken too seriously.

What I am suggesting can be stated in still another

way. The achievement of greater integrity requires serious study by university people of university education. This is long overdue. I do not mean primarily a study of pedagogy in its restricted sense, although such study has been neglected by most university people. I mean rather a serious and informed dialogue concerning the possible and desirable bases of contemporary and future university life in its deepest and widest ramifications. I don't know the best way of meeting the practical problems involved in beginning such a study—how many should be included initially, how they should organize themselves for their work, how they should seek to communicate their findings to their colleagues, the resources they will need as they proceed. But these problems can be solved if there is a will to solve them.

What is the spirit in which the study should be undertaken? It is the spirit expressed in the letter from a Roman Catholic priest to George Bernard Shaw concerning his play, St. Joan. Shaw quotes from this letter in his preface to the play: "In your play I see the dramatic presentation of the conflict of the Regal, sacerdotal and Prophetical powers, in which Joan was crushed. To me it is not victory of any one of them over the other that will bring peace and the Reign of the Saints in the Kingdom of God, but their fruitful interaction in a costly and noble state of tension."

#### SOCIAL ORGANIZATION AND THE IDEA OF A UNIVERSITY

We may accept "the fruitful interaction [of different and opposed viewpoints and powers] in a costly and noble state of tension" as the way toward greater integrity in university life and learning. But the "practical" questions raised when we attempt to translate the idea into action are, in some large measure, questions of social and human

organization. How do we cross departmental and school lines in such a dialogue? Out of whose budget will the needed funds come? Will participants be able to exchange ideas fully across lines of differential status and prestige, vertical and horizontal? How can students get credit for participation in such an activity, if a course number is not assigned and if differential grades are not awarded?

The feasibility and, I fear, the desirability of any new departure in university practice are often judged more in terms of the effects of the departure upon the existing organization of its social system rather than in terms of its desirability and importance when measured against other and less parochial criteria. What is done by way of a proposal for university education and research is always determined both by the social organization of the university, its ways of classifying and grouping personnel, its rules and regulations, and its internal and external pyramids of power, and by the merits and demerits of the concepts and rationales which define and justify the proposal when taken as an object of thought and choice.

This is no surprise to one who accepts the idea of man as a "social and political" organism and a "rational" animal at one and the same time. The possibilities of advancing and communicating knowledge and wisdom are defined, defeated, curtailed, promoted, extended, supported by the social, the human organization of efforts to advance and communicate knowledge and wisdom. Sociologists of knowledge have been studying the interrelations of social organization on the one hand and the shaping and evaluation of knowledge and belief systems on the other for a number of years. It is only recently that they have begun to study these interrelations in their home bailiwick, the university. And, where these interrelations have been studied, little of the knowledge amassed seems to have been applied in planning and replanning university or

ganization. University people have been much more inventive and creative in projecting and testing new ideas than they have been in projecting and testing new forms of social organization consistent with the requirements of the imaginative pursuit and consideration of learning.

As I see the growth of the social and human organization of university effort in the past, it seems to have been in some part a historical process of development by accretion and by trial and error, along with somewhat indiscriminate borrowing of organizational forms and practices from other prestige institutions in the society, whether from industry or from government, civil and military. Subcultural borrowing is one way of social change. But to borrow forms for channeling and controlling learning from organizations devoted to quite different purposes may lead to dysfunctional clashes and heightened disintegrity in the institution of higher learning. And this has happened, I believe, in the American university.

I cannot now prescribe a new form for university organization. We do not now know enough about the sociology and social psychology of university organization. And we are far from clear about our pervasive common purposes, as I have already suggested. But I can recommend without hesitation the focusing of serious studies in the sociology of knowledge and the sociology of organization -without neglect of their psychological, political, and economic aspects-upon university organization. And I can recommend further that the administration of the university take the results of these studies seriously into account in planning changes in the shape of the emerging university. I can also suggest some of the questions and experimental ideas which organizational studies, basic and applied, might take into account as they get underway. And this is what I propose now to do.

Clark Kerr has suggested an interesting metaphor in

linking changing ideas of the university with shifts in its social organization.

[Newman's] "Idea of a University" was a village with its priests. The "Idea of a Modern University" [Flexner's dream] was a town-a one-industry town-with its intellectual oligarchy [an oligarchy, I might add, heading up in its research and scholarly moguls and its graduate departments]. "The Idea of a Multiversity" is a city of infinite variety. Some get lost in the city; some rise to the top within it; most fashion their lives within one of its many sub-cultures. There is less a sense of community than in the village but also less sense of confinement. There is less sense of purpose than within the town but there are more ways to excel. There are also more refuges of anonymity both for the creative person and the drifter. As against the village and the town, the "city" is more like the totality of civilization as it has evolved and more an integral part of it; and movement to and from the surrounding society has been greatly accelerated. As in a city, there are many separate endeavors under a single rule of law.14

We may properly accept the grace and aptness of Mr. Kerr's metaphors. In the contemporary multiversity, we do now live in a "city of intellect" rather than in a "village or town of intellect." The walls of the city have been breached by its surrounding society or at least by certain segments of that society. A man of the university is scarcely distinguishable from some opposite number in the managerial hierarchies of industry and government. The faculty has become virtually as much a migratory population as the student population has always been. I have already raised questions about whether the "worldly," "fragmented," "shallowly rooted," "mobile" quality of life in the contemporary city of intellect is an unmixed good, when the grave responsibilities of that city for helping to bring order on the basis of knowledge and wisdom to the

fragmented world of contemporary society and for helping to develop whole persons, who can cope with the conflicts and disintegrities of that society, are taken seriously as criteria of university success.

I would also raise questions about the planning of the city of intellect as a human organization to support these weighty purposes. Some of these questions Mr. Kerr has not raised and could not raise, since he has accepted the idea of the multiversity as a foregone conclusion and has rejected the idea of a "university" in 1965 and in the years ahead.

# THE BUREAUCRATIZATION OF THE INTELLECTUAL LIFE

The attempt to bureaucratize intellectual life in much of contemporary university organization has no doubt stemmed from many sources. Whatever its sources, it has made the struggle for individual achievement a major motivation in stimulating, energizing, and evaluating both faculty and student efforts. The task of the university is conceived as a productive enterprise. Faculty members are treated, graded, advanced on the basis of measurable evidences of productive achievement. And, since more intangible, qualitative, slow-maturing contributions are harder to measure and reward than tangible, quantitative, quickly produced contributions, the latter are frequently made the basis of tangible reward in salary, promotion, and preferment. Competition, rather than cooperation, among faculty members is stimulated by the system.

Since the faculty member is legally as well as in certain crucial role-relationships an employee, he is not encouraged except by special inducements to become responsibly involved in the life of the institution beyond the special job for which he is hired. He tends to deploy his efforts in a way to increase his marketability in the

general market of university employment. He avoids the burdens of deep emotional commitment to work for the institution which by definition he does not own and of deep investment of himself in teaching students. These burdens of involvement become fetters to his mobility in employment. He invests his talents in negotiable wares—publications and other more or less quantifiable evidences of contributions to his field—which can be easily transferred to other employment situations and are widely and easily negotiable throughout the academic market place—much as the sojourner in a hostile country often converts his assets from real estate into jewels in order to facilitate a quick get-away across the border.

The work of the university enterprise is highly departmentalized. For work purposes chemists are grouped together, botanists together, sociologists together. Thus when group loyalties do grow despite the generally prevailing atmosphere of individual competition the faculty members' allegiance is then invited to attach itself to the advancement of their discipline rather than to wider projects of intellectual, moral, and academic concern. A positivistic orientation helps to rationalize this neglect of extra-departmental or cross-disciplinary problems by questioning their significance and by ascribing "real" meaning only to those questions which can be solved within the framework of a particular science or discipline.

All of us know about the organization of centers in universities—centers formed to study problems which do not fall readily into departmental pigeonholes. There are now over forty of these at the University of Michigan and, according to Seymour Lipset, nearly a hundred within the University of California system. The very movement of live thought demands the breaching of the conventional lines of university organization. New, miscegenated disciplines emerge to handle problems, the study

of which is thwarted by established departmental boundaries-biochemistry, clinical psychology, social psychology, biostatistics, to mention only a few. Such efforts, whether organized for research or teaching or both, must struggle with the established system for acceptance within the university. Some fall by the wayside. And these are not always those which would be deemed intellectually or morally inadequate when judged by more "objective" criteria. Others congeal into new departments in order to survive in the struggle for budget and status in the university and, in the process, often lose the burst of vision and concern which gave them birth. Others seek and find support from grant sources outside the university. And allegiance tends, in these cases, to be transferred to these grant sources and their purposes rather than to find a meaningful anchorage within the university system.

I have, of course, overstated the degree to which the bureaucratic spirit has encompassed the life of the university. This spirit is at so many points antithetical to the life of learning, whether in the form of research, scholarship, or imaginative and comprehensive teaching, that countervailing forces, as we have seen, must be set up against it by men genuinely devoted to learning. When I think of this condition, I am always reminded of two lines from one of Santayana's sonnets:—"As in the crevices of Caesar's tomb, / The sweet herbs flourish on their little earth—"

Centers for tackling larger and more significant problems than departmental organization can readily encompass do emerge and, in some instances, survive in creativity. Men and women do band together to develop programs of general education which make more nearly possible for students Whitehead's "imaginative consideration of learning." Faculty members do make devoted investments of themselves in teaching and in work on problems of

university construction and reconstruction. Some remnant of the old guild organization of scholars manifests itself in tenure systems for professors and in the establishment and operation of university senates. The sweet herbs do flourish in the crevices of Caesar's tomb.

But the following question seems pertinent to me. Why, if bureaucratic organization, as I have defined it, does operate often to defeat the self-professed purposes of a university and to thwart the development in it of a pervasive common purpose and to render difficult devoted communal effort in its behalf, why do we keep it? Why do we not invent and experiment with new organizational forms for channeling, supporting, and rewarding the pursuits of learning more humanely, more effectively, yes, more productively, than now they are typically channeled, supported, and rewarded. This cannot mean a return to the guild organization of the faculty which prevailed in many medieval universities. But this guild system had its values-values which are maintained only with great effort today-effort that diverts scholars from the exciting and pressing tasks of scholarship and teaching. Can we not invent organizational forms that support these values, along with new values realizable only within the city and not within the village of intellect? The resources are now distributed in the faculties for doing this creative task. If men and women of the university cannot invent a human organization, which is intellectually responsible, knowledge-based, and morally sensitive to the conditions of our time, dynamic yet stable in its changing, how can we expect other parts of our society to make such inventions for themselves? And this type of organization is needed throughout our fragmented and conflict-ridden, national and world society. The university should demonstrate the possibility and desirability of such organization as well as develop and communicate ideas about it.

Students fare little better than faculty members in the bureaucratization of the intellectual life, if my criterion for faring well in the imaginative consideration of learning is applied. The story of the Harvard students who invented an imaginary student, got him registered, took his examinations, wrote his papers, and nearly got him through to graduation before the hoax was discovered has a real point, whether it is legend or fact. The impersonalization of relationships in the interest of effective production which is part of the valid idea of bureaucracy can easily become depersonalization in the university as elsewhere. "Persons" become "personnel," and even when the managers of the institution are kindly in intent in forming and administering personnel policies, the kindness tends to take the form of an exchange between roles rather than an encounter between persons. The identification number and the registrar's record become the units to be "understandingly" managed rather than the concrete individual student with his hopes and his fears, his despairs and his confidences, his lusts and his aspirations or the informal group of individual students, whatever the basis of their grouping. The story of the imaginary student who almost graduated projects the anxiety of students that this depersonalization of relationships, this degradation of persons into personnel, has actually come to pass within the operation of the contemporary university.

Yet all of us know, when we think of it, that the important reorientations in our own lives took place through interpersonal encounters. New values grew through significant new associations with people who were different from ourselves in some way and who were willing to grant us access to their inner worlds, even as we gave them access to our own personally important thoughts and feelings. We know that the significant choices of our lives become real to us, meaningful to us, understood by

us, only when we act on these choices, usually in concert with others.

When we learn from the Jacob report and other sources that college and university life has little effect upon the value orientations of students, is it not likely that this non-effect is due to the lack of student experiences in college and university life which incorporate elements of personal choice and encounter like those suggested above? And does not the bureaucratization of the life of learning tend to substitute other expectations for student conduct for expectations that they will seek for encounter with new modes of thought and new bodies of learning at least partially incarnate in persons, and that in the processes of interpersonal encounter, they will responsibly create their own poetry of aspiration and their own personal and collective architecture of purpose?

