

The Future of
the Public University in America:
Beyond the Crossroads

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Stimulated by federal initiatives such as the land-grant acts and the GI Bill, and supported and sustained by the investments of the states, the American public university has evolved into one of the most significant social institutions of contemporary society. Our nation's public colleges and universities have democratized higher education, extending the opportunities for a college education to all of our citizens, applying the fruits of their scholarship and research to serve the diverse needs of our society, and engaging with their local communities and regions to provide the knowledge and services critical to economic prosperity, public health, and cultural vitality.

Throughout the latter half of the 20th Century, public higher education has flourished, sustained by strong social policies and public investment aimed at providing educational access and opportunity to a growing population. Yet today, public higher education faces numerous challenges. A changing student population, far more diverse in age, ethnic background, and economic circumstance, is demanding change in our institutions. The exponential increase in new knowledge coupled with the intensifying needs for advanced education in the workplace are challenging traditional disciplines and methods of instruction. The rapidly evolving technologies of computers and the Internet are eroding constraints posed by the traditional college curriculum and stimulating new market forces for educational services. Furthermore, despite the growing needs of a knowledge-based society, public higher education frequently falls behind other society priorities such as health care, corrections, and K-12 education in its capacity to compete for limited tax dollars. Public policies aimed at access and opportunities have been replaced by concerns about educational cost, quality, and accountability.

More broadly, as we begin a new century, the public university faces the challenge of adapting to an era of rapid social, economic, and technological change. This book considers the future of the public university in America from the perspective of two individuals who have served, respectively and together, as president and chief financial officer of one of the nation's leading public institutions, the University of Michigan. Beyond that, the two of us have spent our entire academic careers in public universities, jointly accumulating over 60 years of experience as faculty members, administrators, and leaders at the Universities of Michigan, North Carolina, and Arkansas.

The challenge of leading a public university during a time of great change is considerable, particularly when the institution has the prominence of a flagship state university. These institutions touch the lives of thousands--indeed, millions--as students, parents, patients, alumni, sports fans, and, of course, taxpayers. Few, indeed, were the days without a new crisis arising to challenge the university and its executive leadership, frequently to the distraction from the fundamental teaching, research, and service missions of the institution, whether arising from the diverse views of students and faculty or the intensely political agendas of state legislatures, governing boards, and the media. To be sure, each such crisis was usually relatively minor within the broader context of the fundamental educational mission of the university and its long history of serving the state and the nation. Yet each had the potential to destabilize the institution or damage its reputation, and each required the immediate attention of the administration, even at the distraction from higher priority yet longer-term agendas such as the quality of educational programs. And each arose from the complex and unforgiving public policy and political environment characterizing the public university.

This book is intended, in part, to consider the challenges and issues facing the public university from a more strategic, reflective perspective, no longer driven by the hour-to-hour pace of the pager and cellular phone. However, the authors wish to go beyond simply identifying challenges and provide as well a series of recommendations and strategies for the leaders and patrons of public universities. It is our hope that our perspectives, formed through direct experience and action rather than contemplation and study, will also be of interest to the broader audience of those concerned about higher education in America. In this sense, this book is intended as an operating manual for the public university, a treatise on lessons-learned, shaped and fired in the furnaces of public university leadership.

Consistent with this objective, we have chosen a more personal and subjective style over the scholarly approach adopted and preferred by many of our faculty colleagues. Furthermore, the issues and perspectives discussed in this book are heavily influenced by our experiences in leading public research universities, i.e., those with substantial graduate and professional programs. Of particular concern are the great state universities, which have served as models of truly public institutions, responsible and responsive to the needs of the citizens who founded and supported them, even as they sought to achieve quality comparable to that of the most distinguished private colleges and universities. Although sometimes different in scale and intensity, most of the issues, problems, and challenges of public higher education in America swirl about and throughout these flagship state universities. Hence we believe our discussion will also have relevance to other types of public colleges and universities. In any event, the diversity of public higher education in America, from local community colleges to

regional four-year institutions to doctoral universities to research universities, makes it difficult for us to deal in any but a very general fashion with the entire enterprise.

We begin with a brief introduction to the complexities and challenges of public higher education. Although we consider those forces driving change in our society and higher education in general, we distinguish those challenges particular to the public university. Here we believe it important to consider those characteristics that define the nature of the public university: its public purpose, legal status, governance, public accountability, and financing. We contrast public and private higher education and discuss the relationship between the two. In particular, we discuss the changing social contract between American society and the public university as it has evolved from a public good, supported primarily by tax dollars, to be viewed increasingly as a private benefit, dependent upon a diverse array of stakeholders with unique and disparate needs. In these chapters we also introduce a recurring theme that appears throughout the book: the weakening role of public policy in determining the evolution of the public university, as first politics and then market forces have played increasingly dominant roles in shaping our public institutions.

The remaining chapters focus on recommendations, strategies, and lessons learned concerning the various challenges and opportunities facing the public university. We begin by considering how the changing needs of our society are redefining the fundamental educational, scholarly, and service missions of the university and provide a framework for how one might address these shifting roles. Both economic realities and rapidly evolving technology provide a particular challenge to the public university, and we provide a series of recommendations on how universities might finance their activities

and prepare for the digital age. Key in this effort is learning to cope with the rapidly intensifying market forces that threaten to erode the conventional monopolies of the higher education enterprise in America.

Much of the remaining discussion concerns the challenge of leading and governing the public university during this period of change. We identify and discuss those characteristics of the public university that make change particularly difficult: the diverse nature of its various campus communities--students, faculty, staff, and administration; the archaic manner in which it is governed; the ponderous nature of its management and decision making; and the weakness of its leadership, particularly at the presidential level. Here we make the case for very significant change in how the public university is governed and led to better enable it to continue to serve our society. We go further to consider the difficult but essential process of university transformation.

Finally, we turn our attention to the future of the public university in America. Here we draw from our experience to consider possible scenarios for the evolution of public higher education. We suggest a more proactive approach that could enable public universities both to understand better and shape their futures. In a similar spirit, we suggest possible strategies at the state and federal level that we believe would preserve and strengthen public higher education as a resource for future generations.

We are convinced that while the public university is more important than ever to the future of our nation, it can only maintain its long tradition of service through change. It is time to move beyond simply analyzing the forces driving change in higher education and focus instead on strategies that enable our public universities to serve a rapidly changing America.

Acknowledgments

As we stress time and time again throughout this book, universities are profoundly human endeavors. Good things happen because good people make them happen, with their talent and dedication, especially when they are provided with the support, encouragement, and freedom to push to the limits of their abilities. Our many colleagues among the University of Michigan's faculty, students, and staff who have had an impact on this book are too numerous to mention individually without running the risk of overlooking important contributions or influences. But there are several particular groups that deserve special mention.

The University of Michigan has long had a tradition of highly decentralized leadership. Executive officers, deans, directors, and department chairs all enjoy unusual autonomy. While these leaders are provided significant authority, they also accept considerable responsibility, both for the welfare of their units and the progress of the university more generally. This culture of delegating authority, flexibility, and accountability to the appropriate levels has allowed Michigan to attract and to develop some truly extraordinary leaders. They, in turn, have been successful in recruiting and developing a faculty, student body, staff and programs of similarly high standards. During the decade we served as executive officers at the University of Michigan, we had the great privilege of working with a truly remarkable leadership team. Many members of this team have continued on to other significant leadership roles in higher education. We wish to acknowledge the impact of their experience, their wisdom, and their guidance on this book--just as we acknowledge their great impact on the university itself.

Next, we wish to acknowledge the exceptional staff support we enjoyed in our administrative roles. The offices of the president and the vice president and chief financial officer are complex and demanding environments, frequently at ground zero on most critical university issues. Both of us benefited greatly from truly remarkable staff--secretaries, administrative assistants, office managers--who managed to keep us from sinking beneath the waves of administrative demands.

Finally, we would like to express our deep gratitude to our two "Anns of Ann Arbor," Ann Womack and Anne Duderstadt. The upper reaches of university administration require a team approach, in which spouses are frequently called upon to make sacrifices and provide leadership, not to mention pastoral care, for the university community. Furthermore, the challenges and complexities of these executive positions, and the inevitable stresses they bring to bear upon their occupants, mean that the advice, counsel, and wisdom of spouses can be invaluable. For this essential support, we are deeply grateful and greatly indebted.

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Chapter 1

A New Century

Many regard the public university as among our nation's most significant social institutions. It is through our public colleges and universities that the educational, intellectual, and service resources of higher education have been democratized and extended to all of our citizens. The missions of these institutions reflect some of society's most cherished goals: opportunity through education, progress through research, and cultural enrichment. Our public colleges and universities are bound closely to society, responsible to and shaped by the communities that founded them. These institutions have grown up with our nation. They have responded to the changing needs and aspirations of its people as America expanded to the frontier. They played key roles in the agricultural development of our nation and then our transition to an industrial society. Public universities were important partners in national defense during two world wars and continue to be important contributors of human and intellectual resources critical to national security. They have expanded and diversified to serve an ever-changing population and its evolving needs.

Today America's public colleges and universities enroll over 75 percent of all college students, currently numbering some 11.6 million. Nearly two-thirds of all bachelor's degrees, 75% of all doctoral degrees, and 70% of the nation's engineering and technical degrees are awarded by public universities.ⁱ Public universities conduct the majority of the nation's campus-based research. They produce most of our doctors, lawyers, engineers, teachers, and other professionals and public leaders. They provide critical services such as agricultural and industrial technology, health care, and economic development. They enable social mobility, providing generations of students with the steppingstones to more rewarding careers and more meaningful lives.

As we enter a new century, Americans can take pride in having built the finest system of higher education in the world, both in terms of the quality of its colleges and universities and the breadth of our society served by these institutions. American universities lead the world in the quality of their academic programs, as evidenced both by their dominance of international awards such as the Nobel Prize and by their status as the institutions of choice for students throughout the world. Beyond the quality of our leading institutions, our colleges and universities have responded to the needs of our nation by providing educational opportunities on an unprecedented scale, with two-thirds of today's high school graduates seeking some level of college education. Our universities' contributions to the scientific and technological strength of our economy and to our culture, especially in addressing social priorities from health care to urban infrastructure to international competitiveness, have been formidable indeed. The American university is more deeply engaged in society than ever before, playing an increasingly critical role in shaping our economy, our culture, and our well being.

Yet this is a time of change, for our society and its institutions. The forces driving change in higher education today are many and varied: the intensifying, lifelong educational needs of citizens in a knowledge-driven, global economy; the increasing diversity of our population and the growing needs of under-served communities; the globalization of commerce, culture, and education; the impact of rapidly evolving technologies such as the computer and telecommunications; and the exponential growth in both the magnitude and commercial value of the new knowledge created on our campuses.

Today, an array of powerful social, economic, and technological forces are driving change in the educational needs of our society and the institutions created and evolving to respond to these needs. We live in an "audit" society, in which accountability and performance matter. Concerns about the cost of a college education appear to have replaced earlier concerns about access and opportunity. Furthermore, as our society places ever more confidence in the economic forces of the marketplace rather than the policy and programs developed by governments, there is a sense that the evolution of higher education in the twenty-first century will be fueled by private dollars and that the influence of public policy will be replaced increasingly by market pressures. There are increasing signs that our current paradigms for higher education, the nature of our academic programs, the organization of our colleges and universities, and the way that we finance, conduct, and distribute the services of higher education, may not be able to adapt to the demands and realities of our times.

While all of higher education faces the challenge of change as we enter a new century, these challenges are particularly intense for public universities. The complex political and social environments in which these institutions must function; the rapidly changing character of their financing; their public responsibilities and accountability; the political nature of their governance; these and many other characteristics make change not only a great challenge but also a compelling necessity for the public university.

Beyond the Crossroads

This book is based upon the belief that we have already moved far beyond the crossroads of considered reflection and contemplative debate about whether change is necessary in the public university. Already the pace of change in public higher education

is relentless and accelerating, just as it is in the rest of our society. Our universities have already traveled far down the roads toward a dramatically different future that we have experienced or known, and there is no turning back. Rather our challenge today is to develop effective strategies to shape the evolution of our public universities so that they will play key, albeit different roles in responding to the needs of a changing world.

Hence this book has been written not as an analysis of the various forces driving change in today's public university, but rather as a consideration of various strategies for shaping the public university of the future. We seek to assist public higher education in shifting from its current tendencies to simply react to the challenges and opportunities of the moment to developing proactive strategies that will allow them to control their own destinies. For example, how should one restructure the academic programs of our universities to better serve an ever more diverse student cohort, not only in terms of socio-economic background but as well in age, employment and family responsibilities, and even physical presence (e.g., on campus or in cyberspace)? How do we finance our public universities, enhancing quality and constraining costs at a time when traditional sources of public support are likely to be restrained or declining? How do we prepare universities for the digital age, a world characterized by increasingly powerful information and communications technologies? How should we govern, lead, and manage our institutions, particularly during a period that will likely require very substantial university transformation? How do we view the need for change not as a threat but rather as an opportunity, managing and shaping it to enable our institutions to better serve our society?

