

CHAPTER

The University at the Millennium

Missions and Responsibilities of Research Universities

Frank H. T. Rhodes

The university as we know it is the product of the second millennium. It is one of the few institutions that span almost the whole of the millennium itself. Bologna University was founded in the 11th century; others followed soon afterwards.¹ Although many universities are of much more recent origin, the university, as an institution, is a creation of the early years of the second millennium. The university is one of the most distinctive institutions of the second millennium, with a nature, membership, responsibility and autonomy that make it unique

It is also, as Clark Kerr (1996) has reminded us, one of the most durable institutions of the millennium: "About eighty-five institutions in the Western World established by 1520 still exist in recognizable forms, with similar functions and with unbroken histories, including the Catholic church, the Parliaments of the Isle of Man, of Iceland, and of Great Britain, several Swiss cantons, and seventy universities. Kings that rule, feudal lords with vassals, and guilds with monopolies are all gone. These seventy universities, however, are still in the same locations with some of the same buildings, with professors and students doing much the same things, and with governance carried on in much the same way".

¹ The medical school at Salerno, founded in the 9th century, remained a medical school, rather than developing into a university. The University of Paris was founded between 1150 and 1170 and Oxford by the end of the 12th century. Smaller centers of learning also existed in some other places at earlier times, such as, for example, in some mosques.

The original purpose of the university was to conserve and transmit the learning and skills of the church, by which most were founded and accredited. Their membership included chiefly ordinands and those who were to serve in offices for which the church held a special responsibility, such as law and medicine.

Growing secularization of the universities in the 19th century saw not only changes in financing and governance, but also change in mission. The curriculum was expanded and professionalized. In the United States, the Morrill Act of 1862 gave great impetus to this movement, while research and public service were increasingly seen as the responsibilities of the university.

Until the 19th century, the universities had little impact upon the professions, modest impact upon their surrounding societies, and made little contribution to the general corpus of knowledge and invention. But in a mere century, all that has been transformed.

- Universities have become the essential gateway to and foundation of every major profession. They have expanded and improved training in what were once non-professional occupations, from interior design, library science and business to nutrition, agriculture and journalism.
- Universities have become the primary agents for basic research in this country and they are having a growing impact upon applied research, in everything from medicine and bioengineering, to computer science and communications.
- Universities have had a huge impact upon their regions, from Route 128 in Massachusetts, to the Research Triangle of North Carolina, to Silicon Valley. Employment, economic development, and almost every area of public life have been influenced by this growing impact.
- Universities have become major agents of social mobility, growing in their own inclusiveness, and providing the means for economic advancement for many who had previously been denied access to traditional careers and opportunities.
- Universities have become significant providers of social services, beginning with model schools, but now embracing such things as tertiary care hospitals, health networks, legal services, technology parks, engineering research centers and athletic and other entertainment.

In this major accretion of tasks and this huge expansion of role, the university of 2000 bears only the most general resemblance to the university of 1900. The contemporary university has grown not only in size and number, but also in inclusiveness of knowledge, in variety, in complexity, in quality, in the inclusiveness of its membership, and in its intellectual, professional and social role. Paradoxically, in spite of these major changes in responsibility, membership and complexity, the university has shown almost no change in its orga-

nization, management, and governance and only modest change in its teaching style. Indeed, the responses it has made to changing social needs have been only in part planned and only in part idealistic. In part they have also been opportunistic, sometimes reluctant and sometimes absentminded.

At the close of the millennium, one must ask, whether the university, in spite of all its success, is prepared for the major growth in responsibility that it must assume in the new millennium. I believe that there are six pressing issues that the university must address if it is to play an optimum role in the development of the society it serves.

Mission, Role and Function of the University

Many in higher education are cynical of mission and value statements, perhaps justifiably, for many read as bland and self-serving. But that skepticism may also reflect uneasiness in attempting to pin down the precise purpose and function of an individual institution, as opposed to the more generic role of the university. Yet with every industrialized country now seeking to expand its educational programs, it becomes less and less credible for individual institutions simply to offer generic identities. In the future, the institutions that prosper will be those which have embraced a more specific role and a more restricted niche.

To talk in specific terms about role and function of a university is to make a statement of priorities. Just as no institution can possibly teach all languages and all literatures, so no institution, even the wealthiest, can now offer programs of the highest quality in every major area of learning. It is this very selectivity and differentiation, however, against which many academics rebel. Perhaps the most urgent and the most difficult task of both board members and rector/presidents is to identify, in appropriately refined terms, the mission, role and functions of their institutions. This will involve a responsible blend of vision and hard-headed realism, as well as patient negotiation and difficult choices, but only by making choices in this way can universities continue as strong and vigorous institutions, capable of seizing new opportunities, developing promising areas and effectively serving their communities.