The university does need to impart information and skill to its students. I welcome the new instrumentation that is developing to facilitate the communication of information and self-development of skills—kinescopes, films, recordings, teaching machines, and self-instructional devices of all kinds. These should be made part of the library of every university, and the library should become a "laboratory" of "informational and skill development" for use by individual students, by small groups of students and, of course, by members of the faculty and administration and staff as well. When teaching is conceived as primarily the imparting of information and skill, this might seem to mean the end of teaching. In my opinion, this might rather be seen as the beginning of teaching. For teachers and students, freed from some of the burden of giving and receiving information in their interpersonal encounters, might engage in finding out and working out imaginatively what the information means, personally and collectively, and the standards and values which should guide and direct the utilization of intellectual skills in "original" and "serious" inquiry and action. They should use not only intra-university resources in this quest for the meanings of what they have learned or are learning but should extend the quest to the society beyond the university through various projects of social action and community service.

Such extra-university activities, designed to test and confirm or disconfirm choices based on intramural study and dialogue, might well become part of the curriculum. When such activities are seen as outside the curriculum, they must compete in students' choices with prescribed efforts to acquire the external badges of achievement—grades and other honors. And the choices are loaded when, as students see it, it is success in the latter on which the esteem of the university seems basically to depend, whatever we as faculty members or administrators may say to the contrary.

The wave of student protests in American universities during the past few years is no doubt a complex phenomenon and requires a complex explanation. But two aspects of these protests seem especially pertinent to the present theme. All protests have involved a reaction by at least some students in them against the depersonalization of their relationships with faculty members in the progressive bureaucratization of university life. A threat to personhood and to respected participation in the affairs of an association in which one is required to work is always resisted by healthy personalities. The resistance may take many forms-individual apathy, the formation of informal or formal organizations, actual withdrawal, off-target attack upon the rules and regulations of the association, or direct protest to and against the keepers of the system. The last form of resistance is by far the most healthy, if the keepers of the institution are willing and able to listen to, to

discuss with the protestants, and, through these processes, to move to reduce the depersonalizing threats which led to the protest.

A second factor in the protests is a feeling by some students that the resources of the university are not focused directly enough upon the quest for the meaning of life, personal and civic, in which many serious university students are now engaged. Students wish to study and to act upon problems of social injustice, as evidenced in race relations. They wish to study and act upon problems of attaining a peaceful world. They wish to find more authentic, less hypocritical, bases for interpersonal relations in various areas of their lives. While some at least of the knowledge they are asked to acquire does have a bearing upon such questions, the connections are often not made clear in the process of instruction. The relations of knowledge to human and moral problems are not explored. Such imaginative consideration of what is learned may be the exception rather than the rule in teaching. The gap between generations, now dangerously accentuated in life outside the university, is not effectively bridged in the life there. It is easy for students, seeking to enroll themselves in authentic life projects, to see the university regime as an amiable bourgeois conspiracy against this quest for meaning in their lives.

I hope we adults in the university will take student protests seriously rather than explain them away as an equivalent of panty raids or some other madness which will sooner or later be outgrown, or as merely the Machiavellian work of subversives or of "non students" who live near but not in the university establishment. To do this is to miss the important meaning of the protests. For they point to a need to move vigorously and promptly to reduce the educational ill-effects of the bureaucratization of intellect in university life.

My discussion of the non-humane effects of overbureaucratized universities should have a sympathetic word to the administrative officers of such universities. They too are in some measure victims of the system. Some of the most poignant pages in Clark Kerr's book are those concerned with his honest and baffled search for a consistent and satisfactory definition of the role of the president of a multiversity. Cast by the system in the role of "boss" to the faculty employees and to the masses of students, he must absorb the hostility which is associated with the "boss" or headman symbol in our society. His powers to manipulate the forces with which he must deal in the public and in the faculty are greatly exaggerated by faculty and by students alike. He must decide on matters of academic strategy where he cannot reasonably be expected to know as much about the issues involved as those whose fate and fortune are involved in his decision. And the story runs similarly for other administrative officers of the university.

I can only advise the president and his administrators, if they are dissatisfied with the confusions and conflicts in their roles as now defined, to work to build centers of genuine community of purpose through invoking and participating in sustained and thoughtful deliberations with faculty members and students across the conventional boundary lines of our fragmented and departmentalized university. The process will not be easy. It will mean that the administrator will at times carry out, defend, and interpret to his Board decisions by groups within the university that are quite different from his own private decisions. Administrators will need continually to learn from those whom, in the bureaucratic scheme of things, they should be "directing." It will mean opening up conflicting views to direct confrontation rather than maintaining surface smoothness by segregating differing points

of view into separate and non-communicating parts of the city of intellect.

The new role for the administration will be defined in the same processes of deliberation and decision that move the multiversity toward a university and which move the bureaucracy of university organization toward something more accurately describable as a community. The present pains of the university administrator grow out of the confusion of his role in the presence of conflicting expectations from his fragmented and warring constituencies. The pains involved in processes of reducing this fragmentation may be compensated for by some relief from his present pains.

# A UTOPIAN ALTERNATIVE TO BUREAUCRATIZATION OF THE CITY OF INTELLECT

One principal defense for bureaucratization in university life is the plea of size and numbers. There is no other way, many argue, to handle big faculties, big masses of students, diverse, expensive, and far-flung projects except by bureaucratization. There is some merit in this argument, but it is certainly not a final argument.

There are ways of dealing with bigness other than compartmentalizing effort, depending fundamentally upon competition and individual achievement as principal motivators of faculty and students, and the substituting of quantitative evaluation of progress for rounded and qualitative judgments, informed but not dictated by quantitative data. If our purpose of facilitating, energizing, and communicating imaginative and sound learning is defeated by the present organization of university effort, then we must invent and test more apt forms of organization.

One answer might be to work out and establish sound units of decentralized teaching and learning within a

university-units bringing together diverse disciplinary resources and a limited number of students, undergraduates and graduate students too, particularly those who wish to become college and university teachers. The persons in the unit will organize themselves around the study of some set of broad human issues. Different units probably will be concerned with different issues. Students and some faculty members in a unit might live in adjacent residences. All will have access to common university facilities-library, laboratories for skill and informational development, and other laboratories and field sites for observation, study, and experimentation. The aim of the unit will be to study, explore, investigate, discuss, and clarify the issues chosen for study in relation to existing relevant knowledge and to new knowledge needed in order to understand the issue fully. Research and original scholarship will be encouraged in its bearings upon the human issue occupying unit members at any one timewhether war and peace, automation and the new leisure, or problems of contemporary youth; there is no end to important issues.

The resources of the creative arts, the humanities, philosophy, and theology, as well as the natural and social sciences, will be required in the faculty and student membership of the unit. All members will seek not primarily to master the major fields from which relevant knowledges and insights are drawn but rather to project the meanings of these knowledges and technologies in terms of the possibilities for good and for evil which they entail for human beings in the future, as such knowledges and technologies are worked into the fabric of human living. Facts studied will, as Whitehead suggested, be invested with all, or at least many, of their value possibilities. The outcome sought will not be dead-level agreement. Different individual and sub-group choices and a diversity of

orientations will be encouraged and sustained. But it will be required that all choices be illuminated by rational argument, by relevant knowledge and insight from whatever sources, and by the projected values implicit in such knowledge as it is imagined in its bearings upon our human future.

This kind of activity will call for a new discipline on the part of the specialized scholars and scientists engaged in it. But it is a discipline which will help them to reconcile their specialized intellectual pursuits with their social and moral responsibilities as persons and as citizens. It was in discussing the ethical and social responsibilities of the scientist, that Sir R. Watson-Watt, a reputable British natural scientist, wrote, quite in the spirit of what I am suggesing for scientists and other scholars in the units of my non-bureaucratized university.

The ethical responsibility of the scientist, within the definition to which I have chosen to limit the title of the scientist, is, I believe, crystal-clear. It is this: In recognition of the privileged and endowed freedom of action he enjoys, he should, after an appraisal that may well be agonizing, declare all the social consequences he may foresee, however dimly, which are even remotely likely to follow the disclosure not only of his own contributions to science but also of those of other scientists within his wide sphere of knowledge and competence. He should outline the social good that he can foresee as resulting from the technological follow-up of "pure" research; he must outline the potential social evil. He will seldom be qualified to make quantitative estimates, but to the best of his ability he should define fields and magnitudes. Nothing less can suffice as partial payment for his privileged tenancy of the Ivory Tower. No plea that he "doesn't understand politics or economics," that, "even if behavioral science be a science (which he doubts) he is even further from understanding it," should be sustained. We must all do our poor best, with the intelligence at our disposal, toward mapping the upward, and

marking the downward, slopes on our still long road of social evolution.<sup>15</sup>

Such responsible seeking for the value shape of our world in its future rather than in its past is in keeping with our uneasy movement as men and women into a nontradition-directed world. We rightly say that the alternative to tradition should lie in knowledge. But knowledge which is not illuminated by awareness of the value-possibilities implicit in it, which is not brought into meaningful relationship with living traditions in their future thrusts, furnishes no confident direction for the choices we must make, individually and collectively, in a changing world. A university should illuminate and enlarge, not dictate, the choices of men. It should illuminate human choices in a way which honors, respects, and utilizes the knowledge available to men through ongoing research and scholarship. To do this, living links between the life of knowledge and the non-intellectual choices confronting men must be forged. The forging of such links requires a refocusing of intellectual effort and a reorganization of the relationships of various kinds and ages of men and women jointly involved in a responsible effort to learn wisdom for the world of today and tomorrow.

We must make certain in our Utopian university unit that older relics of university organization do not intrude upon and destroy the community of imaginative learning which the unit will be working hard to build. Faculty members should be employed with a presumption of tenure, though procedures for termination should be commonly agreed upon and understood. Students should not be expected either to measure up to externally imposed standards of achievement or to flunk out. Once admitted, the presumption will be that students will stay and participate until they are no longer benefiting by life in the

community and are ready to move out of the university or into some more specialized academic or professional course of studies. And the students should share with the staff in such judgments.

But where is the larger university in this picture of decentralized learning sub-communities within it? A genuine university community might grow out of such living neighborhoods of learning. All persons in the university will be required to have a connection with one or another sub-community, with the amount and character of their involvement in it depending on their other responsibilities and upon the ingenuity of the unit in finding a place in its life of learning for their special talents. Units will find ways of reporting their findings to other units, and I would hope the full range of symbolic media -prose, poetry, painting, drama, and dance-will be used in this reporting and that the symbolic adequacy of all members of the unit will be stretched and enlarged in the process. They will find ways of putting into more permanent and retrievable storage their findings for the use of others seeking to illuminate the same human issue. Collected on an interuniversity basis, the findings from various teaching-learning units will be contributions to the "museum of the future" which Gardner Murphy has envisaged: "A museum of the future, a systematic and orderly display of the various potentialities which the future may indeed bring. A study by all the methods of analysis and extrapolation might reveal to us the possible future directions of cosmic and human development. The task would be to fill the gaps and at the same time extrapolate in directions suggested by existing trends, for upon this possibility intelligent planning depends. . . . The more serious social science predictions, the Utopias, the science fiction of today, would all occupy alcoves in such a museum."16 Unit representatives will meet to discuss and decide uni-

versity-wide policies, in collaboration with administrators and boards of trustees. Professors and graduate students will rotate between primary involvement in a teachinglearning unit and involvement in special graduate instruction or work in a research institute or in extension assignments. Work in these various assignments will count equally in the awarding of whatever honors, recognitions, and special emoluments the university finds it wise and expedient to grant to its individual members. Continuing all-university conferences for specialists-faculty members and students-from the same field, though rooted socially in different parts of the university, will provide an opportunity to advance specialist concerns and disciplines. These should serve the valid functions of departments in existing university structures but hopefully without their present fragmenting effect upon the life of learning.

The virtues and arts of leisure and contemplation, of creative expression and of logical rigor, of community service and social action, within and outside the university community, will be honored and respected in the university of the future. This represents a change from extending honor primarily to excellence in individual achievement, geared to an inexorable timetable of otherassigned tasks and scheduled completions, if not consummations, of those tasks as in the bureaucratic multiversity. I am quite sure that it is at least as important for the modern university to help develop models of tasteful and person-fulfilling leisure for our society as to develop models of excellence in productive achievement. Our new gift of leisure may make the gentlemen and the gentlewomen, skilled in the arts of tasteful consumption and civic service, as well as the gifted amateur, educational outcomes to be rescued from their aristocratic past, and, when democratically reconceived, to be honored educationally once again.

I would hope that students and faculty members from various national cultures, from both sides of the Iron and Bamboo curtains, will find their way into the community life of the non-bureaucratized university. The visions of value-possibilities for good and evil, growing out of new knowledge and technology, and requiring the choices of men and women, personally and collectively, in increasing the good and diminishing the evil, should take a world shape in the contemporary university rather than exclusively or primarily an American shape.