Clearly, public universities need to address the rapidly changing character of students, with respect to socioeconomic background, age, family, and employment situations. Both the different learning styles of the plug-and-play generation as well as the lifetime learning demands of the high performance workplace will likely drive a shift from “just-in-case” education, based on degree-based programs early in one’s life, to “just-in-time” education, where knowledge and skills are obtained during a career, to “just-for-you” educational services, customized to the needs of the student. Similarly as learning needs become more pervasive in a knowledge-driven economy, national priorities will shift from selectivity and exclusivity (e.g., focusing most resources on educating the “best and brightest”) to the universal education of the workforce. The increasing commercial value of the intellectual property produced by campus research and instructional activities, coupled with the tightly coupled and highly nonlinear process of technology transfer from the campus laboratory to the commercial marketplace are driving changes in the faculty culture. Public universities need new policies to assist them in balancing their traditional responsibilities for teaching, research, and service with the new needs and demands of a knowledge-driven society.

Universities face a particular challenge in adapting to the extraordinarily rapid evolution of information and communications technology. Modern digital technologies such as computers, telecommunications, and networks are reshaping both our society and our social institutions. Of course, our nation has been through other periods of dramatic change driven by technology, but never before have we experienced a technology that has evolved so rapidly, increasing in power by a hundred-fold every decade, obliterating the constraints of space and time, and reshaping the way we communicate, think, and learn.

Digital technology will not only transform the activities of the university—our teaching, research, outreach—but as well it will transform how we are organized, financed, managed—even whom we regard as students and faculty. The development and execution of effective strategies for addressing the challenges and opportunities presented by digital technology is a particularly critical task for public universities, long committed to broad access and to reaching beyond the campus to serve society, and yet also constrained by public support and accountability to operate in a cost-effective manner with limited resources.

The market pressures of a knowledge-driven economy are attracting new for-profit providers of educational services and challenging the traditional monopolies of colleges and universities. Although perhaps alien to many sectors of the academy, market competition will demand different strategies for public universities, in which concepts such as core competence and strategic intent along with business practices such as mergers, acquisitions, and restructuring will become increasingly important.

Closely related will be the need for new business models capable of adequately financing the complex array of university missions at a time when public support is becoming more limited. It is important to consider strategies such as diversifying the revenue base of the university, building substantial reserves (including endowment), and changing dramatically the current practices of resource allocation, financial management, and financial accountability. As we will discuss later, there will be motivation for some public universities to consider privatizing their financial operations, becoming, in effect, privately funded but publicly committed universities.ⁱⁱ

The leadership and management of the public university is challenging enough during the most quiescent of times because of the complexity of these institutions and the political and social environment in which they must function. But the period of rapid change that will characterize most institutions in the decade ahead may quickly obsolete many of the traditional approaches to university leadership and demand a serious reconsideration of the process for decision-making and management. In a similar fashion, the traditional mechanisms of university governance, such as the use of lay governing boards determined through political means or shared governance with elected faculty bodies may simply be incapable of dealing effectively with either the pace or nature of the changing higher education enterprise. It is important to consider not only new forms but moreover entirely new principles for the leadership and governance of the public university.

Most public colleges and universities will find themselves facing a period of institutional transformation, proceeding at both a pace and to an extent far beyond either institutional experience or the capacity of traditional mechanisms. While universities have changed quite dramatically in the past, they have generally done so over time periods of decades or longer, compatible with the time-scales dictated by tenure the length of faculty careers. Yet today our public institutions will face the need to transform themselves on time scales of years or shorter in key areas such as finance, technology, and academic programs. This requires entirely new strategies for institutional transformation.

We believe that as institutions, states, and as a nation, we need to think far more broadly about the future of the public university. We seriously question whether many of

the current practices and stereotypes of the public university will remain relevant to our future. Perhaps entirely new concepts such as learning ecologies or ubiquitous learning will replace our current national educational infrastructure of schools, colleges, universities and policies and practices.ⁱⁱⁱ Although speculation about the future can be hazardous, since it is frequently wrong, it is nevertheless useful to provide a context of possibilities for current decisions.

Finally, it is important in all of these considerations to remember that the history of the public university in America is one of a social institution, created and shaped by public needs, public policy, and public investment to serve a growing nation. In the past the policies and programs concerning public higher education have been driven by important social values and needs: the importance of extending educational opportunity to the working class and serving a growing industrial nation as evidenced in the land-grant acts; the commitment to make higher education accessible to all Americans, regardless of socio-economic background; the recognition of the importance of universities in creating the knowledge essential to national security, quality health care, economic competitiveness, and an array of other national and regional priorities. These policies and programs provided both the guiding principles for the evolution of the public university and the commitment of public resources necessary to enable it to serve our nation. It remains an open question today whether new social needs and priorities will drive the public policy and investment that defines the public university of the 21st Century, or whether market forces will instead reshape these institutions, perhaps in ways no longer responsive to the public interest.

The Changing Social Contract

Service to society and civic responsibility are among the most unique and important themes of higher education in America. The bonds between the university and society are particularly strong in this country. The public university provides an important model of how social institutions, created by public policy and supported through public tax dollars, evolve in response to changing social needs. Our public colleges and universities were publicly created, publicly supported, and governed by public bodies for public purposes. They exist to serve the public interest. As the needs and aspirations of our society have changed, so too have changed our public universities. In a very real sense, these institutions have grown up with our nation as each generation has established a social contract with its public universities, redefining the relationship between these institutions and the society they serve.^{iv}

The historical rationale for public higher education, its *raison d'être*, is that since education benefits all of society, it is deserving of support from public tax dollars.^v The Carnegie Commission on Higher Education of the 1960s and 1970s framed this idea best when it first posed the classic formulation of the questions that shape public policy in higher education, “What societal purposes does higher education fulfill? Who pays? Who benefits? Who should pay?” It answered by stating its belief that higher education benefits not just the individual but society as a whole. The return on this societal investment is not just an educated citizenry, but a more vital and productive workforce.^{vi}

This leads to a public principle: the public university is established by public action and supported through general taxation for the benefit of all of society. The basic premise is that public higher education is a public good. Society gains benefits both directly from the services of public institutions as well as from the contributions

(including future tax payments) made by educated citizens. Because of societal support, the services provided by universities should be available to all that are qualified, without respect to academically irrelevant criteria such as gender, race, religion, or socioeconomic status. Since it is supported by society, the public university is obligated both to be responsible to the needs of society and to be publicly accountable for the use of tax funds.

For most of the history of public higher education, the key themes of its evolution have been opportunity through access and service to society enabled by strong public investment of tax dollars. Each generation has attempted to provide the benefits of higher education to a broader segment of the American population by launching a new array of public institutions: the state universities and the land-grant colleges of the nineteenth century, the technical and normal schools of the early twentieth century, the community colleges and statewide university systems in the post-war years, and the virtual and cyberspace universities of today. The federal government has played a major role in the evolution of public higher education through important legislation such as the land-grant acts, the GI Bill, an array of federally funded student financial aid programs, and the direct support of campus-based activities such as research and health care. The primary support for the public university came from the states and local government, sometimes guided by major policy efforts such as the Wisconsin Idea^{vii} or the California Master Plan.^{viii}

Despite the great impact of the public university on our nation, important elements of the social contract between society and the public university are changing rapidly. Public resistance to taxes has limited the availability of tax revenue at the local,

state, and federal level. Higher education has become less effective in competing with other social priorities such as health care, K-12 education, and crime prevention and incarceration. Perhaps most significant of all, there has been a subtle shift of public policy away from the public principle. Higher education has increasingly become viewed as an individual benefit rather than a societal right. The concept of publicly supported colleges and universities providing free education of high quality to a broad segment of our population, that is, access through opportunity, has certainly eroded if not disappeared entirely.

As we begin a new century, there is an increasing sense that the social contract between the public university and American society may need to be reconsidered and perhaps even renegotiated once again.^{ix} The university's multiple stakeholders have expanded and diversified in both number and interest, drifting apart without adequate means to communicate and reach agreement on priorities. Public higher education must compete with an increasingly complex and compelling array of other social priorities for limited public funding. Both the public and its elected leaders today view the market as a more effective determinant of social investment than government policy. Perhaps most significant of all, the educational needs of our increasingly knowledge-intensive society are both changing and intensifying rapidly, and this will require a rethinking of appropriate character and role of higher education in the 21st Century.

Perhaps it is understandable that as a key economic, political, social, and cultural institutions, universities have become both more visible and more vulnerable. The American university has become, in the minds of many, just another arena for the exercise of political power, an arena susceptible to the pull of special interests and open

to much negative media attention and even exploitation. It is also understandable that public sympathy toward the university was greater in decades past, when the role of the university was primarily centered around undergraduate education, and when only a small fraction of our population had the opportunity for a college education. Part of today's challenge arises from the multiplicity and complexity of the roles that contemporary society has asked the university to assume. Many of our critics may be asking us to return to our earlier and far narrower roles, easily understood and non-threatening.

Yet it is also increasingly clear that the public university cannot return to its earlier forms. It long ago passed the point where its earlier, simpler roles and character would be adequate to serve our nation. Our knowledge-intensive world has become far too dependent upon the modern university. If the public university were to retreat from social engagement and return to a more restricted role of simply educating the young, society would simply have to invent new social institutions to play our more expanded roles.

A Time for Leadership

History suggests that the public university as a social institution must change and adapt in part to preserve its traditional roles. For centuries this extraordinary social institution has not only served as a custodian and conveyor of knowledge, wisdom, and values, but it has transformed the very society it serves, even as social forces have transformed it in turn. It is true that many, both within and outside the academy, believe that significant change must occur not simply in the higher education enterprise but in each and every one of our institutions. Yet, even most of these see change as an

evolutionary, incremental, long-term process, compatible with the values, cultures, and structure of the contemporary university.

The past decade has been a time of significant change in higher education, as our public universities have attempted to adapt to the changing resources and to respond to new public concerns. Undergraduate education has been significantly improved. Costs have been cut, and administrations streamlined. Campuses are far more diverse today with respect to race, ethnicity and gender. Faculties are focusing their research efforts on key national priorities. Public universities have streamlined their operations and restructured their organizations in efforts to contain the rising cost of a college education.

Yet, these changes in the public university, while important, have been largely reactive rather than strategic. Most colleges and universities have yet to understand, much less address, the profound institutional transformation that may be necessary to serve the educational and intellectual needs of our radically changing society. The rapidly changing nature of our economy, our society, and our world demand profound changes in all social institutions, the university among them.

Today, however, the public university no longer has the luxury of continuing at this leisurely pace, nor can it confine the scope of changes under way. We are witnessing a significant paradigm shift in the very nature of the learning and scholarship—indeed, in the creation, transmission, and application of knowledge itself—both in America and worldwide, which will demand substantial rethinking and reworking on the part of our institutions. As public higher education enters a new century, the powerful forces of a changing world have pushed our universities far beyond the crossroads of leisurely

choice and decision making and instead down roads toward a future that we can only dimly perceive and must work hard to understand.

For the most part, our public universities still have not grappled with the extraordinary implications of an age of knowledge; a society of learning that will likely be our future. Academic structures are too rigid to accommodate the realities of our rapidly expanding and interconnected base of knowledge and practice. Higher education as a whole has been divided and internally competitive at times when it needs to speak with a single unequivocal voice. Entrenched interests block the path to innovation and creativity. Perhaps most dismaying, it has yet to come forth with a convincing case for ourselves, a vision for our future, and an effective strategy for achieving it.

Public higher education in America has a responsibility to help show the way to change, not simply to react to and follow it. Its voice must be loud, clear, and unified in the public forum. At the same time, it must engage in vigorous debate and experimentation, putting aside narrow self-interest, and accepting without fear the challenges posed by this extraordinary time in our history.

Chapter 2

The Public University

A visit to the campuses of one of our distinguished private universities conveys an impression of history and tradition. The ancient ivy-covered buildings; the statues, plaques, and monuments attesting to important people and events of the past, all convey a sense that these institutions have evolved slowly, over the centuries, in careful and methodical ways, to achieve their present forms.