Basis, Methods, Style and Effectiveness of Learning

Given the explosive growth of knowledge, to which the universities have themselves made substantial contributions, and our increasing dependence on it, we have to ask whether the existing traditional patterns of learning are adequate for the needs of the changing world. Not only is knowledge itself increasing at an ever expanding rate, but new methods of learning and new means of delivery are themselves undergoing rapid development. In contrast to this, the leading universities still employ what is essentially a medieval res-

idential system in which youthful students are instructed by tutors and lecturers in a broad range of subjects judged to be appropriate for a baccalaureate degree.

This traditional structure has been supplemented over the years by other means of study, including especially post-graduate and professional schools, internships and other similar programs, part-time, sandwich and extra-mural arrangements, continuing professional education, both formal and informal, and most recently a major expansion in distance learning.

Unexamined among the burgeoning numbers who still participate in traditional educational schemes is the question of whether or not the format, contents and nature of a baccalaureate degree, and especially of a traditional residential experience, remain appropriate to the needs of the new millennium. In some countries, such as the U.K. for example, there has been implicit recognition that it does not, where degrees that formerly occupied three years of full-time student attendance, now typically require four. Such change, though significant, is scarcely radical and it remains easier to continue the present pattern and style than it is to challenge and modify it.

Yet our net investment in the traditional campus-based residential baccalaureate experience is enormous, and is made even more so in the United States by the professional requirement that those aspiring to practice in fields such as medicine and law should receive virtually no professional instruction in those areas until they have completed a non-professional, though frequently pre-medical, or pre-legal, baccalaureate degree.

What is surprising here is the lack of any debate, professional, national, or institutional, as to whether these ancient arrangements continue to serve society well. Nor is it clear who should address that question, for it may be argued that the universities themselves are ill-equipped to provide an impartial review and recommendation. Yet few are as well equipped as universities to address these issues, even if the ultimate decisions do not rest in their hands. With increasing demands from the higher education community for a greater investment in plant, equipment and capital needs, such a review seems both timely and important.

At another level, other questions remain unaddressed. In spite of the volume of research produced by the university, little attention has been paid to the cognitive process and to the effectiveness of various teaching methods. Nor is there any serious study of the value added to the educational experience by its residential component, together with the large and costly range of services typically associated with it. A critic might argue that unless universities can demonstrate significant value-added to the educational experience from the residential style, one should examine other alternative arrangements.

Even to raise these questions will be seen by some as an unfriendly act, but universities, if they are to prosper, need themselves to address these issues and

to lead both the debate that they would generate and the reforms that may arise from such reviews.

Information Technology

Research universities are awash with information technology. Some would claim that they invented it. Certainly, they have made major contributions to its development. They use it on a massive scale, not only in the mundane world of purchasing and record keeping, but also in research and scholarship of all kinds. Furthermore, it has revolutionized practice in fields as different as medicine, law and architecture, as well as being the basis for huge improvements in information storage and retrieval systems.

Yet, strangely, the process of learning remains only marginally influenced by the extraordinary power of information technology, perhaps because those who are our students enjoy much greater skills and imaginative capacities than those who are their teachers.

How universities collectively and individually respond to the challenges and opportunities of information technology will do much to shape the future. This technology has the capacity, even in its present form, to provide vast increases in access, to provide improved quality, to create new partnerships, to reduce costs, and thus to increase the capacity of the university to serve its several audiences. The world's cyber universities are growing rapidly and some appear impressively effective. Britain's Open University, which has 157,000 students, was recently ranked 10th out of 77 traditional universities in the quality of its teaching programs, which were offered at 50% of the cost of those of the typical traditional campus. Other countries offer similar examples of success. Anadolu University in Turkey has 530,000 students, and the cost of instruction is one tenth of that at conventional Turkish universities.