I am not at all sure that this vision of an alternative organization of university life is the best one conceivable. In fact, I am quite sure that it is not nearly so good as one that can be forged out of the deliberations of men and women of various resources now available in any university, deliberations informed by the organizational studies of university life by social scientists which I have recommended. I have wished to suggest that the present organization of the multiversity, plagued with problems of size and numbers, is only one alternative among many and that other forms of social organization might support the mission of a multiversity striving to become once again a university better than its present ways of organizing, rewarding, punishing and coaching the efforts of those who live by and in it.

Throughout this essay, I have urged that men and women in our present multiversity find ways to move toward greater community of purpose and effort. The reasons for such movement lie within the requirements of a sane development of the life of learning itself. They lie also in the need for a university to speak more univocally to the confusions and conflicts of national and world cultures in stimulating and supporting efforts to build an adequate knowledge-base and valuational base for the

more rational resolution of those conflicts and confusions. This movement toward greater community of purpose and effort in the multiversity requires the release and joining of a continuing dialogue among various internal and external voices concerning the distinctive aims and responsibilities of a university in today's world. It requires also a reconsideration and revision of the social and human organization of university life. There is good reason to believe that a more adequate organization, if achieved by universities, might provide a model for the sane and humane organization of other social, economic, and political enterprises as well.

A university needs boundaries. If it is to serve people in many parts of society consistently with its central devotion to sound and imaginative learning, it must be able to say no as well as yes to external demands upon its resources, to set conditions to its services, whether the petitioner for service be a government agency, an industry, a foundation, a profession, a church, or some other special interest group. If a university is to be able to say no in the rational maintenance and growth of its own integrity, it must develop a pervasive idea to which it is committed. A university will have attained its idea when it is able to say no to a proffered multi-million grant from a respected outside agency and be able to state cogently the reasons for its refusal. Perhaps before the year 2000 some universities will have become able to do so.

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# THE UNIVERSITY AND THE MODERN AGE

# By SIR CHARLES MORRIS

I REMEMBER that when I went to the University of Michigan nearly forty years ago on secondment from Oxford I was greatly taken aback with what seemed to me to be an overwhelming preponderance of professional schools in the university. Round the campus were great buildings housing schools of law, medicine, dentistry, many kinds of engineering, architecture, naval architecture, and so on. The College of Arts and Sciences did not occupy any particularly commanding position, and was in fact quite difficult to find. It was also not very large, though the university as a whole seemed to me to be very big indeed. This was, I think, my first close contact with modernity in the university world.

That was a long time ago, and since then Oxford itself has changed a great deal. At the time I was given a very warm welcome, and it was clear that Oxford stood for a good deal in Middle Western eyes. But I may well ask myself today, what was my Oxford idea of university education at that time?

I suppose I assumed that the university was concerned with "education" and not with professional training. Even in law the courses not only for the first degree, the Bachelor of Arts in the faculty of law, but also the second degree, the Bachelor of Civil Law, seemed to be academic and not professional. Medicine I was really hardly aware of; medical students seemed to be concerned with science, usually physiology, and it was only after they had taken

their degree in science at Oxford that they went on to the medical schools at the great London hospitals for their professional training. There was, it is true, a Regius Professor of Medicine in the university, a senior physician of high repute in the profession; but I did not know what his duties were; and there was then no well-developed Department or School of Clinical Medicine, as there is today. There was little or no engineering.

Altogether I was hardly aware of the existence of professional schools or studies at Oxford at that time, or even of a graduate school. Graduate students from other countries, and from other universities, came in small numbers; but for the most part they read for one or other of the undergraduate schools-reading for a second first degree, so to speak, and thereby showing, no doubt, that an Oxford first degree was at that time quite highly valued. The Doctorate of Philosophy, which now attracts many students from other universities all over the world, had been founded at that time but was hardly well established. So far as academics were concerned it was still the Oxford assumption that after completing a first "honours" degree a man was fit to embark straight away on a career of scholarship or teaching and make his own way in the world. I began work as a university teacher myself immediately after taking my first degree.

But to repeat the question, what was the basic idea? If it was assumed that professional training was not the concern of the university but should be left to somebody else—as for instance to the London hospitals or the Inns of Court—what was the university itself to provide? Clearly it was to bring a young man to some necessary, or at least desirable, intellectual starting point from which he could profitably proceed to acquire for himself a professional training. It was still fairly common for an undergraduate to choose for himself a course which was

not particularly closely allied to any field of studies which would concern him at all in his later career. This was especially so in the case of "Greats" or Modern History or Mathematics. Few of those who took these schools were going to be professional classical scholars or historians or mathematicians. Some young men, often on the advice of their parents, deliberately chose studies for which they knew they would never have any time or energy again after they had once embarked on their professional work.

To very many of the young men concerned, their university years were simply three or four years of particularly satisfying intellectual and social enjoyment before they became submerged in the hard grind of their life's work. But to most of them it was much more than this, and in general the world at large accepted it as being much more. The professional man or administrator in later life would look back on his university days as having developed intellectual powers which had proved invaluable to him in his professional work, and as having given him an apparent advantage over his contemporaries who had not shared the university experience. But he also thought that his intellectual development was not entirely separate from the development of his character, and that he had been extremely fortunate that these immensely important years of his youth had been spent in a university society which was so well designed to meet his needs in these growing years. His non-university fellows had just to do the best they could in a more or less grim world which was not too friendly to young men of his age.

This conception of the "golden age" of the university had for many decades a great appeal to generations of parents who had not themselves had the privilege of the experience. It may be that a large number of the young themselves were at all times quite impatient with it, and with the university. Certainly towards the end of their three years most of them were very anxious "to get out and get on with it" and were not too sure, at that point in their lives, that from the point of view of their career they had not been largely wasting their time. But this was not the world's judgment, nor for the most part the judgment of their parents. The general view was that their three or four years of undergraduate life was none too long for them to acquire a capital stock of something, intellectual and personal, which would stand them in good stead for their forty years or more of professional life.

This view, which I have associated especially with Oxford, has often been regarded as an "aristocratic" view. What is more interesting, and perhaps more important, is that it implies the drawing of a rather sharp line between "training" and "education," and allots "education" and not "training" as the province of the university.

Can this conception of university education stand up in the light of modern requirements? Perhaps we should first ask, could it stand up to the requirements of the nineteenth century? It would seem that it could. Certainly Oxford itself had a high reputation as a place of undergraduate education for future administrators and public men. These men acquired the skills they required for their particular occupation after they left the university, and by and large they were able to do this without any apparent regard to the special studies which they had pursued in their college days. The mental training they had derived from these special studies gave them a good starting point from which to attack the task of training themselves professionally, and the acquiring of practical skills seemed then to come naturally and easily with the growth of maturity and with the experience gained from their early years at work. They did not need to look to their early education for any specialisms, but only for such

general intellectual powers and facilities as the special studies they had undertaken at the university had provided them with. Even a doctor for instance needed very little science, and what he did need he could acquire in a few months in the course of his medical training. What was chiefly necessary to him was an orderly mind and an ability to attack problems in a disciplined way. He had to learn a certain amount of sheer information in his years of hospital training; but he could hardly start upon this until he began his hospital studies; and he seems to have been able to gain all that was needed to make him a good doctor within the three or four years of his hospital course. As a professional man, he had in fact discipline of mind and character rather than much specialized knowledge or skills, and with the help of these alone he made a good nineteenth-century or early twentieth-century doctor.

The same applied to the administrator, to the minister of religion, and to many other professional men. The exceptions were the schoolmaster and, of course, the university teacher. The scientists in those days hardly constituted a profession of their own. But the schoolmasters mainly taught the classics and mathematics and in these fields they were highly trained specialists, and they of course used their special knowledge and skills in their professional work. They had indeed no professionalism as educators, or only such as each man acquired for himself in the course of his experience. Their success as teachers was due partly to their natural abilities (a very high proportion of the national brain power must have gone into teaching at that time) and partly to their very advanced expertise in classics and mathematics. Professional training in education was reserved for those prospective teachers who had not been to a university at all, and it was in general short and unambitious. The only men who fore-

shadowed the future with their high specialisms were the classicists and the mathematicians together with the very small number of specialized scientists.

The omni-competence of general education as a training for a man's life work died in England with the First World War. Modern war calls for the last ounce of effort from the nations who make it. Wars can no longer be won easily, or by people who devote only part of their energy and attention to the business. The division of labour and the development of specialisms have to be elaborated to the highest possible degree. In the circumstances of today the professional will always beat the amateur; indeed the professional has become essential to the mere survival of society, as well of course as to its development and welfare. And today the professional is a very high specialist indeed.

This modern circumstance has inevitably transformed the universities. In the first place every working professional man has to call for the continued development of the basic sciences and disciplines upon which his professional skills are based. The doctor has to ask the chemists, physicists, and biologists to press on with the advancement of their sciences because he needs those advances for his day to day medical purposes. The lawyer has to call upon the sociologists, psychologists, and historians in the same way. This need for dynamism in the production of new knowledge applies not only to the basic sciences but also to the very professionalisms themselves. The practicing engineer requires the academic engineering scientist not only to teach him as a young man but also to advance as fast as possible the available corpus of engineering knowledge. The universities as tireless producers of new knowledge are entirely essential to the daily work of the professional man.

As a result, the universities have had to spread them-

selves to include a large number of new disciplines and will have to continue to spread themselves a good deal further yet. Quite apart from the basic physics, chemistry, and mathematics, there are fundamental problems in each of the fields of engineering—civil, mechanical, electrical, chemical, production, nuclear, and so on—which will only be solved by dedicated engineering scientists. All the other professions are plagued similarly. It has been unavoidable that the universities should cease to be simply colleges of arts and sciences and should become consortia of a multitude of professional schools. Nothing less could sustain the industrial welfare society of today.

Two things have become clear in the course of this experience. The first is that there is almost no kind of human occupation which does not benefit very greatly for having a body of knowledge relevant to its practice sustained and developed by full-time academic specialists of its own. Only thirty years ago there was a great deal of merry-making in European universities about some of the specialisms in American academic institutions. But today, so far as the essence of the matter is concerned, the laugh is with the Americans. In the English universities in particular, not only are we proliferating professorships in the technological and business sciences, we are even beginning to appreciate the value of chairs of drama and of creative English-and that is going a very long way in my country. The truth is that there is no human activity or field of interest where an able man will not discover something new, and even something fundamentally new, if he is given an opportunity to give his full-time energy and attention to it. The English have come round to this very slowly. In this belief the American universities have no doubt wasted a certain amount of money, perhaps in some cases avoidably. But what has been wasted has not been very much, in the end of all, as compared with the

prodigious returns which have come in to reward their wide-ranging academic faith and enterprise.

The second thing which has become clear in the experience of recent decades is that there is a considerable feedback of ideas from the applied sciences and the technologies to the pure sciences themselves. Not only is it necessary to the health and growth of the technologies that they should be close to the pure sciences in their daily life and work, but the reverse is also true in a significant degree. Engineers have a great deal to contribute to the designing of apparatus and equipment to meet the experimental needs of the pure scientist. But much more than this is involved. Many of the ideas, we are often assured by physicists themselves, which have been brought into play and which have led to critical advances in physics-and no doubt the same is true in other pure sciences-have been suggested by the manner in which particular technological problems have been posed, and even by tentative solutions to which the applied scientist has been led in his own sphere. It simply would not do in the modern age for the physicists to live and work apart from the technologists, and universities have inevitably adapted their structures and even their architectural master-plans to encourage and to nourish a common world of ideas and communications as between the disciplines.

This pattern of development of universities in our time—and it is a continuous and very rapid development—is primarily dictated by the needs of the advancement of knowledge. Very large numbers of research workers are nowadays required to keep the production of new knowledge moving, and the first call is on universities to house them and to secure for them the necessary facilities, and also the necessary freedom and encouragement, to do what they have to do. But at the same time of course universities are also homes of education, and all these modern

developments have their important implications on the educational side.

The first and most important implication has been referred to already. For a large number of occupations in the circumstances of today a much more elevated level of general education than in the past is required before a man can profitably embark on his professional training. This has been most obvious for some time in regard to the sciences. A modern engineer or physician does not, no doubt, need to be a leader in the field of pure chemistry; but he will not get very far in his own profession, and he will soon get out of date within it, unless he can understand the language of the pure chemist and can communicate with him. When different disciplines or fields of knowledge fragment and fall apart, nothing gets lost so easily in the cracks between the fragments as ideas. If, as is too often the case, new discoveries remain unknown to the very people to whose work they could be most relevant, the advancement of knowledge and professional practice can be set back by decades and even by generations. Yet the only way to try to avoid these losses and delays is for the men in a wide variety of fields to be so educated as to understand one another and to remain in living contact.