In contrast, a visit to the campus of one of our great state universities conveys more of a sense of dynamism and impermanence. Most of the buildings look new, even hastily constructed in order to accommodate rapid growth. The icons of the public university tend to be their football stadiums or the smokestacks of their central power plants rather than their ivy covered buildings or monuments. In talking with campus leaders at public universities, one gets little sense that the history of these institutions is valued or recognized. Perhaps this is due to their egalitarian nature, or conversely, to the political (and politicized) process that structures their governance and all too frequently informs their choice of leadership. The consequence is that the public university evolves through geological layers, each generation paving over or obliterating the artifacts and achievements of earlier students and faculty with a new layer of structures, programs, and practices.

So just what is a public university? The public frequently thinks of “public” institutions as large undergraduate teaching factories, supported primarily by tax dollars while providing broad educational opportunities of modest quality and of nominal cost.

Public universities are also expected to provide an array of services such as health care, agricultural extension, continuing education, and economic development. Yet, attempting to distinguish between public and private universities based on funding source, size and mission, or responsibilities to society can be misleading.

For example, all colleges and universities receive some degree of public funding from local, state, or federal taxes. Although public universities are unique in the support they receive from direct state appropriations, private universities also receive substantial public support from both state and federal government in the form of research grants, student financial aid, and their tax-exempt status. Like private universities, many public universities today draw the bulk of their support from non-public sources such as student tuition, industrial research grants and contracts, private gifts, and income from auxiliary activities such as health care or intercollegiate athletics.

Yet another contrast between public and private universities, at least in the popular view, would be size. The perception of education in large public universities is that of thousands of students wandering in and out of large lecture courses in a largely random fashion, taught by foreign teaching assistants. Campus images are of football stadiums, fraternity and sorority parties, or student protests. We think of undergraduate students in these institutions as identified only by their I.D. numbers until the time of their graduation, when they are asked to stand and be recognized along with thousands of their fellow graduates. Here again, one must temper this image by recognizing that many public colleges and universities are relatively small, no larger than a few thousand students in enrollment. Furthermore, many private universities are comparable in size to large state universities.

One might also consider the degree of public responsibility and accountability as a way to distinguish between public and private institutions. Yet, here too, there is more similarity than difference, since both types of institutions have accepted significant social obligations to serve broad and diverse constituencies and provide public service. Since both are supported by society, both are obligated to be responsive to the needs of society and to be publicly accountable for the use of tax funds. Because all colleges and universities, public and private, receive some degree of public support, they are subject to state and federal laws governing issues such as equal opportunity, environmental impact, and occupational safety.

In summary, public support requires public accountability, responsibility for service to all without discrimination, and dedication to the public interest. To be sure, private universities have far more latitude in deciding just how they will serve society, while the roles of public universities are usually dictated by constitutional language, legislative statute, or funding constraints. Yet in reality all of America's colleges and universities, whether public or private, are public assets and are influenced by public policy and constrained by state and federal laws. All receive some form of public subsidy, whether through direct support through government programs such as research grants or student financial aid or through indirect means such as tax benefits.

Probably the most important distinction between public and private institutions involves their legal status and their governance. Public universities are creatures of the state, clearly owned by the taxpayers and governed by public process. They are held accountable to myriad state regulations and laws. This is reflected in the rules and regulations governing their operations, such as the sunshine laws that open their meetings

and their records to the press or the constraints on personnel policies or expenditures. It is also manifested in the nature of their governing boards, generally selected through partisan political mechanisms such as gubernatorial appointment or popular election and viewed as representing the public's (i.e., the taxpayer's) interests rather than serving as trustees for the institution. In fact, since public and private universities are increasingly similar in size, mission, and financing and most sharply distinguished by their ties to government, it has become common to refer to private universities as "independent" universities.

The Public Higher Education Enterprise

Higher education in the United States is distinguished by a remarkable diversity of institutions. Many nations have approached mass education by creating a uniform educational system determined by the lowest common denominator of quality. In the United States, we have allowed a diverse system of colleges and universities to flourish in response to the complex and heterogeneous nature of American society. From small colleges to big state universities, from religious to secular institutions, from single-sex to coeducational colleges, from vocational schools to liberal arts colleges, from land grant to urban to national research universities, there is a rich diversity both in the nature and the mission of America's roughly 4,000 college and universities.

Public higher education reflects this great diversity in mission, character, and stakeholders. For example, community colleges and regional comprehensive public universities tend to serve students from local communities, who typically commute to classes on campus or at regional centers and may be enrolled on only a part-time basis. Flagship state universities tend to favor a residential educational experience, in which

students live on or adjacent to campus and enroll full-time in their academic programs. Some public colleges and universities focus almost entirely on undergraduate education, while others stress graduate study or education for the professions (e.g., law, medicine, engineering) and research. Some public universities compete for students, faculty, and resources only in local or regional markets. Others, particularly public research universities, compete in national and global markets for people, resources, and reputation.

The diversity of our society leads not only to great diversity in the character of our institutions, but also to remarkable diversity in how institutions respond to a changing society. For example, community colleges and regional four-year public universities tend to be closely tied to the needs of their local communities. They are the most market-sensitive institutions in higher education, and they tend to respond very rapidly to changing needs. When the population of traditional high school graduates declined in the 1980s and 1990s, community colleges moved rapidly into adult education, with a particular emphasis on providing the training programs important to regional economic development. Many four-year regional universities have developed specialized programs to meet key regional needs such as for teachers, health-care practitioners, and engineering technologists.

The public research university, because of the complexity of its multiple missions, its size, and its array of constituencies, tends to be most challenged by change. While some components of these institutions have undergone dramatic change in recent years, notably those professional schools that are tightly coupled to society such as medicine and business administration, other programs of the public research university such as the liberal arts continue to function much as they have for decades. They have been largely

insulated from a changing society both by the intellectual character of their activities (e.g., the humanities) or by their academic culture (e.g., tenure and academic freedom). But here too change will eventually occur, although perhaps with more difficulty and disruption.

It is tempting to compare the university with other types of social institutions, such as corporations, government agencies, or educational institutions in other countries. However here one must take care, since the differing objectives, roles, values, and constraints make such comparisons difficult. For example, during these days of concerns about the rising costs and prices of higher education in the face of limited resources, one is frequently tempted to compare the university to the business sector. In fact, one of the frequent concerns business leaders raise about higher education concerns its reluctance to adopt business practices such as total quality management, strategic planning, or take-to-market strategies. To be sure, there are important lessons to be learned from the experience of corporations over the past two decades as they have increased productivity and quality while reducing costs. Yet it is also misleading to think that one can simply map business methods onto the academy.

Clearly the roles and missions of the university are quite different from the corporation. The latter seeks to make a profit, to increase shareholder value. As a result, most of its decisions are short-term, focused on the quarter-by-quarter earnings statements and stock price. In contrast, the university not only serves society through ongoing activities such as education, research, and teaching, but it also has a responsibility to act as a steward for the achievements of past generations while preparing

to serve future generations. A profit-loss statement or a balance sheet simply cannot capture the nature of its activities and impact.

So, too, the university--particularly the public university--operates under constraints that would be unthinkable for the private sector. Its most important, valuable, and costly human resource, its faculty, is isolated from traditional management by academic practices such as academic freedom and tenure. Its pricing structure, tuition, is largely fictitious, determined not by market forces but by public subsidy, political constraints, and public pressures. And for public universities, there are a wide range of additional constraints such as sunshine laws, state regulations, and political pressures.

The comparison between the public university and a government agency is also complicated. To be sure, some public universities are defined by statute or constitution as a branch or agency of state government, subject to all of the same constraints in terms of personnel policies, purchasing and contracting, and legal practice as any other government body. Yet, here too there are very significant differences. Few government agencies are forced to compete in the intense marketplace for talented professionals that characterize faculty recruitment and retention; instead, they rely primarily on civil service or political appointments. Most expenses of government agencies are met through appropriations from tax revenues. In contrast, appropriations from public funds comprise only a small fraction (averaging 30 percent) of the resources that must be generated by public universities to cover their expenses. Ironically, despite their public character, many government bodies such as legislatures have exempted themselves from intrusive regulations such as equal opportunity hiring, employee workplace protections, and sunshine laws.

One must also take care in comparing American universities with their counterparts in other nations. American colleges and universities are compelled to provide a general education to young students while most other nations believe this role to be more appropriate for secondary schools.^x European universities are viewed primarily as knowledge institutions, with the creation of knowledge as their most important task, and with teaching and learning building upon these research foundations. They are not asked to accept a major role in the emotional or intellectual maturation of young students, assuming that those entering their institutions already possess the maturity to move directly into more focused degree programs. Hence they are also not subject to the concerns about the incompatibility of research and teaching, since at the advanced level, these activities converge.

Furthermore, no other nation has the diversity of colleges and universities, the array of private and public, large and small educational institutions as the United States. Most nations focused on strong central planning and coordination to determine the mission, quality, and support of their institution, rather than relying upon the competitive pressures of the marketplace for faculty, students, and resources in the way that America does. Finally, few educational institutions in other countries are as responsive to the needs of society as American colleges and universities, which have both the incentive and the autonomy to take on an ever-growing set of missions to serve society.

Legal Structure

The legal relationship between public universities and government is a complex one. By constitution and statute, states have distributed the responsibility and authority for the governance of public universities throughout a hierarchy of governing bodies: the

legislature, state executive branch agencies or coordinating boards, university governing boards and administrations. Some universities are structurally organized as components of state government, subject to the same hiring and business practices constraining other state agencies. Others are classified as independent public corporations and possess certain autonomy from state government through constitutional or legislative provision. All are influenced by the power of the public purse--by the strings attached to appropriations from state tax revenues.

All universities require some degree of autonomy to insulate their academic programs from political interference. While private institutions are generally distant enough from such interference, public institutions rely on a more fragile autonomy from the society--and the government--which supports them. In a few states such as Michigan and California, there is an explicit provision in the state constitution vesting exclusive management and control of the public university in its governing board, presumably to the exclusion of influence from state executive and legislative officials. In other cases, institutional autonomy is provided in a far less effective form through statute or practice.

However, constitutional or statutory autonomy usually refers only to those matters clearly designated as within the exclusive control of the university's governing board. Those powers clearly within the prerogatives of the legislature (e.g., the power to appropriate) or the executive branch (e.g., the governor's budget recommendation and veto power) are exercisable even over constitutionally autonomous institutions. For example, state regulations concerning workplace safety or collective bargaining clearly apply to colleges and universities. Public institutions are subject to oversight by state

audit and regulatory agencies, regardless of their legal autonomy by constitution or statute.

Furthermore, no matter how formal the autonomy of a public university--whether constitutional or statutory--other factors can lead to the erosion of their independence. For example, in many states, sunshine laws that relate to open meetings of public bodies or freedom of information have been extended to the point where they can paralyze the operation of public institutions. Public attitudes, as expressed through populist issues such as control of tuition levels or admission standards, also hinder public institutions from time to time. As we will consider in more detail later, the political nature of the governing boards of public colleges and universities bind them to the political process and can undermine university autonomy. Many is the case when a governor has put pressure on politically appointed or elected trustees in an attempt to interfere with what should be an independent institutional decision. There have even been times when state governments or political parties have pressured trustees to remove the president of public universities for political reasons. Such is the political nature of governance in public higher education.^{xi}

Governance

Most other nations rely on government control of higher education through structures such as a ministry of education. Government ministers or bureaucrats have strong authority over universities, and institutional leadership (presidents, rectors, vice-chancellors) is relatively weak. In contrast, the American device for “public” authority in university governance has been a governing board of lay members, either self-

perpetuating in the case of private institutions or selected by political appointment or election in the case of public institutions.^{xii}

Although such governing boards may share some of their power with campus administrators and faculty bodies, in the end, they have final authority and responsibility for the welfare and integrity of the institution. In this way the lay governing board is intended to shield American colleges and universities from the government control and political interference many other nations face.^{xiii}

In theory, at least, the governing board of a university is expected to focus primarily on policy and to serve as trustees acting always on behalf of the welfare of the institution. The detailed management of the institution is delegated to the president--selected by the board, of course--and other members of the university administration. Academic policy is delegated to the faculty. The governing boards of private universities have the additional responsibility of fund-raising, where trustees are expected to “give, get, or get off,” although this has recently become a responsibility of many public university governing boards as well.

Yet, there are some very important philosophical differences between the governing boards of public and private universities. Trustees of private university governing boards tend to view their roles as ones of stewardship and usually attempt to act in the best interest of their institutions. In sharp contrast, the political nature of the process used in selecting the governing board members of public universities frequently leads them to regard their first responsibility to the electorate rather than to the institution. In fact, many public board members tend to focus on narrow forms of accountability to particular political constituencies. They act more as “governors” or

“legislators” of their institution than as “trustees.” This contrast between the “trustee” philosophy of the governing boards of private universities and the “watchdog” stance assumed by public governing boards is both one of the most significant differences and greatest challenges in public higher education today.