I believe no institution is immune to either the competitive effects or the educational benefits of information technology. How it will be used will vary from institution to institution and in that variety will lie the seeds for future success. It is doubtful if any institution can go it alone as far as the development of off-site learning is concerned. But, just as books have expanded the capacity of a leading author to reach a wider audience, so in time must well-crafted video lectures by the world's leading authorities displace the one-time performances on local campuses, with those who had formerly served as lecturers, now serving as coaches, mentors and guides to the new learning experience. This will threaten both traditional university practices and also, perhaps, the role of the professor, but it may represent one way of making a significant reduction in costs, while at the same time allowing improvement in quality. Many questions will be involved if such a practice develops. How, for example, will questions of intellectual property be resolved? Who should produce teaching materials? Should we follow the practice of books, where

independent publishers contract with the professor, or will the contract be with the university, who will then invite particular members of its faculty to contribute, or will both systems exist side-by-side? What about questions of copyright and royalties? How will credit be determined? What kinds of business partnerships and alliances will this involve? To what extent will institutional autonomy and academic freedom be influenced by any such arrangements? These and related questions are now pressing and deserve serious attention.

Patterns and Limits of Outreach

Since their earliest days, America's universities have accepted responsibility for a measure of public outreach. Nowhere is this more fully developed than in the Land-Grant universities, whose record of success in this area has been extraordinary and whose influence continues to be of major significance in regional economic development and societal well being. As the importance and impact of knowledge increases, more and more demands are made upon both the expertise and the purse of universities—public and private—to address issues of community concern. These requests range from research and professional service, to investment in community development. Increasingly, universities are seen not only as agents of economic growth, but also as sources of community renewal. What is unaddressed in these increasing demands is the larger question of coincidence between such outreach and the core responsibilities and obligations of the universities to its own members. Ideally, each would complement the other, but in practice, the total costs of outreach are rarely recovered by those providing support, and frequently the university covers part of these ventures out of its own resources. Where universities choose to do this, there is clearly no problem, but the difficult question involves the extent to which the university facilities, faculty, student time and administrative attention can satisfy the needs and demands of the local community. It would be particularly helpful to have a thoughtful review of the guidelines and benchmarks that representative institutions have developed in this important activity.

A related area concerns partnerships, for, increasingly, such outreach and public service involves partnerships with government agencies, corporations, foundations and private individuals, some of which require new protocols and procedures if they are to be successful. These partnerships may range from cooperation in field tests of new crops or clinical tests of new pharmaceutical products, to public health programs, community services or environmental projects.

The issues involved in these partnerships involve far more than the financial arrangements by which they are supported. They also involve questions of ethical norms and values, institutional autonomy and accountability, and

the interests of both the public and of students, especially graduate students, who may be active participants in the programs.

Here again there is little to guide individual institutions as the number of these partnerships proliferates. A task force dealing with codes of practice, benchmarking and best practices would be of substantial value.

Scholarly Careers

Until the present decade, the traditional scholarly career has been reasonably standard across the range of various institutions. Typically, a young faculty member began as an assistant professor and, after five or six years of performance which was judged appropriate, received tenure, promotion and an indefinite appointment. Only in some cases, especially those institutions involved heavily in clinical practice, or with access to large numbers of adjunct professors and lecturers, has that pattern been supplemented by others.

More recently, in part as a result of changes in the pattern of retirement, and in part as a result of financial constraints, tenure has come under critical review and the proportion of non-tenured individuals teaching in the universities has grown substantially. The question to be confronted is whether the practice of tenure, which was developed in the United States early in the 20th century, still represents the most appropriate contractual arrangement for members of the faculty. This becomes especially acute when only a minority of all those teaching now enjoy such tenured appointments. There are strong arguments, passionately held, on both sides of this issue, but it is one that needs attention, not least because of its growing impact.

Merely raising the question of the future of tenure will be seen by many as a subversive act, but unless the universities address it themselves, it is likely that others, less devoted to the values of the institutions, and less persuaded of the values of tenure, will make the study for them. A review of tenure is long overdue.

Organization, Governance, Leadership and Management

The pattern of university organization has remained essentially unchanged for the last century. But, during that period, the university has experienced explosive growth in numbers, size and complexity, and the significance and impact of its work has multiplied.

Governance and management need to be reviewed at at least four distinct levels:

The department: Does the traditional unit of university organization—the department—still represent the most appropriate organizational unit? Departments arose in the late 19th and early 20th centuries to represent the disci-

plines for which they were named. These disciplines, in turn, reflected the division of the curriculum. We need to ask whether intellectually, pedagogically, and administratively, the division of a university into departments—the traditional focus of tenure decisions, curricular design and student supervision—still seems appropriate.

Intellectually, much has changed since the turn of the century. What were pursued then largely as pure disciplines are still so pursued, though in most cases the disciplines have become more professionalized and, in some cases, practical application has influenced their development. But, increasingly, intellectual interests span a variety of disciplines. Cultural, linguistic, sociological, political, historical and other studies within the humanities and social sciences are less and less frequently confined to a single discipline. Increasingly, such studies have become multi-disciplinary in their approach and sometimes in their authorship. Nor do the problems of society come in neat disciplinary packages. The traditional disciplines are therefore not wholly appropriate in terms of intellectual categories. Furthermore, they sometimes tend to weaken interest in interdisciplinary and multidisciplinary approaches, particularly when appointments and tenure are held only in traditional departments.