This means that more and more professional training has had to become postgraduate and yet remain within the universities. There is still a place, as in the older manner, for the man of curiosity and inventiveness, who has left the university after a minimum of education and training, to give some of his energies in his spare time during years of busy professional practice to some piece of research in private. There will always be room for such men. But it is not along this road that the main advances of knowledge have to come in the present age. The pure advancement of knowledge in any one field is itself

nowadays a professional business. And even to remain in touch with advances calls for some postgraduate training in research and advanced professional study. In regard to the front line work itself, a great proportion of this has to be done in universities, in proximity to the neighbouring sciences-and in the shadow of this work the young men of the future need to be trained. This means a long stay for the young men concerned because they cannot do without some years of high specialization and training in research after reaching a high level in their basic general education. The university has to provide much more than blownup or glorified college teaching. Indeed undergraduate education is, in ever wider and wider fields, only half the business, if so much. If advanced professional studies are producing new knowledge, their place is in the universities. Only the universities can sustain and nourish the work of discovery.

But there have been other reasons also which have led the universities inevitably to welcome more and more of the professions within their doors. It is significant that this movement for the most part began and grew fastest in the new countries. In a pioneering or undeveloped country which has an eye to democracy-and no undeveloped country can afford not to be democratic in this respect at any rate-professional training has to be institutionalized. A new profession of law or medicine can only be built effectively, and a small profession can only be made large rapidly, through the law school or the medical school. The necessary job simply cannot be done privately or semi-privately on an in-service basis. An old country can put up some show of training the future generation in chambers, or in the offices of established firms, but to a new country this possibility is not open. It is able to build a profession only through established schools. Moreover, the experience of the modern world makes it very clear to all countries that their supply of brainpower is short. They must at their peril make professional training and opportunity open to all talents. And this can only be done through institutions. All this is very obvious in the new countries of Africa, but essentially it is only the story of North America all over again.

To sum up, the modern age inescapably demands more of the universities, and of education generally, than simple mind training or the simple development of the intellectual powers of the individual. It is impossible for the universities to turn away from these demands. I have sought to lay stress on three main points which are involved. Intensive training for the professional man is inevitable, and will increase in range and scope; more and more of this professional training will be pressed into the universities, as the years go on; and it will increasingly become postgraduate in character. Even educationally speaking, this is not all loss. The universities will at least be full of students who know what they are there for and appreciate in general the aim and purpose behind everything they are required to do. The increase in specialization and concentration of focus has steadily brought with it a sharper intellectual interest and will to work at academic pursuits, and education based on keen interest achieves even its deepest and most fundamental purposes better than studies whose drive is nothing stronger than habit or fashion or easy-tempered conformity. The danger of course is that students will be asked, and will ask themselves, to do too much.

I have observed that all these developments call emphatically for a rapid and wide-ranging increase in the undertaking of research within the universities. Let us consider what has actually been happening in this regard.

There have, of course, been some regrettable gaps in the advancement of knowledge. It is increasingly recog-

nized that the most important gap in the advancement of the sciences has lain in the serious neglect of the scientific study of the nature of man himself, both in his personality and in society. Philosophers and scholars began to speak of the possibilities of the human sciences as soon as they began to reflect upon the methods and achievements of Galileo and Newton, and some great enquirers have dedicated themselves through the generations to this field. But the study of man has clearly been very slow to establish itself in the "sure way of science," to use a phrase of Kant's, and far more effort has hitherto been concentrated on the investigation of physical nature, where scientific method has met with such satisfying and everincreasing success. It was perhaps inevitable that in the excitement about the fields of our growing knowledge we should be tempted to forget the fields of our apparently intractable ignorance, and even to ignore their existence altogether. Indeed, so far as our educational repertoire is concerned, this is exactly what has happened. The study of humanity by the older techniques was for long thought by a scientific age to be of little value, or even to bring positive harm: such studies as theology, metaphysics, and ethics have disappeared almost without trace from the curriculum of our general education. Even history has come to speak uncertainly to the ordinary student; it is anxious not to claim to have any "value" for any human purpose and seems not to know quite why it has survived as part of the educator's program. Yet though these traditional studies have disappeared as being insufficiently scientific and unworthy of a scientific age, we have found nothing to put in their place. It is not surprising that we are afflicted with the famous "flight from freedom" of our generation. Many people clearly fear, and even believe, that we shall shortly have added to it a flight from hope.

But these humane studies are now reestablishing themselves in a new manner. Whether they are or will be truly and strictly scientific in the traditionally accepted meaning of that term—as physics for instance is scientific—may still be doubted. But it is clear that scientific work is now able to contribute a great deal in these fields, and that they will now attract very much more attention from our scientific age. More money will be devoted to the development of their work, and more men and women of great ability will devote themselves to these studies. Inevitably therefore they will to a greater and greater extent find their place in the educational canon, and this particular gap in the program of general education will come to be increasingly filled.

Associated with these developments will be ever-insistent efforts to throw further light on ultimate aims and purposes. Spectacular successes in apparently approaching even nearer to some glimpses of the very deepest secrets of the physical universe have led thinkers to have less modest hopes of solving the mysteries of man himself. We are all of us trying to think again, with the help of specifically modern ideas and techniques of enquiry, the answers to the old questions. What in the end is the deep purpose of human society? And, more modestly and perhaps more manageably, what is the purpose today of education? What, on the teaching side, is the real aim of the modern university?

The majority of mankind throughout the ages have supposed that the life of leisure, or a life without commitment to work, was the *aristocratic* way of life, and therefore to be desired if one could ever achieve it. Most men who give themselves to the pursuit of wealth think they do so because wealth will give them the priceless gift of leisure. They do not actually work out their lives on this pattern, of course. They go on and on pursuing wealth, or

doing work of one kind or another that they have come to enjoy while pursuing their wealth. Seriously they do not dream of abandoning a life of "work." And if they do, they become a problem, as is now well recognized, to their doctors, and in many cases actually die. So goes the modern belief, and it is probably true. But for all that, as has been said, almost everyone has believed that what would really satisfy him would be a life of leisure, or a life without work. There must be something about the idea which accounts for its almost universal popularity.

To more highly educated and more thoughtful people, of course, "a life of leisure" has always meant something very different from a mere negativism or rejection of effort, or a mere following of the fashionable pursuits of their class and generation. It means the enjoyment of culture or art, planned to suit individual interests and tastes. This is by no means a life of inactivity. The enjoyment of Beethoven or the pleasures of scholarship call for energy and even for dedication. The education of a cultivated gentleman in an earlier generation could be a very strenuous business, and so could the enjoyment of his pleasures through the course of his life. Plenty of activity, self-discipline, and self-training were involved. Many a cultivated man of leisure strove indeed for perfection. But no "work" was involved. And it was this absence of "work" which made a life of leisure.

The modern temper is out of sympathy with this point of view. And of course this is not surprising. To modern man the world presents itself as containing many great evils which can in principle, or at least in theory, be eliminated by the effort of man and also many opportunities which can in principle be practically exploited by man for the almost indefinite improvement of human health and happiness. It is a world which very positively challenges human effort and devotion. There are plenty

of things, and presumably always will be plenty of things, which can in principle be actually done, and which, if one believes they can be actually done, are obviously worth doing. The world presents itself as a tremendous field of work, where the achievement by man of the ends which are achievable, though no doubt difficult and distant, would very obviously give him satisfaction.

This is I think a specifically modern attitude, and it has come into being as the result of the advance of modern science. People have always realised that there are terrible evils in the world—famine, poverty, disease, war, and so on. But they thought that these things were an inescapable part of the human lot. One could give alms to a few poor men, but one could not abolish poverty; one could succour a few wounded men, but one could not get rid of war. One could save a few people from starvation, but famines would continue so long as human life continued.

Later, in the seventeenth and eighteenth centuries, when modern science was beginning to show its possibilities, philosophers began to speculate about the "justification of Christian optimism," and the possibility of a millennium or utopia arising out of the advancement of human knowledge. But it was a utopia. The thoughts and projections were very speculative and in a way unreal. Now in our time science, and above all the application of science to human affairs, has advanced so fast that almost any achievement seems to be possible. There seems to be almost no limit to what can be done.

Superficially, I know, the present is not an optimistic generation. The wave of optimism after the First World War—"the war to end wars"—seemed soon to fade away. And this quick disillusionment has since that time made it difficult or impossible for a younger generation to indulge again in the same kind of easy and confident hopefulness about the future. Nobody today hopes for quick, con-

tinuous, and irreversible improvements in the lot of mankind. Yet everybody knows that there have been very quick changes, almost unbelievably quick changes, in our time. To take only one instance, the "wind of change" has swept Africa, and produced remarkable repercussions in other parts of the world, with a speed which was quite unpredicted, and not even dreamed of. Similarly, the developments in medicine have been so spectacular and have followed one another at so remarkable and unprecedented a pace in the last twenty years that the whole climate of human hopes and expectations has changed, even in the most advanced and sophisticated countries. Families have no longer to expect to lose two or three young children by early death, and the modern Elizabeth Browning or Florence Nightingale does not have to contemplate spending a great part of her life on a couch.

There is as I have said no easy optimism on the surface. But at a deeper and steadier level, it is now universally recognised that tremendous things can be done. Even the great populations of the East are profoundly stirring and moving forward. Where communism has an appeal it is because of a promise-no doubt an exaggerated, overeasy promise-that wonders can and will be achieved within the lifetime of men and women now living. Where it fails in its appeal, it is because some other faith in a really practicable future has forestalled it and seems more convincing. Today nobody dreams that it must be accepted that nothing, or nothing very much, can be done. Nobody believes that mankind will forever be subject to the same old ills, that the future will be like the past. The future could possibly be catastrophic and disastrous, on a scale that has never been possible before. It could be, and should be, very much better than the past. Certainly it will not be the same.

Such is the spirit of the modern age. It is for life in

a world like this that the young have to be educated. Plato and the very great philosophers—what Walter Lippmann has called the high philosophy—have always taught something like this. But now the doctrine has entered into the heart and mind of the common man. He cannot see the world of the future in any detail or with any clarity. But it is an affirmative and activistic world that he foresees, not a world where recreation, contemplation, and acceptance are the final end of man.

This modern belief is without doubt fundamentally true. For the present the obstacles to human peace and happiness are obvious and great. There is much indeed to strive for in our immediate generation, and the doctrine holds beyond the present and early future. For man the last problem is never solved. As one difficulty is surmounted, other and more difficult aims and ambitions arise. The service of man, his welfare, and his aspirations will never be completely mastered by any form of automation. There are always more distant ranges beyond the horizon, and man himself advances a step further with every machine he invents and makes his slave. There is always need for creation, for the conception of something new. And with every stage of progress in machines and devices, man improves his knowledge of himself and sees more and more possibilities in the future. There is and can be no final end. It is the nature of man that this should be so.

How can all this come about? What pattern will the future of humanity take upon itself? To start with the prosaic and the practical, we are seeing today in the labour market the supersession of the work of production industries by the work of service industries. There can now be time, labour, and energy for the servicing of man by man. Many of the most valuable kinds of service, which people have most wished they were able to receive, have

seemed to be impossibly expensive and therefore available only to the very few. But this will no longer be true. The world will now be able in principle to provide itself not only with the goods but also with the services it wants on a really big scale. And the scale and the number, and even the quality, of these services could go on increasing indefinitely.

In the past the privileged few have largely used their command of services for trivial purposes, but not entirely so. Education, and the pursuit and maintenance of health, including mental health, of the individual, of the family, and of society can be almost endlessly expensive in manpower. Moreover it can be assumed that it will continue to give increasing returns in health and happiness for a very long time to come, and perhaps indeed endlessly. The demand for services will call for the best energies, not just of very large numbers, but of the masses and of all the members of society whatever.

For the great mass of people, education for the first time will need to be for really exacting vocations. For the professional man, for the public man, for the teacher, for the scientist, and for some others it has been so in the past. In their working life these men need all the education they can get and could always well have done with more than they have had. And their work has satisfied them and filled their lives. But for too many employments very little education, or even none at all, has up to now sufficed—a little reading, writing and arithmetic, and perhaps not even that. A man, or a woman, has been able to learn to work a manually controlled press in three weeks and then go on operating it, monotonously, for the rest of his life.

But today more and more employments are becoming more demanding, and work in the service industries is calling for more and more personal skills and personal qualities. Employment is in more and more cases coming nearer and nearer in quality to the satisfying work of the professional man. And an education is required which is apt to take longer and involve much wider and more advanced studies.

Clearly we are only at the beginning of the expansion of the services of the welfare state. Teachers are terribly short in most advanced countries, and though a considerable proportion of them undoubtedly need more personal education than they have been able to acquire, it will be difficult to begin to find the national resources to provide for this improvement of quality for some years, because of the sheer necessity to concentrate on providing much greater *numbers*.