Whether the members of governing boards of public colleges and universities are elected or appointed, they are usually selected based more upon their political ties than their knowledge or experience with higher education. Furthermore, the political process used to determine public governing boards can be quite distasteful to many of those who possess the broad experience from public or private life necessary to understand the complex nature of the modern university. As a result, the general quality of public university governing boards tends to lag considerably behind that of private boards. As a result of their relatively inexperienced and highly political composition, many public governing boards enjoy neither high visibility nor respect on the campus, and this can lead to a significant credibility gap between the board, the faculty, and the student body.

Financing

One might be tempted to use the sources of funding as another possible distinction between public and private universities. Many public university presidents wince when they hear the fund-raising pitch to donors used by their private university colleagues: “You folks give to public higher education on April 15th. The rest of the year you should give to private colleges and universities.” To be sure, state governments provide about 45 percent of the support for public colleges and universities, subsidizing their very low tuition levels, compared to only about 3 percent for private universities, primarily through state-based financial aid programs. In contrast, private universities

generate roughly 50 percent of the revenue for their instructional programs from tuition compared to 25 percent for public universities. Gifts and endowment income represent another difference, amounting to 17 percent for private compared to 6 percent for public universities.^{xiv}

However, these differences between the ways public and private universities are financed are diminishing. As the subsidy provided from state appropriations has eroded, many public universities have responded by increasing tuition levels and launching major private fund-raising campaigns. At the same time, private universities have become increasingly effective in competing for public funding, particularly from the federal government. For example, the private research universities receive very substantial federal support in the form of research grants and contracts. Their students also are eligible for financial aid from both federal and state governments, which, in part, allow private universities to sustain their relatively high tuition levels. And, perhaps most significant of all, private universities benefit very significantly from the favorable tax treatment of private gifts and endowment appreciation.

Private colleges and universities have been remarkably successful in shaping state and federal higher education policy to their advantage.^{xv} For example, some would contend that state and federal financial aid programs have been designed in part to subsidize the very high tuition levels of private colleges and universities.^{xvi} Furthermore, state and federal tax policies represent a very significant subsidy of private higher education. When the investment corporations created by many private universities to manage their endowments make profits on a business venture, that profit is tax-exempt, and, in effect, the foregone tax revenue must be replaced by tax dollars paid by other

citizens including those sending their students to the local public community college. Not that such public support of private institutions is unusual or necessarily inappropriate. But it should be recognized that most private colleges and universities receive very substantial public subsidy.

Of course, public universities are becoming increasingly dependent upon nonpublic sources for their funding as state support has deteriorated. Most public universities are now heavily involved in private fund-raising, with several having launched successful billion-dollar fund-raising campaigns rivaling those of leading private universities. Both public and private universities alike are increasingly dependent upon the revenue generated through auxiliary activities such as health care and continuing education. And most research universities, public and private, are actively engaged in technology transfer activities, ranging from licensing and royalty income to equity interest in spin-off companies.

Missions and Roles

Because of their service mandate, public universities tend to have broader missions and serve more diverse constituencies than private universities. Their instructional activities encompass both the general education and liberal arts programs offered to undergraduates as well as the most highly specialized graduate and professional education. Their research activities range from fundamental investigations to highly applied knowledge services such as agricultural extension and economic development. As the needs of society evolve in complexity, the public university mission similarly broadens. While this multipurpose and comprehensive mission can pose challenges, particularly during periods of constrained resources, most public universities

are reluctant to focus their missions for fear of cutting their bonds to the large segments of the society that support them.

The Core Missions

To many students and families, the educational role of the university is best symbolized by the university's power in granting degrees. Beyond formal education in the traditional academic disciplines and professional fields, the university has been expected to play a far broader role in the social and intellectual maturation of students. Colleges provide not only the structured learning and discipline necessary for advanced education, but also a secure environment, a place where the young can spend their first years away from their families, both learning and exploring without concern for the risks posed by "the real world."

The second traditional role of our colleges and universities has been scholarship: the discovery, integration, evaluation, and preservation of knowledge in all forms. While the academy would contend that knowledge is important in its own right and that no further justification is required for this role, it is also the case that such scholarship and research have been essential to the university's related missions of instruction and service. Furthermore, universities play important roles in preserving our culture and heritage for future generations.

The third traditional mission of the university has been to provide service to society. American higher education has long been concerned with furnishing special expertise to address the needs and problems of society. The commitment of our public universities to the development of professional schools in fields such as medicine, nursing, dentistry, law, and engineering are adequate testimony to the importance of this

role. So, too, are the major efforts of public universities to serve the public interest through activities such as agricultural extension, economic development, and health care.

Although it is customary to identify the primary activities of the university as the triad of teaching, research, and public service--or in more contemporary terms as learning, discovery, and engagement^{xvii}--from a more abstract perspective, each of the activities of the university involve knowledge.

The Periphery

If the core missions of the public university are education, research, and public service, then what activities would we identify as on the periphery? In many ways, the public university today has become one of the most complex institutions in modern society--far more complex, for example, than most corporations or governments. It is comprised of many activities, some non-profit, some publicly regulated, and some operating in intensely competitive marketplaces. The contemporary university teaches students; it conducts research for various clients; it provides health care; it engages in economic development; it stimulates social change; and its provide mass entertainment (as evidence by size of its football stadium). In systems terminology, the modern university is a loosely-coupled, adaptive system, with a growing complexity, as its various components respond to changes in its environment. It has become so complex that it is increasingly difficulty to articulate the nature, mission, or even the fundamental values of the university to those it serves.

In part, the modern university has become a highly adaptable knowledge conglomerate because of the interests and efforts of its faculty. Faculty members have been provided with the freedom, the encouragement, and the incentives to move toward

their personal goals in highly flexible ways. Universities have developed a transactional culture, in which everything is up for negotiation. The university administration manages the modern university as a federation. It sets some general ground rules and regulations, acts as an arbiter, raises money for the enterprise, and tries--with limited success--to keep activities roughly coordinated.

Yet, in the case of the public university, this continual expansion of peripheral missions for the university also reflects an effort to respond to the ever more diverse needs of our society. These institutions were created, in part, to address the needs of their states and the nation. Through long-standing programs such as cooperative extension, adult education, health care, and applied research, or through new endeavors such as online education and technology transfer, public universities continue to become ever more engaged with society. While there continue to be complaints that higher education is unresponsive to the needs of society, quite the opposite is true, since the competitiveness of American universities causes them to pay close attention to their multiple constituencies. This intense desire to respond has led many institutions to reallocate limited resources away from their primary responsibilities of teaching and research in an effort to generate more direct public awareness and support. By attempting to respond to unrealistic public aspirations and expectations, to be all things to all people, higher education has whetted an insatiable public appetite for a host of service activities of only marginal relevance to its academic mission. A quick glance around any community with a local university provides numerous examples of this, from agricultural extension offices to medical clinics to incubation centers for high-tech business formation to athletic camps for K–12 students.

There is little doubt that the need for and the pressure upon universities to serve the public interest more directly will intensify. The possibilities are endless: economic development and job creation; health-care; environmental quality; the special needs of the elderly, youth, and the family; peace and international security; rural poverty and urban decay; and the cultural arts. There is also little doubt that if higher education is to sustain both public confidence and support, it must demonstrate its capacity to be ever more socially useful and relevant to a society under stress.

These peripheral activities do play an important role to better connect the public university to the public that it was created to serve. Public service and engagement must be a major institutional obligation of the public university. The public supports the university, contributes to its finance, and grants it an unusual degree of institutional autonomy and freedom, in part because of the expectation that the university will contribute not just graduates and scholarship, but the broader efforts of its faculty, staff, and students in addressing social needs and concerns. Moreover, while education and research are its core missions, these academic activities rarely engage the broader tax-paying public in a compelling way. In a sense, it is the service role of the public university through activities such as health care, agricultural extension, or even intercollegiate athletics that builds the necessary level of public understanding and support for the teaching and research mission of the public university.

The Tensions

There is an inevitable tension among the more immediate services sought by society and the long-standing roles of the university in education and scholarship.^{xviii} The complex multidimensional roles and missions of the contemporary public university are

driven both by societal need and by the willingness of entrepreneurial faculty to respond to this demand. Public universities are compelled both by character and by political pressures to respond to the rapidly changing needs of society by adding more and more missions at the periphery. Expanding academic health centers into comprehensive health care systems, developing industrial extension services to assist in economic development, creating charter schools and managing K-12 education systems, even building highly professional athletics programs to provide commercial entertainment--all are not only accepted but even demanded as appropriate roles of the public university.

However such responsiveness to the needs--indeed, even the whims--of society by higher education may in the long run be counterproductive. Not only has it fueled an inaccurate public perception of the primary mission of a university and an unrealistic expectation of its role in public service, but it has also stimulated an increasingly narrow public attitude toward the support of higher education. Powerful forces of parochialism compel institutions to spread themselves ever more thinly as they scramble to “justify” themselves to their elected public officials. Faculty and administrators alike feel under intense pressure to demonstrate their commitment to public service, even when they recognize that this will frequently come at the expense of their primary academic missions.

This situation is compounded by the limited ability of public universities to shed missions to protect their core activities of education and scholarship and to say “no” to the ever more numerous demands for public service. In fact, the new missions that the public university is pressured to undertake are almost invariably far removed from their core activities. This mission creep is one of the greatest challenges to the public

university since the missions opportunistic faculty add to its portfolio are generally reactive and opportunistic rather than strategic. Beyond the resources required for each new mission taken on by the university--since rare indeed is the activity that does not require some degree of subsidy--there is also a concern about the risk associated with these peripheral activities. For example, the financial risks associated with operating large health care systems are considerable, as are the public relations risks associated with big-time college sports, and the legal and financial complexities of technology transfer. Most corporations would make certain that the risk of new ventures was appropriately managed and perhaps even isolated from the parent organization through financial firewalls. But this is difficult if not impossible in public institutions in which both legal requirements and politics require public involvement in all activities.

So, too, society generally seeks additional services from our institutions from a “What have you done for me lately?” perspective, with little apparent understanding or awareness of the importance of protecting our core missions of education and research. Public universities must develop the capacity to focus and refine their activities to bring them more in line with our core mission of learning. They have to develop the capacity to shed some of the missions that have outlived their usefulness to society or their relevance to their academic mission. They need to ask some difficult questions. For example, are most universities really qualified to operate massive health care systems in today’s intensely competitive and high-risk financial marketplace? Do universities have any business operating quasi-professional athletic franchises simply to entertain armchair America?

While many of the programs sought from the public university by society may be

both useful and appropriate, they must not be allowed to distract the institution from its primary activity of learning. Put another way, those roles and missions at the periphery of the university should not be allowed to degrade its core missions of teaching, learning, and research.

The Interaction between Public and Private Higher Education

Despite their differences in governance and funding, public and private colleges generally cooperate in advancing the cause of higher education. They come together in various organizations such as the American Council on Education and the Association of American Universities to work on behalf of important agendas such as federal research support and student financial aid.

However, there are occasionally issues on which public and private higher education part company, although this is usually more an issue of priorities and emphasis than actual disagreement. For example, for years private universities have pushed hard for federal programs to subsidize major capital facilities as one of their top priorities. While public universities have supported this effort, they have generally not viewed it as a high priority since they have had access to state appropriations for capital facilities. So, too, the tax policies governing public and private universities are somewhat different, and hence receive different attention.

However there is one area where public and private higher universities come into more direct conflict: the competition for outstanding faculty and students. Although one might think that there is a sharp difference between the student admissions selectivity of public and private colleges and universities, in reality flagship state public universities have generally been able to attract many of the most outstanding students from their

region. Such a cohort of outstanding students is particularly important to large public universities, since these students set the pace, the academic standards, for the rest of the student body.

Today, however, several factors are converging that threaten the quality of students enrolling in public universities. Part of the challenge is perception, since students and parents are increasingly influenced by popular college rankings such as U.S. News & World Report based upon criteria such as endowment per student or expenditure per student that are clearly biased toward smaller, private institutions. It is worth noting here that because of their large size, even outstanding public universities such as the University of California and University of Virginia do not make the top twenty in the USN&WR rankings, although clearly the academic and instructional resources of these institutions dwarf those of many institutions listed higher on the list.

A second factor has to do with more aggressive efforts by the most selective private colleges and universities to buy “the best and brightest” students through generous financial aid using the vast wealth they have accumulated as a booming economy has swelled private giving and endowment growth. Despite the fact that these institutions have become more selective than ever, now accepting only 10% to 20% of those who apply, they are increasingly using financial aid not simply to meet the needs of less fortunate students but moreover to outbid the offers from other institutions. As Harvard’s admission brochures state: “We expect that some of our admitted students will have particularly attractive offers from institutions with new aid programs, and those students should not assume we will not respond.”^{xix} Needless to say, despite their

relatively low tuition levels, public universities have a difficult time competing with such an aggressive stance.