The transitory nature of disciplines is reflected in changes that have taken place in disciplines, and thus in departments themselves. Disciplines that were once apparently well-established—geography for example—are now less widely recognized and less highly regarded and geography departments have been closed in many universities. Other disciplines are fragmented into a host of sub-fields and specialties, which may enjoy little common discourse. The typical discipline of “English” is such an example. Within the sciences, new disciplines have developed and evolved, including such things as biochemistry, computer science, neuroscience, and others. The emergence of new disciplines is often cumulative, rather than substitutionary. Thus, geophysics does not obviate the need to continue to teach both geology and physics, its parent disciplines.

If one asks whether pedagogically the department still “makes sense” the answer is far from clear. Departments were established when the curriculum was relatively fixed, involving a dozen or so disciplinary courses. The departments at that time had very strong influence, not only upon the development of the curriculum, but also in their responsibility for its implementation and representation. Furthermore, they provided nurture and evaluation to students, who found in them a congenial home. The influence of departments in both these areas is now much less significant than it once was. Courses have proliferated. Department offerings have fragmented. Interdisciplinary courses abound. The oversight of the curriculum is in limbo.

Administratively, the department has been the foundation of the organization of the university, but, as the disciplines have developed, some depart-

ments have shrunk in size, being now represented by only three or four faculty members, while others—such as English and psychology—may number 100 or more faculty members in some of the larger universities. Added to this, the once strong role of department head has been replaced by department chair, and the individual appointed to this position often has little influence upon the imaginative development of the department or the creation of constructive linkages with other departments.

Taking these three aspects of the life of a typical department: its intellectual contribution, its pedagogic contribution and its administrative contribution, it is tempting to say that there must be a better method of coordination and management within the university. Unfortunately, that is far from clear. Though it is easy to suggest that the smallest departments should be merged into larger units, it is not clear that any alternative method is superior to the departmental organization we now have, even with all its admitted imperfections. The question may well become how do we take an imperfect organization—the department—and improve it? I believe that the two essential steps in bringing about improvement are to strengthen the leadership of the departmental chair and to provide periodic internal review, supplemented by external review, as appropriate, of the life and work of the department. In this way, one could retain the benefits of the department, but improve some of its present limitations.

The college or school: Universities, since their earliest days, have been created on the basis of the college or school, known in many European universities as the faculty. The characteristic feature of this grouping is that it represents a collection of departments united by broadly common intellectual interests and methods. One finds typically, therefore, a college of engineering or a school of medicine or a faculty of law. A traditional college is headed by a dean who, in the better universities, has substantial administrative and financial responsibility. In most cases, the dean is assisted by a small administrative staff and an appropriate advisory council. Perhaps the greatest variation in this traditional pattern of organization is found within the humanities, arts, social sciences and sciences. When I was dean at the University of Michigan, I presided over a college whose title was Literature, Science and the Arts; this was a mammoth grouping of some 50 departments, museums, colleges and institutes that, at that time, accounted for some 20,000 students. In many North American universities, this association still continues, with the arts, the social sciences and the sciences all unified under a single administrative leadership. In Europe, on the other hand, as well as in some North American universities, the three major divisions have been separated as individual colleges. In still other cases, particular groups of subjects, the earth sciences or the biological sciences, for example, have become separate schools or faculties. The reason for the separation of what had once been combined, extensive col-

leges is the unceasing intellectual growth in some areas, not least in the sciences. In universities where separation has taken place, it is argued that there is now little in common between, say, the sciences and the humanities. In those where an association is still continued within a single college, it is argued that the demands of liberal education favor the retention of the older association. There is no simple solution to this enigma, but the academic style, curricular direction, size and administrative complexity of the university will determine the most appropriate organization.

In general, the collegiate structure is still remarkably effective, intellectually and administratively, not least where a strong dean with a well-developed sense of intellectual purpose and direction is present. I believe it has proved effective largely because the colleges still define common intellectual interests and therefore are able to appeal to common standards and norms. Colleges have prospered when their deans have been willing to exercise authority in a way that current department chairs have generally not. What is needed here is for the deans to require of their chairpersons the same kind of financial responsibility and initiative that they themselves display.