In Britain the bold step has been taken of increasing the minimum length of course at training colleges from two to three years. This means an education for thirteen years at school followed by three years at college. Or putting it in another way, it means five years further full-time education after reaching School Certificate level, or the ordinary level of the General Certificate of Education—the level upon which until less than twenty years ago the minimum entrance requirements to universities were based. But even this is not enough, and even this has only been achieved by learning to live with a gross shortage in numbers for the total teaching force.

There can be no doubt any longer, if ever there was any reasonable doubt, that primary schools need very highly educated teachers. It is increasingly becoming clear, I think, that before long all the children in Great Britain will go to primary schools in the national system. Their quality has come to be more and more recognized by all the social classes in recent years. But good as they are coming to be, educated parents will not be satisfied with them as they are, but will demand that they shall get

better and better. This can only mean more and more highly educated teachers. Primary teachers very much leave their mark upon the children under their care; and since intellectual stimulus is becoming more and more needed for more and more children in the present world, high intellectual equipment as well as a good professional training is quite essential for primary teachers.

For graduate teachers, whether in primary or secondary schools, a further year of professional training is already usual and will shortly become compulsory for all, as a minimum. Even this is not sufficient for all. There needs to be a sizable proportion who have a longer academic training than this, for planning and controlling the work of departments and for quite a lot of advanced teaching. Educational systems have a very, very long way to go yet before they can properly meet the needs of the modern community for teachers.

In the present context I mention these points about teachers only as one illustration. Longer education and training for greater and greater numbers are needed at every point. All the health, welfare, and guidance services of modern society are calling urgently for more and more well-qualified workers, and these too are now being under-educated and under-trained because of the sheer necessity of producing large numbers quickly.

With the complexity of modern life and modern society must come a wider and wider extension of personal and family services. The traditional view that only a small section of the community—perhaps about 15 to 20 percent—need such services is clearly out of date. Society nowadays sets its aims so high. It is believed almost universally today that such things as poverty, under-nour-ishment, a high proportion of illness and ill-health, social insecurity—and of course social strife, and war between nations—can be eliminated if only we organize ourselves

to take full advantage of the continuous and spectacular advances in medicine and in the "human" sciences. The workers in the various social services need to be "professionally" qualified in a very high sense, and they are called in to advise and help in the face of personal and family needs of all classes of the community. Here again, educated persons and families will continually press for a better quality of service as the years go on and as scientific knowledge steadily advances. The call for more and more workers of a "professional" and "near-professional" character will be rapid and never-ending. Even in the most advanced countries we have so far only seen the beginnings of it.

The requirement of more and more workers in the social fields will have to bring forward more and more members of the community out of routine and monotonous work, which has often demanded little or no education, into work of a "professional" type which calls for personal qualities, some degree of personal dedication and devotion, and a high personal education and training. Work which can be really satisfying, in the sense in which "professional" work is satisfying, and which can in itself give a real purpose in life, will inevitably become available to more and more people, almost without limit. And education will have to take account of the world as it is really going to be: a world of communities with everincreasing interdependent human services, operated by workers with the highest education and training which can be devised and afforded.

In all this woman comes very recently upon the scene. We have lived through generations in which woman has tended to be in the backstage, or even off the stage altogether. She has become more and more "emancipated," but nobody can believe that we have yet seen all the results which are going to flow from her emancipation. In

the age of specialisation she has been the great influence for humanism, the great protagonist of balance and commonsense. She has seemed to some to have been fighting a losing battle. In a generation of glittering specialisation she has seemed too near to earth, to nature, to dull commonsense.

But now even the avant-garde are thinking again. When in this age of brilliant techniques we turn to think of human welfare and happiness, is she not nearer to the root of the matter? She is the main source of power in social inheritance, and therefore in the advance of civilised life; she lives longer and has avoided many of the agonies of specialised man; and in spite of being in many ways more vulnerable she is nearer to holding the key to the secrets of the good life. In retirement, in the closing years of life, she finds more satisfaction, and more sheer will to continue enjoyment of living than her mate of the other sex.

We must accept it as a fact, as Alva Myrdal so brilliantly expounded to us now many years ago, that in the coming years women, over and above their work in the home, are going to play a very greatly increased part in the working of the welfare society. Not only is this quite necessary for the health and happiness of the community, and not least for the survival and health of the family system in modern circumstances, but it is what women as individual persons are going to want for themselves. The facts speak clearly and convincingly. Very large numbers of women are going to have their youngest child fully engaged and occupied at school before they themselves are forty, and after that they will have an expectation of active life for at least thirty more years. A high proportion of them will certainly want, for the second part of their lives, work and commitments outside as well as inside the home. Without such employment, life under

modern conditions has simply not enough to offer them. Increasingly and inevitably they will take every opportunity that is offered to them to secure work for themselves, and they will press—as they are already pressing—for the employment structure to be effectively rearranged and adjusted to make the necessary jobs more suitable to their needs and conditions. The demands for such changes in the labour market, for instance in the fields of teaching and nursing, are only now beginning, but they will grow and grow.

The education of girls today, both at school and at university, must take account of what will inevitably be the future pattern of life for women. Girls must be educated so as to be able not only to bring up a well-educated family, but also to take up in the second half of their lives work outside the home. They will need to be in a position to take work which is worthy of their own abilities and self-esteem; they must obviously not be left out of modern developments, and they will not consent to become a depressed and dissatisfied section of society. In any case, their abilities are very badly needed. They ought to be qualified to fit well into the many employments which suit women, especially in the social and personal services, including of course, education.

Nobody can doubt that this new form of society, which is coming in our time, will greatly improve the quality of individual living. Fewer and fewer people will have to devote their working lives to humdrum and humanly unsatisfying employments which have to be undertaken simply to earn the family's daily bread. More and more will be able to enter professions and vocations which they can embrace with pride, and in which only a well-educated human being could succeed. The possibility of such a society could well be accepted as presenting us—to use the quaint but curiously stirring phrase of an eighteenth

century social philosopher—with "a justification of Christian optimism."

And nobody can doubt that all this calls the university to a greater and greater task. The need for further advancements of knowledge, and for further developments and ever wider extensions of knowledge, are so insistent and so cumulative that no university could, if it wished, retire into a modest and unassuming backwater away from the arena of social and public life. If it did, it would be necessary to invent a new model university to replace it.

# THE UNIVERSITY AND THE COMMUNITY OF LEARNING

# By HENRY STEELE COMMAGER

WHEN WE CONSIDER the nature and the role of the university at the beginning of the next century, the history of predictions admonishes us to be both cautious and modest, for few of them are vindicated by history. "And the things men looked for cometh not / And a path there was, where no man thought" seems to be the rule in history. How sobering to contemplate the utopias of the past, from Plato's Republic to Bacon's New Atlantis, and Butler's Erewhon; how different the New World from the New Atlantis, how different Australia from Erewhon, how different even the real Israel from Theodor Herzl's Altneuland and from the plans of the Zionists. How misguided, for that matter, the prophecies of our own founding fathers of the development of the American society. And the difficulty, on the whole, has not been that the predictions were too visionary, but that they were too prosaic, not that they have been too voluptuous, but that they have been too unimaginative. It is well, when looking to the future, to recall Daniel Burnham's admonition: "Make no little plans."

It is a mere thirty-five years now to the year 2000, a single generation, as generations go. Who, in 1930 looking ahead to 1965, imagined, or could have imagined the development of the university and its associated institutions over this thirty-five year period? Who, then, would have imagined that this generation from the thirties to the sixties would prove the most progressive and creative in

the history of higher education? Abraham Flexner had just published his mordant Universities: American, English, German contrasting American universities unfavorably with the German, and educators who imagined that the American university might be something new under the academic sun were being put in their place by Robert Hutchins. Almost everywhere the college was the tail that wagged the academic dog. (Kentucky, for example, authorized the Ph.D. in history only in 1931.) And in a good many other places the football team was the most important thing about the college. Most colleges and universities were worried about filling their class rooms and dormitories, and about paying their professors: the state of Kentucky, for example, reduced its biennial appropriation from something over three to less than two million dollars in a period of four years. Notwithstanding the threat of impoverishment, few educators called for federal aid, and those who did were looked upon as the enemies of both learning and freedom, for it was an article of faith that federal aid spelled federal control. And certainly it never occurred to anyone in that innocent day, that either the universities or the government had any responsibility for education among the backward peoples of the world.

What has happened in the past generation suggests discretion in prediction. But it suggests, too, the direction which higher education in America (and perhaps in Europe) will in all likelihood take in the next generation. The quantitative changes are obvious. There has been an immense increase in the number of colleges and universities, and if the new institutions are not all Harvards or Chicagos, neither are they all built in the image of Old Siwash or Canarsie, as some of our European friends seem to think. There was a five-fold increase in the total number of students and a proportionately higher in-

crease in the number of students in professional and graduate work. Appropriations increased some ten-fold and so did endowments. More important are the qualitative changes of the past generation: a decisive shift from the private to the public university; the massive entry of the federal government into the academic domain; the steady raising of standards except where state policy made that impossible; a shift in the center of gravity to the graduate and professional schools; and an immense growth of the research functions of the university, sometimes at the expense of teaching.

More astonishing, perhaps, than the prosperity of the academic community has been the poverty of academic leadership. The generation after the Civil War had seen the emergence of a galaxy of great educational statesmen: Charles W. Eliot, Daniel C. Gilman, Andrew D. White, and after them Harper of Chicago, Butler of Columbia, Van Hise of Wisconsin, and Lowell of Harvard. There are more affluent universities now, but no academic statesmen to compare with these. Most of us will, I suspect, agree that in the last generation it is Robert Hutchins and James B. Conant who have been the most distinguished contributors to educational thought. But Hutchins' thought has been for the most part irrelevant to the development of higher education, and Mr. Conant has concerned himself almost wholly with the problems of secondary education. Pressure for change, expansion, experimentation, improvement has come rather from without than from within the academy; it has come in substantial part from that government traditionally feared: the federal. It has come in large part, too, from circumstances which educators have been most reluctant to recognize, the importunate demands of war.

The university is, by now, firmly established as the focal point not only of American culture and education, but of

American life. It is, next to government itself, the chief servant of society, the chief instrument of social change. It occupies something of the symbolic role of both the church and the state in the Old World, but it fills a role which neither church nor state can effectively fill; it is the source, the inspiration, the powerhouse, and the clearing house of new ideas.

All this is very much in the American tradition and in the American grain. For as the Americans were the first people to use their schools primarily for nonacademic purposes, so they were the first to turn to their colleges and universities for general social services, often of a nonacademic nature. And as so many of those social purposes were new—the creation of a classless society, for example, or the separation of church and state—the universities early fell into the habit of taking new functions and new ideas in their stride.

We take this for granted, but Europeans cannot. "Universities," wrote Johann Grimm at the beginning of the last century, "are like gardens where wild growths are only reluctantly tolerated." Even that was putting the matter somewhat generously. From the sixteenth to the eighteenth centuries most Old World universities were not only unsympathetic to new ideas, they were under pressure from both church and state to resist and suppress new ideas. The great Thomasius was forced out of the University of Leipzig at the end of the seventeenth century because he lectured in German, and a generation later his successor Christian Wolf was forced to depart Halle on pain of death for suggesting that Chinese philosophy was as benign as Christian. At the University of Paris the medical faculty was forbidden to teach the circulation of the blood until the eighteenth century. In Jesuit universities the rule of Acquaviva (head of the order, 1581-1615) that "the teacher is not to permit any novel opinions or discussions to be mooted . . . or to teach nor suffer to be taught anything contrary to prevalent opinions of acknowledged doctors current in the school" held good all through the seventeenth century and into the eighteenth. No wonder the universities were moribund in most of Europe in the seventeenth and even the eighteenth centuries, Holland and Scotland and two or three German universities being the only important exceptions. They had contributed little to the Renaissance and they contributed even less to the Enlightenment: how interesting that the University of Florence languished all through the brilliant fifteenth century, and that the University of Paris was the center of obscurantism all through the eighteenth.

Circumstances imposed a very different situation on the new United States, for here were none of those powerful institutions which in the Old World could be relied upon to encourage and patronize science and learning. No monarchy, no aristocracy, no church, no bench nor bar as yet, no great merchant companies and no guilds—whatever was to be done had to be done by the schools and the colleges. This circumstance, which might appear a serious handicap to the new nation, had its advantages: there was no crown, no government, no church, no class powerful enough either to control or to censor science and learning in the New World. To do the miscellaneous tasks which so desperately needed to be done, and which no traditional institutions were prepared to do, Americans invented a new kind of university.