The faculty recruiting practices of several of the wealthiest private universities raises a similar concern. Most colleges and universities build their senior faculty ranks from within, by hiring and developing junior faculty. However, several elite private universities prefer instead to build their senior faculty by raiding established faculty members from other institutions. Their vast wealth allows them to make offers to faculty members that simply cannot be matched by public universities. Most deans of major public universities can readily testify to the great effort expended to fend off raids on their top faculty by wealthy private universities.

The growing disparity in the resources available to public and private colleges and universities has made this competition even more of a challenge. During the 1990s, a booming equity market has driven extraordinary growth in the endowments of the most prestigious private universities. During the same period, these institutions were able to substantially increase tuition revenue, subsidized in part by generous federal financial aid programs that covered roughly 40 percent of their high tuition pricing. Yet during this past decade, many public universities have experienced erosion in state support but were unable to compensate with tuition increases because of public and political pressures. As a result since the 1980s, public universities have fallen further behind their private university counterparts in expenditures per enrolled student.^{xx}

One important manifestation of this fiscal disparity is provided by the most significant component of instruction-related expenditures, faculty salaries. Since 1980 salary disparities in all faculty ranks have increased significantly favoring private

research universities. Prior to 1980, faculty salaries in the late 1960s and early 1970s were relatively consistent between public and private research universities and only slightly favored private university faculty, with the average differences across all professorial ranks amounting to less than \$2,000 (in 1998 constant dollars). After 1980s, public-private university salary disparities began to increase dramatically and have continued through the 1990s, to over \$14,000 in 1998. Alexander notes that only three public Research I universities have improved upon their faculty salary market position since 1980 when compared to the average salaries of faculty at private research universities.^{xxi} Even among the nation's most distinguished public universities such as the University of California at Berkeley and the University of Wisconsin the gap has widened between average faculty salaries and those of private universities.

To illustrate the problem, it is instructive to think of higher education as a complex ecosystem, comprised of a wide variety of life forms. Most are benign and pastoral, such as the community colleges, comprehensive universities, and liberal arts colleges, which serve particular constituencies in a largely noncompetitive environment. In this ecosystem, the public research universities would be competitive, but probably akin to elephants, slow of foot, and seldom directly combative. But, at the top of the food chain, are the intensively competitive predators, carnivores such as Harvard and Princeton, that tend to feed on the rest, using their vast wealth to lure away other universities' best faculty and students and leaving behind depleted if not decimated academic programs in public universities.

Of course, when challenged about their faculty raids on public universities, the elite private institutions generally respond by suggesting a trickle-down theory. Such

free-market competition, they argue, enhances the quality of all faculties, accepting the fundamental premise that the very best faculty members should be in the wealthiest institutions. Of course they usually do not acknowledge that in their predatory recruiting they are generally attempting to lure away outstanding senior scholars who have already benefited from years of support by public universities during their scholarly development. Nor do they admit--although they certainly realize--the damage that is done to the academic programs of public universities by their raiding practices.

But, as in all ecosystems, evolutionary adaptation does occur. As we noted earlier in this chapter, the vast wealth of the elite private universities also depends in part upon public largesse, in this case through very generous tax policies that benefit both charitable giving and endowment investments. As the faculty raiding practices of these predatory institutions become more aggressive and intrusive, the large public universities may eventually be forced to unleash their most powerful defensive weapon: political clout. After all, influential as the elite private universities may be, they are no match for the political influence of flagship state universities, able to build and coordinate considerable political pressure in every state and within Congress. One can imagine a situation in which the pain from irresponsible faculty raids by wealthy private universities becomes so intense that the public universities are compelled to unleash the “T” word, tax policy, and question the wisdom of current tax policies that sustain such vast wealth and irresponsible behavior at public expense to both taxpayers and to their public institutions. Needless to say, this would be the equivalent of nuclear warfare and could damage both private and public higher education. But it could happen if the very wealthy private

universities do not behave in a more responsible fashion by curtailing their current faculty raiding practices.

Evolutionary Paths

Since all colleges and universities are subject to many of the same forces driven by economic, social, and technological change, it is not surprising to find that public and private institutions are converging in many respects. After all, they must compete with one another for students, faculty, and financial resources. The competitive market for faculty members, particularly among the leading research universities, drives convergence in appointment policies such as tenure and promotion. Academic and professional programs are evaluated and accredited by similar bodies, driving similarity in academic offerings and culture.

We have noted that the constraints on state appropriations have compelled many public universities to launch major fund-raising efforts to go after private giving, just as private colleges and universities. So, too, private institutions seek not only public support through federal programs such as sponsored research and student financial aid, but they are increasingly shaping legislation at the state level that allow them to access state tax dollars as well. In fact, they increasingly portray their mission of teaching, research, and service, along with their commitment to access and engagement, in language essentially indistinguishable from those of public institutions.

Yet, while the competitive marketplace may drive such similarities in strategies and missions, such commitments to serve the public interest are voluntary for private universities, while they are fundamental to the character of public universities.

Furthermore, public universities do operate under quite different constraints than private

institutions. They are governed by lay boards of a decidedly political nature. They are constrained by state regulations and policies concerning issues such as public access, procurement, and employment. Their public character demands a philosophy of providing low cost education to a broad range of students. It also requires them to take on a far broader spectrum of missions, including far more utilitarian activities such as practical education, applied research, and extension services. And perhaps most important for our discussion, it constrains to a considerable extent their capacity to adapt to rapid change.

Chapter 3

Responding to the Changing Needs of Society

The contemporary university is defined, in part, by the many roles it plays in an ever-changing society. Universities provide educational opportunities for our citizens. They produce our scholars, professionals, and leaders. Universities also preserve and transfer our cultural heritage from one generation to the next. They perform the research necessary to generate new knowledge critical to the progress of our nation. And they provide service to society across a number of fronts such as health care and economic development that draw on their unique expertise.

Yet the same powerful economic, social, and technological forces driving change in our society are also transforming its needs and expectations for the contributions of the university. Although the university's traditional roles such as educating the young, creating new knowledge, preserving and transmitting to future generation our cultural resources, and providing knowledge-intensive services to society will continue to be needed, society will need far more from our institutions. The high performance workplace is creating new needs for adult education provided in a form compatible with career and family responsibilities. Universities are increasingly seen as sources of commercially valuable intellectual property arising from research and instructional activities. Local communities, states, and the nation itself seek new knowledge-intensive services from the university requiring far deeper engagement and partnership.

New forms of organizations are evolving to meet the changing knowledge needs of our society, e.g., for-profit colleges, cyberspace universities, telecoms, dot-coms,

collaboratories, all specializing in providing to society knowledge-intensive products or services, many once the prerogative of the university alone. Traditional universities face increasingly intense competition in this new knowledge marketplace. In effect we are seeing the emergence of a global knowledge and learning industry that will challenge the traditional higher education enterprise. Most colleges and universities, including the public university, will find themselves in an increasingly competitive market for both traditional and new products and services. They will have to demonstrate anew that they are the best qualified to define the substance, standards, and process of higher education.

Changing educational needs raise important issues concerning access, affordability, diversity, and selectivity of educational opportunity. The changing role of the research university in providing knowledge-intensive products and services raise important issues concerning the balance between responding to the commercial pressures of the marketplace and protecting the public interest. In this chapter we will examine the changing needs of society for the multiple roles of the public university and suggest possible strategies for responding.

Education in the Age of Knowledge

The university has long played both a personal development and civic role in the lives of students, providing each new generation of students with the opportunity to better understand themselves, to discover and understand the important traditions and values of our past, and to develop the capacity to cope with their future. Despite the dip in the post-war baby boom, enrollments in public universities have risen 30% since 1980 and are projected to increase another 17% in the decade ahead^{xxii}. Today, 65 percent of America's high school graduates seek some level of college education, and this percentage could

well increase as a college degree becomes the entry credential to the high performance workplace. There is an increasingly strong correlation between the level of one's education and personal prosperity and quality of life. Even those with college degrees will find themselves hard-pressed to keep pace in a future that will in all likelihood demand frequent career changes. The ability to continue to learn and to adapt to--indeed, to manage--change and uncertainty will become among the most valuable skills of all.

Eighteen to twenty-two year-old high school graduates from affluent backgrounds no longer dominate today's undergraduate student body. Indeed, only 16% of today's students are full-time, living on campus, and between the ages of 18 and 22.^{xxiii} We now see increasing numbers of adults from diverse socio-economic backgrounds, already in the workplace, perhaps with families, seeking the education and skills necessary for their careers. They seek convenience, service, quality, and low cost rather than the array of course electives and extracurricular activities characterizing today's undergraduate programs. This demand for adult education may soon be greater than that for traditional undergraduate education.^{xxiv} Today's universities will have to change significantly to serve the educational needs of adults, or new types of institutions will have to be formed.

Most of the attention devoted by American universities over the past decade to improving the quality of undergraduate education has been focused on the general education experience of the first two years. While this has certainly improved the quality of large introductory courses, providing additional opportunity for seminars, writing experiences, and when necessary, remedial instruction, it has largely been within the traditional classroom paradigm. However the students entering college today both seek and require a different form of education in which interactive and collaborative learning

will increasingly replace the passive lecture and classroom experience. The student has become a more demanding consumer of educational services, although frequently this is directed at obtaining the skills needed for more immediate career goals.

Increasingly educators are realizing that learning occurs not simply through study and contemplation but even more effectively through the active discovery and application of knowledge. There is a certain irony here. When asked to identify the missions of the university, university faculty and administrators generally respond with the time-tested triad: teaching, research, and service. Undergraduate education, however, is usually thought of only from the perspective of the first of these missions, teaching. Clearly, the academy should broaden its concept of the undergraduate experience to include student involvement in other aspects of university life.

For example, although public research universities possess a rich array of intellectual resources, through their scholars, laboratories, and libraries, little of these are utilized in the current undergraduate curriculum. Perhaps every undergraduate should have the opportunity--or even be required--to participate in original research or creative work under the direct supervision of an experienced faculty member. The few students who have been fortunate enough to benefit from such a research experience usually point to it as one of the most valuable aspects of their undergraduate education. There is ample evidence to suggest that student learning also benefits significantly from participating in community or professional service. Such activities provide students with experience in working with others and applying knowledge learned in formal academic programs to community needs. Many students arrive on campus with little conception of broader community values, and the experience of doing something for others can be invaluable.

The undergraduate experience should be reconsidered from a far broader perspective, encompassing the multiple missions of the university. All too frequently each of the missions of the university is associated with a different component; a liberal education and teaching with the undergraduate program, research with the graduate school, and practical service with professional schools. In reality, all components of the university should be involved in all of its missions.

In these new learning paradigms, the word “student” becomes largely obsolete, at least in the sense that it describes a passive role of absorbing content selected and conveyed by teachers. Instead we should probably begin to refer to the clients of the twenty-first century university as active learners, since they will increasingly demand responsibility for their own learning experiences and outcomes. In a similar sense, the concept of a faculty member as a “teacher” may also be outdated. Today the primary role of most faculty members in undergraduate education is to identify and present content. In these new paradigms the role of the professor becomes that of nurturing and guiding active learning, not of identifying and presenting content. That is, they will be expected to inspire, motivate, manage, and coach students.

It is not surprising that during these times of challenge and change in higher education, the nature and quality of graduate education has also come under scrutiny. The current highly specialized form of graduate education may no longer respond either to the needs of students or society. The majority of Ph.D. programs have traditionally seen their role as training the next generation of scholars, or even more limited, as cloning the current cadre of dissertation advisors. To be sure, the process of graduate education is highly effective in preparing students whose careers will focus on academic research.

However, the specialized research training provided most graduate students leaves them ill-prepared for the broader teaching responsibilities they are likely to encounter in the higher education enterprise. More than half of new Ph.D.s will find work in non-academic, non-research settings, and our graduate programs must prepare them for these broadened roles.^{xxv}

Although undergraduate education in the liberal arts remains the core mission of most public universities, their commitment to professional education is considerable.^{xxvi} In fact, an analysis would show that many public research universities devote a significant fraction--and in some cases the majority--of their faculty and financial resources to education in the professions such as business, engineering, law, and medicine. Furthermore, even many undergraduate degree programs are designed primarily to prepare students for professional careers, such as engineering, nursing, teaching, or business. This is also the case for “pre-professional” undergraduate majors designed to prepare students for professional programs at the graduate level such as pre-med or pre-law. Even traditional disciplinary majors are based on sequences of courses designed to prepare students for further graduate study in the field, for possible careers as academicians or scholars. In this sense the contemporary public university is based heavily upon professional education and training. Of course this is nothing new, since even the medieval university was based on the learned professions such as theology, law, and medicine.