Perhaps the other reason for the success of this division within the university is the fact that deans are generally carefully selected and well supported, occupying their positions for a significant period and regarding their appointment to these positions as an important career move.

Could the present collegiate system be improved? Certainly it could benefit from better strategic planning, from better cross-college linkages, with appropriate incentives for partnerships in the attainment of university-wide goals and in the advice of a standing visiting committee from outside the college itself. None of these improvements would be revolutionary, but they would take what is now one of the strongest aspects of university organization and make it even better.

The president: The president, rector, chancellor, or vice chancellor occupies an ancient office, the power of which varies greatly from country to country and even from institution to institution. In general, presidents, chancellors and vice chancellors in North America enjoy more autonomy than those in other parts of the world—in part, perhaps, because, unlike those in many industrialized countries, their universities are not wholly dependent upon the state for both financial support and direction. The presence of large numbers of independent universities in the United States makes the role of the president distinct.

I have recently written at some length on the art of the presidency (Rhodes, F. H. T., 1998) and there is also available a recently published report on renewing the academic presidency (Report of the Commission on the Academic Presidency, 1996). That report urges the delegation of more substantial

authority to the president and I believe that, if universities are to prosper in the new millennium, that will prove desirable.

The board of trustees, board of regents, board of overseers: In contrast to all the organizational categories and responsibilities described above, the board exercises a governance function, rather than one of management. In essence, it exists to provide public accountability, public oversight and public support for the institution. It may be of several types. Some boards are statewide in their authority, overseeing the work of as many as 50 different institutions within a state, representing many levels of individual responsibility and intellectual and professional concern. Other boards have responsibility for only a single university. In public colleges and universities, board members may be appointed by the governor or, in a few cases, elected in statewide elections. In private universities they are invariably self-appointed, often including substantial representation from the alumni association.

In general, the concept of board governance and responsibility has proved remarkably resilient and successful. Given the public responsibility of the universities and its growth beyond that of providing higher education, the function of the board is likely to grow more, rather than less, critical in the years ahead. This is not to say, however, that the system has been without its problems. Boards of public institutions have, on occasion, become politicized and intrusive. The boards of some private institutions are so preoccupied by fund raising that they have become largely symbolic rather than being actively involved in governance. In practice, much of the work of the large boards characteristic of private institutions is done through board committees. Perhaps the two greatest hazards of any board are the dangers of too much engagement, on the one hand, leading to intrusive micro-management, especially in athletics and in the medical school, and, on the other, of disengagement from the major issues, where board meetings become show-and-tell events, in which senior university administrators present a fairly cut-and-dried agenda, leaving little room for enquiry or guidance on the part of the board. This places a heavy responsibility on the board chairman and the president to work together to ensure the maximum effectiveness of the board. Creatively used, the board provides an effective system, not only for assuring public accountability and responsibility of the university, but also in serving as a bulwark against both internal usurpation of authority, and public intrusion or control. The delicate balance between institutional autonomy, personal freedom and responsibility, and public support and oversight, is one that exists in a constant state of dynamic equilibrium. A wise board will recognize the delicacy of that equilibrium and will nurture the vitality of the various forces that contribute to it (Rhodes, F. H. T., 1999).

This list of topics leaves unaddressed several of great importance, among them future financial support for universities. But, without broad agreement

on the future *role* of higher education, there can be no agreement on sources of financial support. It is the debate on role, and the related discussions of scale and scope, which should drive the discussion of methods, means, and finance. That is a public discussion that deserves urgent attention, and it is the responsibility of the universities to ensure its place on the public agenda.

Universities are one of the glories of the past millennium, one of the treasures of human vision and creativity. Arising from humankind's highest aspirations, they have made a unique and growing contribution to enlarging human understanding and advancing the human condition. In a new millennium where population continues to outstrip resources, where natural disaster compounds human mismanagement, where ancient animosities fuel new hatred and terror, where hunger, poverty and misuse still blight the lives of one quarter of our fellows, the challenge to universities will be greater still. Their products—experience shared, considered and analyzed; knowledge created, refined and applied; and skills perfected, focused and humanely used—are the essential, but frail, tools by which we fashion our collective future well-being. These skills are not given. Each must be cultivated. None is freestanding. Each requires community. None is self-sustaining. Each depends on support.

It is these three vital commodities—shared experience, demonstrable knowledge and humanely used skills—which are the business of the university: at once both its means and its products. Our successors at the Glion Colloquium in the year 2999 will look back on a planet and a people whose condition will largely reflect how responsibly, intelligently and humanely we, the leaders of the universities, have cultivated them today.

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