I need not remind you that the university is a Western invention, one of the two or three most important inventions of Western man. The original university, that which grew up in Italy in the twelfth and thirteenth centuries and spread from Italy to France and Spain and from there to Germany and the North, was an institu-

tion designed to train theologians, doctors, lawyers, and—increasingly—students of philosophy who might conceivably serve society outside these three set professions. The original university was urban, nonresidential, professional, patronized either by the church or by the prince and controlled pretty much by these. The English created a second kind of university—the colleges of Oxford and Cambridge, located in the country rather than in the city; residential; with masters in loco parentis to students; designed at first to train churchmen but increasingly to train the upper class to rule. The Germans added to this, in the eighteenth century, the function of expanding the bounds of knowledge through research, and that came to be the distinctive mark which characterized the modern university.

Americans took over features from all three models. modified them, and added new functions, interests, aims, and activities to make something which-by the end of the nineteenth century—was really a fourth type of university. It was rural and urban, residential and nonresidential, collegiate and professional and research, and miscellaneous; it was religious and secular, private and public, and a combination of the two. Its most striking feature, however, was that it was not bound to the traditional roles, but took on whatever tasks society assigned to it: agricultural education, veterinary science, teacher training, commerce and business, architecture, librarianship, and scores of other miscellaneous activities. Nor did it become wholly professional. It undertook the old familiar tasks of teaching the young, and carried the doctrine of in loco parentis to lengths that others thought absurd, and that we now think absurd; it catered to the public interest with games and sports on a scale that conjured up images of the Roman arenas. It sponsored research of the most advanced character and built up research libraries and laboratories that were the envy of the rest of the world.

Now we are witnessing what might be called a new proliferation: the creation, in affiliation with existing schools, of semi-autonomous institutes to investigate the things society wants investigated. There are, to be sure, antecedents here in the Old World, but the institutes of the Old World-the famous Max Plank Institute in Göttingen, for example, or the Nils Bohr Institute of Copenhagen-belong clearly in the framework of the traditional university. The American institutes are, in a sense, more secular and less academic. Here is an institute for the study of violence; there one that concentrates on urban development; here-it happens to be at Columbia-an institute for citizenship, and elsewhere-this is at Chicago -an institute for the study of race relations. How interesting, too, the recent trend-to which I shall advert later -to make the universities the centers of the creative arts. Every college, now, has to have a poet in residence, or a painter, or a musician. Where in the eighteenth century a Haydn, a Handel, a Mozart, a Beethoven were under the patronage of some prince like Esterhazy, or of the church, in twentieth-century America, a Hindemith, a Roger Sessions, an Aaron Copland, a Leonard Bernstein finds patronage-the very term is misleading-in some college or university.

In short the pattern of the American university—a pattern now spreading back to the Old World—is that of an institution large enough and prosperous enough to serve all the traditional functions of the university—teaching and character training and professional training; to serve the needs of society and of the government; to engage in far-reaching academic ventures across national boundaries; and fearlessly to initiate, sponsor, and carry out research in every field that calls for investigation.

Every age thinks its crises the most urgent; perhaps there is some vanity here, for the sense of urgency is subjective. But complexity is another matter: that seems to increase by geometrical rather than by arithmetical progression. The problems confronting the next generation are surely as urgent as those which confronted the past; they promise to be even more complex if for no other reason than that they are so much more unavoidably world-wide. The basic, the pervasive task is to grasp and control these forces of revolutionary change that threaten to overwhelm us, and to direct them in peaceful channels. The tasks are familiar, and they are tasks with which-for the most part-the universities are peculiarly equipped to deal: to save and replenish our natural resources and to discover new resources to meet the demands of a vastly increased population; to wipe out many of the diseases which afflict mankind, and to improve the physical standards of peoples throughout the globe; to abate race prejudices; to develop a public economy as affluent as our private; to lift standards of education at home and abroad at every level; to work out mechanisms designed to avoid war; to cooperate in that prodigious revolution-the greatest since the Renaissance -whereby two thirds of the backward and impoverished peoples of the globe are attempting, in a convulsive leap, to close the desperate gap which divides them from the prosperous and the fortunate. These and related tasks will make ceaseless and importunate demands upon our resources of organized intelligence, and the responsibility will fall, in larger measure than ever before, upon the scientist, the scholar, the expert, the trained administrator, and the enlightened statesman. That is another way of saying that the responsibility will fall upon the university, for in our country, and increasingly elsewhere, the university is called upon to provide these persons.

One of the elementary tasks of the university here has customarily been neglected. That is, to seek out, to train, to manufacture, intelligence. Over the centuries in the Old World and in the New, the university, unlike the church, has been a passive instrument rather than a zealous crusader. The church has gone out to save souls, but the university has not gone out, in any corresponding manner, to save minds.

Now the American theory-I know few Europeans outside Russia who subscribe to it—is that talent is to be found everywhere. It is the theory set forth most elaborately, and with most impressive scientific support, by that great educator, sociologist Lester Ward: that there is potentially the same talent in any hundred thousand people-black or white, or yellow, male or female, rich or poor—the same intellectual, the same social, the same artistic talent, and that it is the duty of the state-for he was our first great exponent of the welfare state-to seek it out and to create conditions in which it can flower. The accepted American principle does not go quite this far: it is rather that everyone has a right to as much education as he can profit from, but it is notorious that even in America there has been little organized effort to discover who could profit from what education; it has all been left to chance. Perhaps the greatest single waste of natural resources here and abroad has been in the resources of human nature. Only now are some of our colleges and universities-the impetus has come from the lower schools-moving to compensate for those discriminations and injustices which society has so long imposed upon large segments of the population: Negroes, for example, or the impoverished and neglected children of the slums and of the rural South.

The next generation is going to need proportionately far more doctors, engineers, librarians, architects, biol-

ogists, psychiatrists, poets, musicians, and statesmen than the past, for the elementary reason that the tasks that have to be done require more and more expertise. Therefore perhaps the most urgent task facing the educational establishment in this or any country is the manufacture of intelligence.

Will this enterprise—this seeking out of talent, this trial and error—mean a levelling down rather than a levelling up? It was a question which troubled that most perspicacious of observers, Alexis de Tocqueville, and he answered it in terms which still excite our sympathy:

When I survey the countless multitudes of beings, shaped in each other's likeness, amidst whom nothing rises and nothing falls, the sight of such universal uniformity saddens and chills me, and I am tempted to regret that state of society which has ceased to be. When the world was full of men of great importance and extreme insignificance, of great wealth and extreme poverty, of great learning and extreme ignorance, I turned aside from the latter to fix my observation on the former alone, who gratified my sympathies. But I admit that this gratification arose from my own weakness: it is because I am unable to see at once all that is around me, that I am allowed thus to select and separate the objects of my predeliction from among so many others. Such is not the case with that Almighty and Eternal Being, whose gaze necessarily includes the whole of created things, and who surveys distinctly, though at once, mankind and men.

We may naturally believe that it is not the singular prosperity of the few, but the greater well-being of all, which is most pleasing in the sight of the Creator and Preserver of men. What appears to me to be man's decline is to His eyes advancement; what afflicts me is acceptable to Him. A state of equality is perhaps less elevated, but it is more just; and its justice constitutes its greatness and its beauty.

Let us look briefly at some of the problems which will,

unquestionably, confront the university in the next generation.

The most elementary observation to make about the university in the year 2000 is that there is going to be a prodigious growth in the population and in the professional activities of the university. A population increase to 300 million will in itself increase the number of students by over one third; the proportion of those going on past the high school to some form of higher education, already rapidly rising, will increase that total by at least another third. These two considerations alone will contribute to a university population of something like ten million. But that is merely the ostentatious expansion. To use a cant phrase, the knowledge explosion is even more spectacular than the population explosion. We may get the population explosion under control, but it is neither desirable nor possible to get the knowledge explosion under control. Thus as the university is called upon to cope with a doubling in the number of students, it will be called upon to cope with something more than a doubling in the body of scientific and scholarly knowledge, and in scientific and scholarly interests as well. In considering the task of the university, the new interests are probably more significant than the new knowledge. The physicist or the biologist, for example, can discard old and mistaken data as he acquires new, but the historian cannot; and even as he acquires new information about old subjects, he is called upon to familiarize himself with a host of new subjects: Who would have thought, thirty years ago that every university worth its diploma would have an institute of African, of Latin American, of Near Eastern or Far Eastern studies?

Scholars and administrators will have to find means to cope with this avalanche—one quite unprecedented in history. Universities cannot be expected to have all books

in their libraries—most of them are unobtainable for the newer institutions. Technology will need to devise means of making the books accumulated at the Widener and the Bibliothèque Nationale speedily available to all. Professors cannot all be airborne, all attending conferences in Paris or Lexington, or advising governments in India or Mexico; some way will have to be found for making their talents available and making them available too. All universities cannot teach all subjects; some method must be worked out to allocate financial resources, which are never adequate, and intellectual resources, which are always inadequate.

Qualitative changes are no less inevitable than quantitative. The college is today what the high school was in 1930; perhaps the never ending proliferation of knowledge and the insatiable demand for expertise will make the Ph.D. of 2000 pretty much what the A.B. is today: If the society of the future does not demand additional degrees, it will, beyond doubt, require some evidence of continuous exposure to new findings of science and scholarship in one way or another.

We are witnessing now two strongly marked tendencies in higher education. One is the spectacular growth of junior and community colleges; the other the equally impressive development of graduate and professional studies. Will the traditional undergraduate college be squeezed out by these forces, as Dean Barzun has predicted? Is it desirable that we reorganize our "higher education" to recognize this situation? To do so would be an almost revolutionary departure from American experience, but harmonious with traditional European experience, where what we now teach in most of our colleges has long been relegated to the lycée or the gymnasium or the technical school, and what we now teach in our professional schools has been accepted as the proper business of the university.

Much is to be said for an accommodation to what we might call the European system: it would free the university from many of the improper pressures which now play upon it-pressures to have winning football and basketball teams, for example, pressures to serve as a marriage mart for the young (who no longer need one), pressures for lowering standards in order to take in all comers, pressures from special interest groups, or from filiopietistic societies to teach what should not be taught, or to teach what should be taught in the wrong way. But much is to be said, too, for the more traditional American compromise. To separate undergraduate and graduate faculties might drive away teachers and scholars, dry up library and laboratory resources, substitute for the love of learning among the young mere professional zeal, and, by separating teaching from research, dry up the imagination of scholars, that imagination essential to the highest flights of science or learning.

There is never any "solution" to "problems" of this nature, but it seems entirely probable that the problem will take care of itself. As the secondary schools do their proper job of preparation, the demands of scholarship make themselves felt ever more insistently in the college itself. "General," as distinct from "professional," education will come increasingly from the students themselves, from the library, from societies, from extra-curricular and even extra-collegiate activities.

The mounting requirements—and expense—of advanced and professional education will call for a far more effective collaboration among universities and between universities and other institutions and agencies than now obtains. There will have to be a greater division of labor—in library collections, for example, in specialties such as classical archeology or Sanskrit or African studies or astrophysics—than now obtains. One of the more urgent tasks

of academic statesmanship will be to arrange such cooperation, not only among universities, but among universities and all other research institutions.

In the next generation the university will, in all likelihood, be more and more a center and a sponsor for the creative arts. This enterprise, already well established, is something new in academic history. Universities in the Old World did not concern themselves with the arts. and do not; they supported no "poets in residence," no painters to induct the young into the mysteries of abstract art, no choreographers to teach ballet, no composers. Traditionally all that was left to the court, the church, the aristocracy. But there were no comparable institutions in the New World to patronize the arts, and the arts were neglected until, quite recently, an aristocracy of wealth took over the patronage. But the patronage of a Morgan or a Frick was to historical, not to living art. Increasingly in the last quarter century the universities have taken over this delightful responsibility, and now every respectable college and university has a center for creative arts, a poet in residence-we had Robert Frost at Amherst and now have Archibald MacLeish—a theater. a museum, and a school of painting and of sculpture. I have no doubt that this happy association between the arts and the academy will flourish, with immense advantage to the academic community and to the public and, let us hope, to the arts as well. Creative artists are fearful of the limitations of the academy, but surely, of all patrons the academy is the least exacting, the most liberal and, for those who have faith in youth, the most inspiring.

The responsibility of the university to such miscellaneous things as science, scholarship, public service, and the arts dramatizes the role which the university has achieved in America and which it will increasingly occupy here and elsewhere in the world-that of a clearing house for all scholarly and scientific and artistic interests. We need not accept Lord Snow's conclusion that there are two cultures and never the twain shall meet at any high table to realize that the task of communication is becoming increasingly difficult, not only between cultures, but within: mathematicians are no longer able to communicate; and the happy Hellenists, confronted with something like one hundred learned journals devoted to their subject, have no time to speak to the Romans. But in the academy they do speak to each other, if nowhere else than on faculty committees, and university and foundation administrators have somehow to keep ever in mind the unity of learning. Nothing can quite prevent the fragmentation of knowledge, but the university can and will do more to restore harmony than any other institution.