The rapid growth of the knowledge base required for professional practice has overloaded the curricula of many professional schools. This has been particularly serious in undergraduate professional degree programs such as engineering and pre-med, since

the tendency is to include more and more specialized material at the expense of the liberal arts component of an undergraduate education. In a world of continual change, we should no longer assume that a professional education can provide sufficient knowledge to suffice for a substantial portion of a career. Some professional schools are now taking action to restructure their curricula by providing early but limited exposure to professional practice and stressing more the development of skills for lifelong learning rather than mastering a sequence of highly specific subjects, with the intent of relying more heavily on “just-in-time” education, practical knowledge provided in modules and perhaps even through distance learning paradigms to practitioners when and where they need it.

For example, many business schools now find their faculty more heavily involved in non-degree continuing education programs such as executive education than in traditional B.B.A. or M.B.A. programs. They find that learning in such programs is more efficient since older students are more mature and highly motivated. Furthermore, since both the students and their employers can more accurately assess the value of the program, they are far more willing to pay tuition levels that reflect the true cost.

Today’s college graduates will face a future in which perpetual education will become a lifetime necessity. They are likely to change jobs, even careers, many times during their lives. Educational goals need to be reconsidered from this lifetime perspective. In a world driven by knowledge, learning can no longer be regarded as a once-is-enough or on-again, off-again experience. Rather, people will need to engage in continual learning in order to keep their knowledge base and skills up to date. Undergraduate and graduate education are just steps--important steps to be sure--down

the road toward a lifetime of learning. They should ensure a person's ability and desire to continue to learn, to become attuned to change and diversity, and adaptable to new forms of knowledge and learning of the future. To prepare for a future of change, students need to acquire the ability and the desire to continue to learn, to become comfortable with change and diversity, and to appreciate both the values and wisdom of the past while creating and adapting to the new ideas and forms of the future. These objectives are, of course, precisely those one associates with a liberal education.

Since the need for learning will become lifelong, perhaps the relationship between a student/graduate and the university will similarly evolve into a lifetime membership in a learning community. Just as the word “student” may no longer be appropriate to describe an active learner, perhaps the distinction between "student" and "alumnus" may also no longer be relevant. There is an increasing interest in the part of alumni in remaining connected to their university and to learning opportunities throughout their lives.

There are already signs of both subtle and profound transitions in how some universities conceive the fundamental nature of their educational programs. With rapidly evolving communications and information technology, learning experiences are no longer confined to the campus or highly structured degree programs for the young, but rather increasingly tailored to the time, place, and individual needs of the public we serve. The terminology is shifting from students to learners, from faculty-centered to learner-centered institutions, from classroom teaching to the design and management of learning experiences, and from student to a lifelong member of a learning community.^{xxvii}

Access, Affordability, Selectivity, and Diversity

A growing population of college age students, the intensifying educational needs of adults demanded by a knowledge-driven economy, and the increasing diversity of our population has brought the issue of access to educational opportunity once more front-and-center as a national concern. Largely ignored since the college days of the baby boomers in the 1950s and 1960s, the linked issues of access, affordability, selectivity, and diversity once again require careful attention and reconsideration.

The Cost of a College Education

A key determinant of access is affordability. Certainly the cost of a college education is among the more contentious issues in higher education today. Students and parents, taxpayers and politicians, and the media and public-at-large, all have raised concerns about spiraling tuition levels, and the affordability of a college education. Many believe that college tuition is out of control, essentially pricing higher education out of the reach of all but the wealthy. Some even suggest that the price of a college education is no longer worth its benefits.^{xxviii}

To separate myth from reality, we need to examine carefully two issues relating to the cost of a college education. First, we must understand the relationship between what it costs a university to operate, the price a student actually pays, and the value received by students through this education. Second, we need to consider the issue of just who should pay for a college education: parents, students, state taxpayers, federal taxpayers, private philanthropy, or the ultimate consumer (employers in business, industry, and government). It is important to realize that quality in higher education does not come cheap. Someone must pay for it. The real debate in our society is less about cost than about *who* should pay for higher education.

A variety of factors determine the cost of a college education to students and their parents: the tuition charged for instruction, room and board, the cost of books, travel, and other incidental expenses. The most immediate concern here is tuition, since this represents the price that the institution charges for the education it provides and over which it has (or should have) the most control.

At the outset, it must be recognized that no student pays the full cost of a college education. *All* students at *all* universities are subsidized to some extent in meeting the costs of their education through the use of public and private funds.^{xxix} Through the use of private gifts and income on endowment, many private institutions are able to set tuition levels (prices) at one-half or one-third of the true cost of the education. Public institutions manage to discount tuition “prices” even further to truly nominal levels--to as low as ten percent of the real cost--through public tax support and financial aid programs.

We noted earlier that in 2000-2001 tuitions in public four-year colleges and universities averaged \$3,500 compared to \$16,332 in private institutions. But there is considerable variation. For example, at the University of Michigan, one of the more expensive public universities, instate undergraduate tuition is about twice the national average, at \$7,000 per year.^{xxx} Yet even this represents only 25% of the estimated costs of educating an undergraduate student, with most of the subsidy coming from state taxpayers and private philanthropy. Furthermore, when this tuition is discounted by the financial aid available to all instate undergraduates with demonstrated need, the average net price for a year’s education drops to less than \$3,000.

This is a very important point. Even though tuition levels have increased at all institutions, public and private, they remain moderate and affordable for most colleges

and universities. It is the very high tuition at a few highly selective private institutions such as Harvard, Stanford, and MIT where tuition has soared to \$25,000 per year or more that has generated the most attention. However less than one percent of all college students attend such elite institutions.^{xxxii} Nearly 80% of all students attend public colleges with annual charges for tuition that average only \$3,500. Despite the increases in the tuition charged by public colleges and universities to compensate for the erosion in funding from public tax dollars, public higher education remains affordable for most families, particularly when augmented by student financial aid programs.

Yet, there is another, more substantive reason for the current concerns about the rising costs of a college education.^{xxxiii} The costs of higher education have generally increased somewhat more rapidly than inflation for almost a century. Fortunately, however, average family income also increased substantially over this period. As long as family income increased at about the same rate as tuition, the costs of a college education were tolerated since they remained at roughly the same fraction of family expenses. In the 1980s, however, just at about the time that the growth in state appropriations for public higher education began to slow, triggering corresponding increases in college tuition levels, the rate of increase of family income began to decline as well. The shift of the burden for meeting the costs of a college education from the taxpayer to the family occurred at a most inopportune time when the family budget was coming under increasing stress.

While many families can still afford the costs of a college education for their children at public or even private universities, many others are not so fortunate. Yet, despite increasing tuition levels, today a college education is more affordable to more

Americans than at any period in our history, as evidenced by the fact that enrollments have never been higher. This is due in part to the availability of effective need-based financial aid programs. In truth, the real key to providing access to a college education for Americans has not been through low tuition, but rather through need-based financial aid programs. For low-income students attending a public university, the average contribution of federal, state, and institutional financial aid typically exceeds the gross tuition price so that they, in effect, pay no tuition at all.

As state and federal subsidy of the costs of education has declined, whether through declining support of institutions or financial aid programs, tuition charges have understandably increased. Much of this new tuition revenue has been used to protect the financial aid programs critical to low income families. Put another way, public universities, just as private universities, have asked more affluent families to pay a bit more of the true cost of educating their students--although not the full costs, to be sure--so that they can avoid cutting the financial aid programs that enable economically disadvantaged students to attend.

The financial aid programs established by the Higher Education Act of 1965 and its subsequent amendments and reauthorizations significantly changed the mechanism for federal support of higher education. Rather than allocating funds directly to institutions, the federal government channeled funds directly to students through a complex system of financial aid programs. This policy shift gained momentum in the 1970s when the Nixon administration expanded federal financial aid programs still further, thereby encouraging colleges and universities to move to a high tuition, high financial aid model in which

tuition was set at levels more comparable to actual educational costs while financial aid programs were used to provide access.

Such federal financial aid programs were first based upon need and focused on low-income students. However during the late 1970s and early 1980s, political pressures extended eligibility to middle- and upper-middle class students through efforts such as the Middle Income Assistance Act, thereby providing, in effect, even further public assistance to high tuition private colleges and universities. Furthermore, during the 1980s federal programs began to emphasize student loan aid over federal grant aid by again expanding student eligibility for loans. For example, in 1979 two-thirds of federal assistance to students came in the form of grants and work-study jobs, with the remaining one-third in the form of subsidized loans.^{xxxiii} Today, the reverse is true; grants typically comprise only one-third of a student's federal aid award, and the remaining two-thirds is extended in the form of loans. The percentage of tuition covered by federal financial aid for low-income students has decreased over time, while institutional grants have increased rapidly for students from both low- and middle-income groups.

The nature of the federal loan program shifted once again in 1997 with a major new series of tax credits and deductions, the Hope Scholarships and Lifetime Learning tax credits, designed to help middle-class students and families meet the cost of a college education.^{xxxiv} While this legislation was portrayed as a \$40 billion national investment in higher education, many contend that the credits represent instead a massive middle-class entitlement program, politically very popular but not strategically well aligned with the needs of the nation.^{xxxv} Although the size of the Pell grants to economically disadvantaged students has also been increased, there is concern that the major impact of

the tax benefits will be on middle-class consumption and not on expanding the opportunity for a college education.

Today federal financial aid programs provide over \$50 billion a year to college students.^{xxxvi} Currently over 55% of undergraduates receive some level of student aid from federal, state, or private sources, averaging \$6,256 per student. The participation rate for financial aid is even higher at the graduate level, with over 60% receiving some form of financial aids averaging \$13,255. However, these programs have shifted from an emphasis on expanding access to higher education to a goal of reducing the cost burdens of a college education on the middle-class. Put another way, the higher education tax benefits contained in the Taxpayer Relief Act of 1997 represent yet another step away from the concept of higher education as a social investment. In a sense, by shifting student financial aid first from grants to loans, and then from loans to tax credits which benefit primarily the middle and upper class, federal policy has shifted away from the view that higher education is a public good and instead toward the view that education benefits primarily the individual. By channeling federal support through tax assistance rather than need-based grants, the government has also indicated a preference for investing in the marketplace rather than in students most in need or in the capacity of colleges and universities. It also clearly suggests that middle-class votes have become more important to federal leaders than the access of low-income students to educational opportunities.

These shifts in federal financial aid programs also represent as well the increasing priority given to the support of private higher education at the federal level. Public universities are at somewhat of a disadvantage in benefiting from these federal financial

aid programs. Since there are no tuition limits on federal financial aid support, private universities have been able to raise tuition to capture an increasing share of federal dollars (now amounting to roughly 40%, despite the fact that they enroll less than 20% of college students). Lower cost public universities, constrained in pricing by state policy and governing board politics, have been unable to move to the high tuition-high financial aid models most benefited by federal programs. Ironically, while most state government have sought to control costs in order to expand access, limiting tuition growth to the CPI or less, the federal government has given economic incentives to private colleges and universities to raise tuition, since the high tuition-high aid approach to federal programs tends to reward institutions charging disproportionately higher tuition.

It should not be surprising that the policy shifts characterizing public support of higher education have impacted the access of various socioeconomic groups in different ways.^{xxxvii} During the past two decades a large discrepancy has appeared in college participation with respect to family income. The growth in college enrollments during these periods has occurred primarily from the top three income quartiles, where college participation has increased to 70%. There has been little additional participation in the lowest income quartile, still amounting to less than 30%. Although one could argue that the major increase in student financial aid programs should offset the impact of raising tuition in public colleges and universities, in reality access from low income groups is determined very much by the perception of costs, causing a very sensitive relationship between tuition level and enrollment in the lower income quartile. Similarly, the shift of financial aid policies from grants to loans and now tax benefits further tends to discourage lower income students.

Some states have aggravated these income disparities even further by intentionally diverting resources away from need-based financial aid programs designed to enhance access to low income students and instead channels these funds to middle and upper-income students in an effort to buy votes. Of most concern is the recent trend to provide merit awards to high school students who score well on standardized examinations, since students from lower-income families are less likely to succeed on such tests because of their limited access to high quality K-12 education and extracurricular learning opportunities. For example, the State of Michigan has used the majority of its tobacco settlement funds to provide \$2,500 merit scholarships to students who score highest on the statewide Michigan Education Assessment test. In 2000, 63% of white high school students taking the test qualified for such a merit scholarship, while only 2% of African American students who took the test qualified. Most of the white students were in the upper two economic quartiles of the population, while the African American students were in the lowest quartile, demonstrating the clear political intention of the program to buy middle and upper-class votes rather than providing access to educational opportunity to those most in need of assistance.

Clearly there is a compelling need to focus the attention of the nation once again on providing access to quality higher education regardless of financial ability. Indeed, this is one of the most fundamental purposes of the public university. The highest priority for public funding should be given to those most in need. The tragedy is that public leaders at the state and federal level are targeting student financial aid programs to benefit the middle and upper-class to the neglect of those less fortunate who will simply not have the opportunity for a college education without financial assistance. Ironically, many

governing boards of public colleges and universities take the same tact when they hold tuition levels down to unrealistically low levels rather than using additional tuition revenue to fund strong financial aid programs. To some degree this represents a profound misunderstanding of the fact that educational access and opportunity is achieved not through subsidizing those who can afford to pay but rather by providing financial assistance to those who cannot. But there is also a very pragmatic element to these policies, since middle and upper class voters are more influential than the impoverished. And finally, there is a certain element of hypocrisy inherent in these policies, since those governing board members and public leaders most insistent upon low tuition and educational benefits for the middle class are themselves usually in the upper income brackets.

Three decades of shifting public policies have tended to aggravate the economic stratification in our society, the gap between rich and poor, by allowing widening inequalities of income and wealth to determine access to educational opportunity. To be sure, it is also the case that we have relatively little understanding, much less little empirical data, concerning the impact of various public subsidies on access to higher education, despite the fact that we currently spend over \$50 billion within the states to subsidize the low tuition in public colleges and universities, and a similar amount at the federal and state level on student financial aid programs. But more significantly we seem to have become mesmerized by a belief that quality is somehow related more to exclusivity than academic achievement.

Excellence, Selectivity, and Exclusivity

Although access to quality higher education should be a significant if not dominant priority of our colleges and universities, many instead are driven by a culture of selectivity and elitism that has characterized much of American higher education during the past several decades. One of our colleagues refers to this as the “Harvardization” of higher education in America, in which the highly selective approach to admitting students (and recruiting faculty) of the Ivy League colleges has set the gold standard for all of our colleges and universities, whether they be elite private universities, public universities, or small liberal arts colleges. In the highly competitive marketplace for students, faculty, resources, and reputation, there is a common perception that the more selective an institution is, the better its student body and academic programs. Popular rankings of colleges and universities such as those published by U.S. News and World Report make it clear that academic ranking and reputation is directly correlated with selectivity.

This emphasis on selectivity, indeed, elitism, has been pushed to extreme limits. The most elite institutions, such as Harvard, Stanford, and Yale, accept only about one out of every ten applicants. Even leading public universities such as the University of California, Michigan, and Virginia today admit only a small fraction of applicants. Yet, in truth, not only do the majority of those applicants rejected by these elite institutions have the academic ability to both succeed and benefit from their academic programs, but in many cases they have academic credentials comparable to or even better than those students who have been accepted (particularly when the latter are athletes, alumni legacies, or the relatives of influential donors). Put another way, selectivity in many institutions has reached the stage where admissions decisions are made more on the basis of subjective evaluations than empirical data.

Not only should one question the admissions process that leads to such high selectivity, but as well one might also question the wisdom of students and parents striving for admission to such highly selective institutions. Although there appears to be little correlation between admissions selectivity and career earnings or achievement, parents and students hold tight to the belief that the more selective an institution one attends, the better their chances for success later in life. Brand name has high value in college applications.

As the admissions policies of elite institutions become increasingly selective, and their costs for attendance become ever higher, there may eventually come a backlash. In fact there are already some signs of a shift in public attitudes toward higher education that will place less stress on values such as “excellence” and “elitism” and more emphasis on the provision of cost-competitive, high-quality services, shifting from “prestige-driven” to “market-driven” philosophies. While quality is important, even more so is cost, the marketplace seeks low-cost, quality services rather than prestige. The public is asking increasingly, “If a Ford will do, then why buy a Cadillac?” Why should their children attend an expensive private institution, when they could attend their flagship state university for less than 20% of the cost? It could be that the culture of excellence, which has driven both the evolution of and competition among colleges and universities for over half a century, will no longer be accepted and sustained by the American public.

More generally, the tendency of linking excellence to exclusivity, of spending more and more on fewer and fewer, may eventually crumble under the weight of its own elitism for another reason. In a knowledge-intensive society ever more dependent upon educated people and their ideas, what our nation needs are not richer and more selective

elite universities, but rather more institutions capable of providing quality educational opportunities for our citizens. We need to increase our flow of human capital, not refine it. In a sense, a knowledge-driven society must shift from elite education to universal education for its very survival. It is time to “de-Harvardize” higher education in America.

Part of the difficulty here is our tendency to focus on the “inputs” as indicators of academic quality: the test scores and class rank of entering students, the selectivity of college admissions decisions, the funds spent on educating students. Yet in American today, only 55% of those entering college will graduate with a degree of any sort within a decade of high school graduation--an appalling waste of talent and effort. Clearly we should not focus simply on inputs but rather on outputs, on the value-added by a college education. Access to a college education along is meaningless unless we are also committed to the success of students.

We must not be deceived by the myopic focus on the artificial measures of educational quality promoted either by commercial ratings (e.g., USN&WR) or elite institutions. We cannot long tolerate the growing gap between rich and poor in our society, driven increasingly by inequity in educational opportunity. A democratic society in an age of knowledge requires access to educational opportunity and success for all of our citizens. No one must be left behind for economic or social reasons.

Diversity

One of the most enduring characteristics of public higher education in the United States has been its ever-broadening commitment to serve all the constituents of the diverse society that founded and supported its colleges and universities. As our nation enters a new century, it grows even more diverse, transformed by an enormous influx of

immigrants from Latin America, the Caribbean, Africa, and Asia. By the year 2030, demographers project that approximately 40 percent of all Americans will be members of minority groups, and by mid century we may cease to have any majority ethnic group, a milestone reached by California in 2000. As we evolve into a truly multicultural society with remarkable cultural, racial, and ethnic diversity, this new society will clearly require further changes in the nature of higher education.

Though such diversity brings remarkable vitality and energy to the American character, it also poses great challenges, both to our nation and our social institutions. We once viewed America as a melting pot, assimilating first one group and then another into a homogenous stew. Yet, in reality, many people tend to identify both themselves and others in racial and cultural terms and to resist such assimilation and homogeneity. Our universities especially need to understand and accommodate the ways new, nontraditional members of our communities think and function, in order to span racial and cultural divides. Universities should not simply react passively but rather take decisive action to build more diverse institutions to serve an increasingly diverse society.

Yet today's political climate raises serious questions about the nation's commitment to equity and social justice for all Americans. Segregation and exclusivity still plague many of our communities and our social institutions. An increasing number of Americans oppose traditional approaches to achieving diversity such as affirmative action.^{xxxviii} Federal courts are considering cases that challenge racial preference in admissions, and in state after state, voters are taking aim through referenda at an earlier generation's commitment to civil rights.

When one discusses the topic of diversity in higher education, it is customary to focus on issues of race and ethnicity. But it is also important to recognize that human diversity is far broader, encompassing characteristics such as gender, socioeconomic background, and geographical origin, and these, too, contribute to the nature of an academic community. In both the narrow and broader sense, it is important to first lay out the rationale for the importance of diversity in American higher education.

Universities are created and designed to serve society at large, both by advancing knowledge and by educating students who will, in turn, serve others. Therefore, beyond creating knowledge and educating students, our universities are responsible as well for perpetuating those important civic and democratic values that are essential to our nation: freedom, democracy, and social justice. To achieve this, our colleges and universities may be required at times to take affirmative action to overcome the social inequities imposed on people who have historically been prevented from participating fully in the life of our nation. Higher education has an obligation to reach out to make a special effort to increase the participation of those racial, ethnic, and cultural groups who are not adequately represented among our students, faculty, and staff. This fundamental issue of equity and social justice must be addressed if we are to keep faith with our values, responsibilities, and purposes.

Over the years our public universities have committed themselves to providing equal opportunity for every individual regardless of race and nationality, and also in terms of class, gender, or belief. This is the university's basic obligation as a democratic institution and as a major source of future leaders of our society. Equity and social justice

have been fundamental values of higher education and are integral to our scholarly mission.

Nevertheless, universities are social institutions of the mind, not of the heart. While there are compelling moral and civic reasons to seek diversity and social equity on our campuses, the most effective arguments in favor of diversity to a university community tend to be those related to academic quality. Perhaps most important in this regard is the role diversity plays in the education of students. Universities have an obligation to create the best possible educational environment for the young adults whose lives are likely to be significantly changed during their years on our campuses. The quality of our educational programs is affected not only by the nature of the individual students enrolled in our institutions but also by the characteristics of the entire group of students who share a common educational experience. To prepare these students for active participation in an increasingly diverse society, universities clearly need to reflect this diversity on their campuses. Beyond that, there is ample evidence from research to suggest that diversity is a critical factor in creating the richly varied educational experience that helps students learn. Especially since students in late adolescence and early adulthood are at a crucial stage in their development, diversity (racial, demographic, economic, and cultural) enables them to become conscious learners and critical thinkers, and prepares them to become active participants in a democratic society.^{xxxix} Students educated in diverse settings are more motivated and better able to participate in an increasingly heterogeneous and complex democracy.^{xi}

Diversity is also important to scholarship. Unless scholars draw upon a vast diversity of people and ideas, we cannot hope to generate the intellectual and social

vitality needed to respond to greater worldwide social complexity. Perhaps at one time our society could tolerate singular answers, when we could still imagine that tomorrow would look much like today. But this assumption of stasis is no longer plausible. As knowledge advances, we uncover new questions we could not have imagined a few years ago. As society evolves, the issues we grapple with shift in unpredictable ways. A solution for one area of the world often turns out to be ineffectual or even harmful in another. Academic areas as different as English and sociology have found their very foundations radically transformed as they attempt to respond to these dilemmas.

In addition to these intellectual benefits, the inclusion of underrepresented groups allows our institutions to tap reservoirs of human talents and experiences from which they have not yet fully drawn. It seems apparent that our universities could not sustain such high distinctions in a pluralistic global society without diversity and openness to new perspectives, experiences, and talents. In the years ahead they will need to draw on the insights of many diverse perspectives to understand and function effectively in our own as well as in the national and world community.

Although American higher education has long sought to build and sustain diverse campuses, this is a goal that has faced many challenges. Prejudice and ignorance continue to exist on our nation's campuses just as they do throughout our society. American society today still faces high levels of racial segregation in housing and education in spite of decades of legislative efforts to reduce it. Not surprisingly, new students arrive on our campuses bringing with them the full spectrum of these experiences and opinions. Most students complete their elementary and secondary education without ever having attended a school that enrolled significant numbers of students of other races and without living in

a neighborhood where the other races were well represented. It is on our campuses that many students for the first time have the opportunity to live and learn with students from very different backgrounds. It is not easy to overcome this legacy of prejudice and fear that divides us.

We cannot fool ourselves into thinking that our institutions will change anymore quickly and easily than the societies of which they are a part. Achieving the democratic goals of equity and justice for all has often required intense struggle, and we remain far from our goals as a nation. In confronting the issues of racial and ethnic inequality in America our universities are probing one of the most painful wounds in American history.

Throughout the latter half of the twentieth century, our nation's progress towards greater racial diversity in our society and in our social institutions has been made, in part, through policies and programs that recognize race as an explicit characteristic. For example, universities with selective admissions have used race as one of several factors in determining which students to admit to their institutions. Special financial aid programs have been developed that address the economic disadvantages faced by underrepresented minority groups. Minority faculty and staff have been identified and recruited through targeted programs.

But those affirmative action policies that use race as an explicit factor in efforts to achieve diversity or address inequities have been challenged through popular referenda, legislation, and by the courts. For example, actions taken in several states now prohibit the consideration of race in college admissions. In such instances, it is sometimes suggested that other approaches such as admitting a certain fraction of high school

graduates or using family income could be used to achieve diversity. However, the available evidence suggests such alternatives may not suffice.^{xli} Income-based strategies are unlikely to be good substitutes for race-sensitive admissions policies because there are simply too few blacks and Latinos from poor families who have strong enough academic records to qualify for admission to highly selective institutions. Furthermore, standardized admissions tests such as the SAT, ACT and LSAT are of limited value in evaluating “merit” or determining admissions qualifications of all students, but particularly for underrepresented minorities for whom systematic influences make these tests even less diagnostic of their scholastic potential. There is extensive empirical data indicating that experiences tied to one’s racial and ethnic identity can artificially depress standardized test performance.^{xlii}, ^{xliii}

Hence, progress toward the diversity will likely require some significant changes in strategy in the years ahead. Unfortunately, the road we have to travel is neither frequently walked nor well marked. There are very few truly diverse institutions in American society. Universities will have to blaze new trails, and create new social models. To do this they will need both a commitment and a plan. Here they must take the long view, one that will require patient and persistent leadership. Progress also will require sustained vigilance and hard work as well as a great deal of help and support.