All in all the most striking development in higher education in America in the past twenty years has been the role which the federal government has assumed. There are, to be sure, antecedents: the federal government began to sponsor universities-including this one-with the Morrill Act of 1862. Yet fifteen years ago the then president of Columbia University, Dwight D. Eisenhower, could warn in the most solemn tones against federal aid to higher education. Now the federal government helps finance practically everything but faculty salaries-student fellowships, construction, research, international exchange. We take for granted, here in the United States, that if the federal government is to sponsor research it should turn, as a matter of course to the universities. Yet there were alternatives: the government might, quite logically, have turned to the departments of agriculture, of the interior, or justice, or it might have created new agencies to carry out scientific programs, as it once created the Library of Congress, the Smithsonian, the U.S. Geolog-

ical Survey, the Surgeon General's Office, or, more recently, the Space Agency. But wherever security was not a primary consideration, government has chosen to turn to the universities. May we not predict that in another generation, a substantial part of governmental activities will be carried on by universities and that a substantial part of university activities will, in turn, be articulated to, if not responsive to, governmental needs, national and international?

Now all this conjures up an alarming picture of universities as mere agencies of society or of government so deeply involved in current affairs that they are unable to serve the larger commonwealth of learning, so dependent upon government that they forfeit their independence. Doubtless there are dangers here, and the history of universities in other parts of the globe-even in Germany with its long tradition of academic freedom-admonishes us to caution and to vigilance. But happily there are countervailing forces operating in the American arena which permit us to take a more optimistic view. There is, first, the long tradition of academic freedom in the United States, a tradition stronger here than in any countries outside northern Europe, and stronger today than at any time in the past. Second, there is at least a margin of safety in numbers. We need not take too seriously our statistical total of some 1,900 institutions of "higher learning," nor even the figure of 1,400 listed in that otherwise infallible index, The World Almanac, but surely there are between one and two hundred institutions which are regarded as proper universities even by Old World standards. The demands of government and society, importunate as they are, will be spread widely over these scores of institutions, and most of them will continue to devote most of their energies and resources to the traditional functions of the university. Furthermore as government and society grow increasingly dependent on the university it will be, in a sense, in command of the situation, able to impose its own standards on society.

The experience of universities in the past quarter century seems to me to confirm this reassuring view. It is in this area that universities have been most elaborately engaged in public service, most intimately involved with government, and most deeply indebted to government appropriations. Yet who, knowing the history of academic freedom, can doubt that it is in this era, too, that American universities have achieved their greatest degree of freedom and independence. As recently as ten years ago it was freely predicted that if the government financed university research it would insist on supervising and even controlling that research, that it would endanger the independence of the university laboratories, that it would gradually come to monopolize university resources. So far we can say that none of these fears has materialized.

The university was originally, as its name indicates, a center of learning open to all, and the early universities -Bologna, Padua, Paris-attracted students from many "nations"; to this day the Swedish universities have their "nation houses". These early universities, whose students came from all parts of Europe and moved from university to university, reflected something of that community of culture that obtained in the Renaissance and in the Enlightenment as well. Modern nationalism put up formidable barriers to the operation of that great communitybarriers of language, of religion, of politics-barriers to the free movement of persons, of books, even of ideas. Wherever the universities were free—free from religious or political controls (at Padua, for example, at Leyden, at Edinburgh) -they resisted these pressures and served, as best they could, the great commonwealth of science and of

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learning. American universities—we can date them, perhaps, from Harvard under Eliot or the Johns Hopkins under Gilman—were never required to serve the interests of church and state, and could and did function across the barriers of religion and of nationalism, but they lacked, until recent years, the resources with which to do this effectively.

Never, in the past, was the free flow of science and of learning more important than it is now, when so much is at stake. Yet nationalism and ideology present barriers to that interchange as formidable as at any time in the past. The greatest responsibility, and the greatest opportunity, of the university in the next generation is to help overcome these barriers—barriers not only of nationalism, of ideologies, but of ignorance and poverty as well—and help restore the great community of science and of learning.

It is a bit difficult for us, here in this university-littered landscape to remember that the university, as we know it, is almost unknown in many of the countries of the world. It has spread, to be sure—this astonishing Western invention—from Europe to Latin America, from Britain to India, from the United States to Japan, but it is not always clear that the universities that flourish in these areas are true universities, and countless millions of people have no experience with the university at all. Now every new nation—and there are some sixty of them—is eager to have a university. That is sometimes merely a matter of pride, like an airline or an Olympic team! More important is the consideration that the impoverished and underdeveloped parts of the world desperately need what the university can provide.

I need not remind you that we are in the midst of the greatest revolution since the discovery of America, since the Renaissance and the Reformation—the emergence of

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some sixty new nations into the forefront of history. The non-European peoples of the globe are attempting to catch up, in one leap, with the European world, to close, in one generation, the gap of centuries that has separated much of Asia and Africa and Latin America from those standards of living which the European world has so long enjoyed. Can this be done, in one generation, without loosing the furies of nationalism, or racial and ideological wars? If the long exploited and neglected and deprived peoples of the world come to believe that it cannot, then we are confronted with the prospect of a generation of violence between races and colors and—as in the Middle East and much of Asia—of religions as well.

Surely one of the most effective instruments for guiding and speeding up the social and economic revolution in Africa, Asia, and Latin America is the university—I use the term in its broadest sense to embrace technological schools, agricultural experiment stations, medical schools and hospitals, and so forth. Just as surely the United States with its material and intellectual resources must take the lead in carrying through this affluent enterprise.

# By GUNNAR MYRDAL

THE NEXT TURN of the century is not very far off. If we make the assumption—uncertain as it is—that the armaments race and the many other brooding causes of international tension and conflict will not explode in a nuclear holocaust, the great majority of student audiences in the United States today will live to celebrate it. From that point of view, it would seem to be entirely reasonable to raise the question of what shape life will take in the United States in A.D. 2000, what the universities will be like, and what role they will play at that future date.

We know, however, that the development of American universities during the next generation is bound up with all other economic, political, and social developments in the United States-developments which themselves will be ever more dependent on international relations. We also know that history is continually speeding up its pace, that, for instance, scientific and technological change is following a logarithmic curve, bending upwards ever more steeply. We can only guess in what particular fields there will be major breakthroughs or in what broader areas there will be an accumulation of less dramatic advances that together will become of crucial importance. Still less can we foresee how society will change under the impact of this accelerating scientific and technological development and of other changes, the less so, since this will depend upon how people here and abroad adjust themselves to the acceleration individually and as members of political communities.

There will also be independent, or partly independent, forces at play emanating from the political, ideological, and moral spheres which will affect the world and our national community. Ideas and ideals are real facts when they are held by people. History, even while it is now accelerating its pace, is not destined but is man-made.

The almost complete uncertainty about what the future holds in store a generation ahead, and even more immediately, must make us deeply anxious. Perhaps it is fortunate for our sanity that as social beings as well as individuals we all live only in the present tense, with a past tense of history which we might know, but with only the vaguest notion of a future tense. Even planning for the next move is hedged about by projections founded on static assumptions that will not endure critical scrutiny.

The title and topic of this conference therefore challenges our way of perceiving one segment of our social life—the universities—which is itself dependent upon the entire development of the United States and the world. We are invited to use our imaginations bravely, far beyond the limits of knowledge.

Until this point in the conference we have, on the whole, restricted our discussion to history and to present trends. I may be foolhardy in the extreme as I now attempt to adhere more closely to the challenge presented to me and to focus attention on what the American universities will be like in the year 2000. As a precaution, I will lay stress on the forces that will determine their shape. But even so my observations are presented with a humble feeling of how utterly uncertain my conclusions must be. They also have to be very general and take the form of obiter dicta. A second reason for humility on my part is that unlike my two distinguished colleagues I have not had the

occasion to experience the academic community except as an individual participant in it, not as an administrator of a university and not as a thinker and historian who has had the life of this community very much in the focus of his studies.

Of course, international relations will bear heavily upon the development of educational trends in the United States. The danger of another global war is not yet dispelled; it is not now being greatly reduced. The atomic bomb will probably be developed by other nations; and with increased nationalism, especially among the newly independent nations, the threat of the bomb's use will probably be increased. The cold war has not come to an end. It has been extended, even if diversified. If the temperature has been increased as between Russia and the West, it has been reduced as between the West, Africa, and China. The color complex is involved, and the drift is toward trouble. The gap between the rich and the poor nations seems sure to grow greater. The rich will grow richer and the poor, poorer, especially if nothing is done to check the population explosion among the underdeveloped nations. And the richer will be called upon more and more to help the poorer if any sort of peace is to be maintained. Accommodations must be sought. And these will come only at great expense to the United States. This nation will have to carry much larger financial burdens in the development of the now underdeveloped nations. If catastrophe can be avoided, then international relations presumably will improve gradually. We can then assume that the normal process of educational development will be maintained in America, and only then.

Given this assumption, the United States will have about doubled its present population at the turn of the century. Almost the entire population will be living and

working in metropolitan areas. Average incomes will be several times higher than they are now.

That the United States will be much richer thirty-five years from now would stand out even from a simple projection of present economic growth trends. There are reasons, however, for believing that economic growth will be accelerated still further. With the foreseeable population increase and with technological advance (automation), this is indeed necessary in order to forestall an increase of unemployment, which itself is only part of the real under-utilization of the labor force, for there is much disguised unemployment and underemployment.

Even though the need for a substantial acceleration of economic growth—it is now around 5 percent compared with about half that figure during the relative stagnation in the Eisenhower era—is still played down in the policy debate, it will increasingly come to the forefront.

The policy changes implied in a more rapid economic growth are in line with the "unconditional war against poverty" which has been so emphatically declared. From an economic point of view, poverty amidst plenty is a drag on economic growth. Egalitarian reforms, therefore, have the character of profitable investments, as misery implies diseconomy. On the other hand, since reforms are aimed at producing, among other things, a labor supply which better corresponds to the demands for labor, the reforms need a full-employment economy to become effective.

For the time being, the "war against poverty" is merely a rapidly unfolding moral and intellectual catharsis in the body politic, plus an assortment of scattered and spurious minor reform activities. There is no great mystery about the major policies that have the double effect of creating the preconditions for a speedier economic growth and of lifting the "under-class" to fuller participation in the nation's life and work. But most of these policies cannot

be extemporized. They will, for instance, have to include the total rebuilding of American cities, the eradication of the vast slums, and the equalization of the quality and availability of schooling. Even so, thirty-five years is a long time. It is reasonable to expect that at the turn of the century the United States will be not only much richer than now but at the same time also more egalitarian, as far as the enjoyment of community services is concerned.

Meanwhile, considerable structural changes of the economy will have taken place. At the end of the century there will be no need for unskilled labor and a greatly decreased need for what we now call skilled labor, particularly at the lower skill levels. Generally, these changes will have led to a more complete professionalization of the work force and a consequent need for higher education. What are now considered trades will take on more and more the characteristics of the professions and will require far more advanced technical training than they now require. Already medical and dental technicians must have college degrees. Already carpenters and mechanics are required not only to operate complicated power tools and delicate instruments, but to understand something of the strengths of new synthetic materials, something of the chemical qualities of the metals they use, even something of the mathematics once required only of the engineer. The same is true of all skilled workers. As a result, the level of basic education has been raised for these tradesmen and skilled workers. Many of them are now taking special "refresher" courses so as to keep up with the advances in their "professions." In addition, their trade unions, like the professions, set the standards of admission and advancement. And with these developments has come a general elevation in social and political responsibility. All of these responsibilities will increasingly require a higher level of basic education than has been necessary in the past, as well as much more technical training among tradesmen and those whom we have in the past called skilled laborers.

Furthermore—I must stress this—while domestic service and, more generally, the reliance upon cheap labor to perform all sorts of unpleasant, dirty, or less dignified work, is already now disappearing, other services, particularly those that must be provided in a collective framework, are increasing.

The "war against poverty" will hasten this process as it gets underway. More fundamentally, however, it has its cause in what I would call the expanded Say's law. The richer we become, the more we can spend on personal services like the care of children and youth, the sick, disabled, and the aged; the aged, in particular, will grow in numbers and in needs for care as it becomes possible to cure cancer and heart ailments. And we can then also spend more on cultural pursuits of all sorts and on transforming our cities into more perfect containers of our lives and our work.

All these services, the demand for which will be growing, raise the demand for professionals on all levels. In the present transitional stage the growing difference between the quality of the labor supply and the labor demanded results in "structural unemployment" where automation plays its role. That type of unemployment, which is often disguised, as well as underemployment can only be cured by a combination of a more rapid rate of economic growth and the organization of more education and training facilities of a type more appropriately patterned for the society of the future. I have great hopes that these two conditions for overcoming unemployment will gradually, and, I believe, rather soon, be created in the United States.

If we project these various trends and assume that policies will not lag too far behind needs and potential, the United States will be a much richer society at the turn of the century, while the eradication of the pockets of poverty will have led to the creation of more equality of opportunity for all the young. At the same time the professionalization of the work force, which will increase the demands for education, will have proceeded much further. Particularly as education has an independent value also, I consider it quite likely that practically all American youths will at that time demand and obtain not only secondary but also college education of some kind.

This situation does not imply any surprising deviation from present trends, except in regard to the greater equality of opportunity. Even at present there are areas in the United States where almost all, or in any case, a very large proportion of young people who are above the poverty line go to college. The new element will be the availability of equal educational opportunities for the youth in the low income groups. Efforts to increase their primary and secondary education belong to the more immediate tasks in the "war against poverty." Their equal entrance into the colleges will follow.

I would not even except from this prospective postsecondary education, equivalent to the college of today, the 10 to 15 percent of students who are least endowed intellectually. I rather guess that the present attitude, that they are not gifted enough to warrant more than a minimum of education, will then have changed to the contrary attitude that they, more than others, need special educational efforts in order to make them useful in society and able to live a fuller and more satisfactory personal life. The same should apply to the blind, the deaf, and all other handicapped persons.

Towards the turn of the century people may even have

become enlightened enough to accept criminality as a social malady and be prepared to spend freely for the reeducation of delinquents, particularly the young ones. The trend towards a rising incidence of juvenile delinquency, not only in the slums but also in the middle and upper class suburbs, will attract ever more anxious attention, and research and public discussion will gradually change attitudes in the direction of enlightened understanding.

For all these special groups the type of education will, of course, have to be differentiated. But the point I want to stress is that they will not be left as a substratum that should have less education than other groups.

Education will then, even more than now, be by far the largest industry in the United States. As the needs are increasing in a cumulative fashion, as teachers and the teachers of the teachers must be taught themselves, there will be a tremendous demand for higher education, particularly as almost everyone will be given higher education. Except for the fact that the United States has the problem of the highly disadvantaged groups in its vast slums, although at the same time it has already come farther than any other country in providing higher education for a larger part of its youth above the poverty line, the general trend towards the universalization of higher education is the same in all rich countries.

One conclusion is thus fairly firm, namely, that the growth of the number of students in colleges and universities will continue and will even be greatly speeded up. It is far more difficult to form an opinion about what the trend will be in regard to the character of the institutions for higher education and learning. Leaving the needs for researchers aside for the moment, I can fairly safely predict that, as a primary need is for more professional education

in all old fields and in a great number of fields now gradually becoming professionalized, the colleges and the higher professional schools will continue to concentrate on giving professional education, while decreasing the time and effort devoted to general education. On the whole this is the trend not only in the United States but also in other Western countries as well. The picture is somewhat blurred, however, for there is at present a countereffort in some professions—engineering, medicine, and architecture, for example—to give students a broader base of knowledge about the society in which they will work.

Certainly in most other professions also a danger of too narrow a specialization exists, where even from the point of view of professional competence more general education would be desirable. When, as I am sure will happen soon, the United States wants to improve the standards of its police forces and require academic degrees for entrance into and advancement in that important profession, the emphasis will be less on crime detection and suppression and more on giving the men and women in the police forces an understanding of society and on making them at the same time social workers and teachers.

Added to this professional interest is a democratic society's interest in having a citizenry with broader views than those of professional specialties. These interests should influence first of all the teaching in high schools; consequently, place for general education should be preserved in all the colleges and professional schools and, in particular, opportunities should be created for still further extracurricular activities supplementing the regular courses.

There is, of course, a need for training specialized professional teachers in the humanities and the social sciences, but, with that exception—and that of the need for researchers—it would not seem to be in the public interest

for one group of students to monopolize information in these fields. Education for continued "culture consumption" and for participation in national and community affairs must be pursued through all lines of study if we are to avoid having professionals who are cultural and social idiots and a select group that instead, or besides, are "cultured people."

Higher education-which presumably will be available to practically all young people at the end of the centurywill then contain elements that are at the same time a sort of "luxury consumption," a forward move to "culture," which in the ever richer society is taking on the character of what Alfred Marshall called a quasi-necessity. Just as part of the rising productivity of labor is consumed as leisure, so it would be natural in the society of more equal opportunities which we are anticipating that many more students of various pursuits would follow the aristocratic tradition of getting something more out of higher education than professional competence. Such strivings for culture will bring very little conflict because that type of culture is greatly needed for raising levels of competence in most professional training and because we need generally educated citizens.

As life becomes increasingly complicated and the available knowledge grows, there is an obvious conflict, however, between the desire for broader education and the desire not to prolong unduly the period when youth are kept from beginning to work in their chosen professions. This conflict becomes intensified by the now fairly well established belief that improved living conditions not only lower the age at which puberty occurs, but probably also accelerate intellectual and emotional maturation. From that point of view it would be natural that young people get out of school earlier. And yet the increase of knowledge in all areas of learning, in the basic sciences

as well as the professions and skills, and the demands for specialized training will not permit them to leave school at the time of their reaching their "majority" or maturity. Witness what has already happened in the study of medicine: one must usually have a baccalaureate degree before he can enter upon his four years' study for the M.D. degree. These four years are followed by at least one year's work as an intern, and this one year by some three to five as a "resident" physician. Before the young physician is "on his own," he is thirty years old-no longer a very young physician. Pasteur had achieved international fame by the time he was thirty; Alexander the Great had by that time in life no worlds left to conquer. Much the same developments have occurred in the other professions -in teaching, in dentistry, in engineering, and so on. The trend is well set.

Thus in spite of the earlier maturity of the rising generations, they will be entering their professions later. An adjustment must be made. By various means the students must be made economically independent of their families; they must be able to marry and take part in political life. We have been moving quickly toward an adjustment in the rich countries in recent years. By way of substantial scholarships, loans, and apprentice employment something is being done. In the poorer countries less is being done. Everywhere much more needs to be done to solve this conflict between the need for longer schooling and the fact of earlier maturation. It will require immediate and thorough study on the international level.

So far I have not touched upon another trend that will greatly increase the demand upon our institutions for higher education and learning: the sharply rising need for researchers in various fields. In all probability we will see this need continue to rise faster and faster.

## THE UNIVERSITY IN THE AMERICAN FUTURE

In every educational system there will be a problem of detecting the individuals with special endowment for research and of directing them toward research. The Soviet Union has come far in creating a selective procedure to increase interest in research, but in Western countries much more is left to the individual's capacity and good luck in finding his way. Though there is an increasing number of students, the need for researchers is increasing so rapidly, particularly in the natural sciences, mathematics, and engineering, that we shall probably have to pay increasing attention to the problem of how to draw a greater proportion of those who are highly gifted into research and, at a later stage, how to keep them in research instead of losing them to the professions.

One feature common all over the world is the trend towards specialization in research. We tend more and more to produce researchers who concentrate their work so exclusively on a narrow field that they, even more than the professionals, often come to have little knowledge about anything outside their specialties. Even within any one of the old broad disciplines, they often do not understand each other, if they do come together to discuss their work. As the pace of work is hectic, they often have little particular knowledge about the society and the world in which they are living.

As the need for researchers is growing so rapidly, and as we are forced to skim off more and more effectively the highly gifted students and lead them into research, the problem of specialization in research may become a serious matter. If we succeed in preserving a reasonable place for general education in the high schools and in the training of professionals, we will have secured the existence of a broadly educated public, for we assume that almost the whole working force will belong to the professions at the end of the century. But, unless some corrective measures

are taken, the university may not produce enough creative intellectuals.

To be able to speak on the basis of some knowledge, I will focus my attention on the economists. First, I would stress this: our present tendency to specialize in very narrow fields has its dangers even from the purely functional point of view of advancing knowledge. We should expect that our most fruitful and most radically new ideas would be likely to come from acquaintance with fields other than our own. Too much specialization can lead to a relative lack of imagination.

From the same viewpoint it is invigorating to move to new fields of study from time to time. There are creative possibilities in coming fresh to a problem where one is not imprisoned from the start by too much knowledge, but where one instead has to acquire it. Though I cannot develop the theme in this context, economists have to fight a tendency toward traditionalism, and this traditionalism stamps the broad pattern of our approaches which are never questioned in specialized research. To blaze new paths requires interest in fundamental assumptions; such blazing is not promoted by specialization.

We have increasingly become fascinated by techniques, independently of what useful purpose they can serve in solving problems of importance in the world where we live. Sometimes they are not even of a nature to allow application to any empirical reality. Quite often we construct models that are not tested as regards adequacy to reality or even logical consistency of the implied assumptions. With all their ostentatious scientific rigidity, these implied assumptions about reality are seldom thought through and seldom made explicit. More and more often it is taken for granted that techniques have an interest in themselves. The theory of knowledge—like the sociol-

ogy of knowledge, i.e., the knowleddge about the causal process by which knowledge is created and which can be irrationally influenced if we are naive—is disregarded, though it should be of special importance in our type of scientific activity.

This is what one of the most gifted social scientists of our time, Louis Wirth, who was all too early taken from us, once pointed out: "It is curious that in order to gain the reputation of a realist, it is regarded best never to think about reality, and in order to be regarded as a social scientist to get as far away from the actual problems and operations of society as you can."

In particular there is a tendency among most economists to avoid political issues—an astonishing development in a science that two hundred years ago emerged as a branch of moral philosophy. This is rationalized as "objectivity." But true objectivity demands an explicit spelling out of value premises for our research, and the value premises should be relevant and significant in the society under study. What we reach by trying to work without value premises is a false objectivity that actually opens the door to biases.

Related to this "flight into expertness" is a growing disdain for the type of direct appeal to the general public which requires drawing general policy conclusions from what we know and expressing the conclusions and the empirical basis for them in a language that can be understood outside our own profession or, even more narrowly, outside a specialized group of us. By not doing that, we retreat from the role of intellectuals in democratic society. Up until the present generation that role was considered so important that the greatest economists in every generation took time from their research to play it.

In my early youth Gustav Cassel was my teacher and fatherly friend. As a man who had received his earliest

impulses from the thinking at the end of the last century, and who had his basic training in natural sciences and mathematics, Cassel believed that nature was essentially simple. He used to say that an economist should not be satisfied with his work on a problem until it had been so clarified that he was able to explain the essence of it in such simple terms that anyone could grasp it. I do not share Cassel's view that nature is simple. But I do agree with his conclusion. The social sciences have a special position because we are studying society. As a group, we have, therefore, the special duty to enlighten people about the tremendous problems in the society we have had the privilege of studying in depth. The failure to fulfill this duty results in less rational policies being put into operation in our economies.

We should feel a guilt on behalf of the profession of the economists when observing the great number of mythological and irrational conceptions prevalent in the American society and which have influenced American policy: about budget balancing, for instance, or the role of gold in the payment mechanism. We have become accustomed to talking only to each other. In almost every problem we have avoided the politically important aspects and kept to technicalities. In recent years when the attention of the American public has been drawn to the problems of poverty amidst plenty and possible solutions to them, this was not to any large extent the accomplishment of economists, but of social workers, administrators, journalists, and, later, politicians.

I am, of course, not arguing for any monopoly of the economists and the social scientists as the only intellectuals enlightening the people in our democracy. With our present relative negligence of the duty to educate the general public, we can be happy that there are so many persons in the United States outside, or on the fringe of,

our profession who have taken on this responsibility. But American society would have reached much further much earlier if we economists had not preserved the exclusiveness of pretended objectivity.

Naturally, I am not arguing for less strict scientific standards or against detailed research. But I am arguing that research should be directed more upon the problems that are important in our society, and that the researcher should take time off to explain his broad conclusions to the general public.

Robert Nathan has expressed the present trend of our profession as a development "toward less and less policy orientation among the young economists; with more concentration on mathematical tools of analysis and less on understanding the quantity and quality of empirical data; with decreasing recognition that the real world is somewhat at variance with the assumed conditions and relationships in so much theoretical analysis; with what appears to be less participation among economists in economic policy debates, especially those that might have overtones of political or group conflicts; and with what looks like greater conformity and more complacency in our increasingly affluent profession."

When looking a generation ahead, I would hope for a change in that trend, and I feel there are reasons for such a hope. As the underprivileged come to exert more influence in the United States through voting and in other ways, the social pressures will be more nearly balanced. Universities and foundations will feel freer to enter controversial grounds.

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