Here it may be useful to consider the University of Michigan’s experience in its effort to achieve diversity because it led to measurable progress and because, since it happened on our watch, we can describe some of the victories and pitfalls that occurred along the way. Like most of higher education, the history of diversity at Michigan has been complex and often contradictory. There have been many times when the institution

seemed to take a step forward, only to be followed by two steps backward. Nonetheless, access and equality have always been a central goal of our institution. An early president, James Angell, portrayed the mission of the university as that of providing “an uncommon education for the common man”, contrasting it with the role of the nation’s private colleges in serving the elite of society. In the early 1800s, the population of the state swelled with new immigrants from the rest of the country and across the European continent, and by 1860, the Regents referred “with partiality,” to the “list of foreign students drawn thither from every section of our country.” The first African American students arrived on campus in 1860s, and by the turn of the century, Michigan’s student body reflected a broad diversity with respect to race, gender, nationality, and economic background.

Although the University sustained its commitment to diversity throughout the 20th Century, its progress reflected many of the challenges facing our society during the years of discrimination based upon race, religion, and gender. The student disruptions of the 1960s and 1970s triggered new efforts by the University to reaffirm its commitments to affirmative action and equal opportunity, but again progress was limited and a new wave of concern and protests hit the campus during the mid-1980s, just prior the appointment of our administration. In assessing this situation, we concluded that although the university had approached the challenge of serving an increasingly diverse population with the best of intentions, it simply had not developed and executed a plan capable of achieving sustainable results. More significantly, we believed that achieving our goals for a diverse campus would require a very major change in the institution itself.

In approaching the challenge of diversity as an exercise in institutional change, we began by engaging as many of our constituents as possible in a dialogue about goals and strategies with the hope of gradually building widespread understanding and support inside and beyond our campus. Throughout 1987 and 1988 we held hundreds of discussions with groups both on and off campus, involving not only students, faculty, and staff, but alumni and state and civic leaders.. Meetings were sometimes contentious, often enlightening, but rarely acrimonious. Gradually understanding increased and support for the effort for the evolving plan grew.

It was the long-term strategic focus of our planning that proved to be critical. The University would have to leave behind many reactive and uncoordinated efforts that had characterized its past and move toward a more strategic approach designed to achieve long-term systemic change. In particular, we foresaw the limitations of focusing only on affirmative action; that is, on access, retention, and representation. We believed that without deeper, more fundamental institutional change these efforts by themselves would inevitably fail--as they had throughout the 1970s and 1980s.

The challenge was to persuade the university community that there was a real stake for everyone in seizing the moment to chart a more diverse future. More people needed to believe that the gains to be achieved through diversity would more than compensate for the necessary sacrifices. The first and vital step was to link diversity and excellence as the two most compelling goals before the institution, recognizing that these goals were not only complementary but would be tightly linked in the multicultural society characterizing our nation and the world in the future. As we moved ahead, we

began to refer to the plan as *The Michigan Mandate: A Strategic Linking of Academic Excellence and Social Diversity*.

The mission and goals of the Michigan Mandate were stated quite simply:

1) To recognize that diversity and excellence are complementary and compelling goals for the University and to make a firm commitment to their achievement. 2) To commit to the recruitment, support, and success of members of historically underrepresented groups among our students, faculty, staff, and leadership. 3) To build on our campus an environment that sought, nourished, and sustained diversity and pluralism and that valued and respected the dignity and worth of every individual. A series of carefully focused strategic actions was developed to move the University toward these objectives. These strategic actions were framed by the values and traditions of the University, an understanding of our unique culture characterized by a high degree of faculty and unit freedom and autonomy, and animated by a highly competitive and entrepreneurial spirit.

The first phase was focused on the issue of increasing the representation of minority groups within the University community. Our approach was based primarily on providing incentives to reward success, encouragement of research and evaluation of new initiatives, and support for wide-ranging experiments. Here it is important to note that the plan did not specify numerical targets, quotas, or specific rates of increase to be attained, nor did it modify our traditional policies for student admission.^{xliv}

To cite just one highly successful example, we established what we called the Target of Opportunity Program aimed at increasing the number of minority faculty at all ranks. Traditionally, university faculties have been driven by a concern for academic specialization within their respective disciplines. This is fundamentally laudable and

certainly has fostered the exceptional strength and disciplinary character that we see in universities across the country; however, it also can be constraining. Too often in recent years the University had seen faculty searches that were literally “replacement” searches rather than “enhancement” searches. To achieve the goals of the Michigan Mandate, the University had to free itself from the constraints of this traditional perspective. Therefore, the central administration sent out the following message to the academic units: be vigorous and creative in identifying minority teachers/scholars who can enrich the activities of your unit. Do not be limited by concerns relating to narrow specialization; do not be concerned about the availability of a faculty slot within the unit. The principal criterion for the recruitment of a minority faculty member should be whether the individual can enhance the quality of the department. If so, resources will be made available by the central administration to recruit that person to the University of Michigan.

But there was a stick as well as a carrot to this program. Since we did not have any new resources to fund the target of opportunity program, we simply totaled up our commitments throughout the year, and then subtracted this amount from the University-wide budget for the following year, before allocating the remainder to traditional programs. In effect this meant that those academic units who were aggressive and successful in recruiting new minority faculty were receiving base budget transfers from those programs that were not as active. It took some time for this to become apparent, and during this period some of the more successful academic units made very significant progress (e.g., our departments of English literature, history, and psychology) at the

expense of other units that chose a more passive approach to diversity (e.g., our school of medicine).

From the outset, we anticipated that there would be many mistakes in the early stages. There would be setbacks and disappointments. The important point was to make a commitment for the long range and not be distracted from this vision. This long-range viewpoint was especially important in facing up to many ongoing pressures, demands, and demonstrations presented by one special interest group or another or to take a particular stance on a narrow issue or agenda. This was very difficult at times as one issue or another became a litmus test of university commitment for internal and external interest groups. While these pressures were understandable and probably inevitable, the plan would succeed only if the University leadership insisted on operating at a long-term strategic rather than on a short-term reactive level.

By the mid 1990s Michigan could point to significant progress in achieving diversity. The representation of underrepresented students, faculty, and staff more than doubled over the decade of the effort.^{xlv} But, perhaps even more significantly, the success of underrepresented minorities at the University improved even more remarkably, with graduation rates rising to the highest among public universities, promotion and tenure success of minority faculty members becoming comparable to their majority colleagues, and a growing number of appointments of minorities to leadership positions in the University. The campus climate not only became far more accepting and supportive of diversity, but students and faculty began to come to Michigan because of its growing reputation for a diverse campus. And, perhaps most significantly, as the campus became more racially and ethnically diverse, the quality of the students, faculty, and academic

programs of the University increased to their highest level in history. This latter fact seemed to reinforce our contention that the aspirations of diversity and excellence were not only compatible but, in fact, highly correlated. By every measure, the Michigan Mandate was a remarkable success, moving the University far beyond our original goals of a more diverse campus.

Research

One generally thinks of the research role of the university as a more recent characteristic of higher education in the twentieth century. However, the blending of scholarship with teaching was actually introduced into American higher education in the mid-nineteenth century. The public university, through on-campus scholarship and off-campus extension activities, was key to the agricultural development of the United States and then our transition to an industrial society. World War II provided the incentive for even greater activity, as the universities became important partners in the war effort, achieving scientific breakthroughs in areas such as atomic energy, radar, and computers. During this period our universities learned valuable lessons in how to develop and transfer knowledge to society and how to work as full partners with government and industry to address critical national needs. In the postwar years, a new social contract evolved that led to a partnership between the federal government and the American university aimed at the support and conduct of basic research.

The basic structure of the academic research enterprise of the past half-century was set out some fifty years ago in a wartime study chaired by Vannevar Bush and resulting in the seminal report, Science, The Endless Frontier. The central theme of the document was that since the nation's health, economy, and military security required

continual deployment of new scientific knowledge, the federal government was obligated to ensure basic scientific progress and the production of trained personnel. Federal patronage of scientific research was not only essential for the advancement of knowledge; it was in the national interest. The Bush report stressed a corollary principle--that the government had to preserve "freedom of inquiry," to recognize that scientific progress results from the "free play of free intellects, working on subjects of their own choice, in the manner dictated by their curiosity for explanation of the unknown."^{xlvi} Since the federal government recognized that it did not have the capacity to manage effectively either the research universities or their research activities, the relationship became essentially a partnership, in which the government provided relatively unrestricted grants to support part of the research on campus.

The resulting partnership between the federal government and the nation's universities has had an extraordinary impact. Federally supported academic research programs on the campuses have greatly strengthened the scientific prestige and performance of American research universities. The research produced on our nation's campuses has had great impact on society, playing a critical role in a host of areas including health care, agriculture, national defense, and economic development.^{xlvii} It has made America the world's leading source of fundamental scientific knowledge. It has produced the well-trained scientists, engineers, and other professionals capable of applying this new knowledge. And it has laid the technological foundations of entirely new industries such as electronics and biotechnology.

The research partnership between the federal government and the universities has also reshaped the academic culture on the campuses. Since most research funding is

channeled directly to a single investigator or a small team of investigators, a culture rapidly developed on university campuses in which faculty were expected to become independent “research entrepreneurs,” capable of attracting the federal support necessary to support and sustain their research activities. In many areas like the physical sciences, the capacity to attract substantial research funding became an even more important criterion for faculty promotion and tenure than publication. Some institutions even adopted a freewheeling entrepreneurial spirit, best captured in the words of one university president who boasted, “Faculty at our university can do anything they wish--provided they can attract the money to support what they want to do!”

The level of sponsored research activity is not only a measure of faculty quality and a source of graduate student support, but it is also frequently a determinant of institutional reputation. Little wonder then that university leaders seek ways to increase the external funding for research, particularly from the federal government. Of course, the most direct strategy for success in sponsored research involves increasing the quality of faculty and graduate students, but this takes both time and considerable investment. Many universities have found that they can unleash faculty research entrepreneurship by removing disincentives such as the bureaucracy and paperwork involved in preparing, submitting, and administering research grants and contracts, and providing support through administrators knowledgeable about sponsored research opportunities and federal funding agencies. Positive incentives such as the weight given sponsored research activity in salary, promotion, and tenure decisions or discretionary funds indexed to indirect cost recovery can also be important.

Since over 60 cents of every federal dollar spent for campus-based research is currently in the biomedical sciences, corresponding to the staggering growth in the budget of the National Institutes of Health, university medical centers play a key role in expanding research activities.^{xlviii} Universities that do not have a medical center are well-advised to develop a relationship with one if they wish to compete effectively for funding in key areas of the life sciences. Many universities have taken advantage of their political influence, perhaps through the hiring of lobbyists, to bypass the competitive peer review process used in most federal research funding and instead persuade their Congressional representatives to earmark federal legislation to provide direct funding for a pet project. In fact, such Congressional earmarks now amount to over \$1.5 billion per year, a substantial fraction of the \$20 billion the federal government spends on campus-based research.^{xlix}

While the research partnership between the federal government and our research universities has had great impact in making the American research university the world leader in both the quality of scholarship and the production of scholars, it has also had its downside. Pressures on individual faculty for success and recognition have led to major changes in the culture and governance of universities. The peer-reviewed grant system has fostered fierce competitiveness, imposed intractable work schedules, and contributed to a loss of collegiality and community. It has shifted faculty loyalties from the university to their disciplinary communities. Publication and grantsmanship have become one-dimensional criteria for academic performance and prestige, to the neglect of other important faculty activities such as teaching and service. During the past two decades there has indeed been a significant shift in university expenditures from instructional

activities to faculty research, driven in part by federal research programs, but matched to a significant degree by the reallocation of internal university funds.

There has been a similar negative impact on the higher education enterprise, as faculties pressure more and more institutions to adopt the culture and value system of research universities. To put it bluntly, there are many more institutions that claim a research mission, that declare themselves “research universities,” and that make research success a criterion for tenure, than our nation can afford. With hundreds of institutions seeking or claiming this distinction, the public is understandably confused. The immediate result is a further eroding of willingness to support or tolerate the research role of higher education.

A Question of Balance

Public universities have always responded to the needs and opportunities of American society. In the nineteenth century the federal land-grant acts triggered the establishment of professional schools and the development of applied research in essential areas. In the post--World War II years, public universities developed a thriving capability in basic research and advanced training in response to the federal initiatives embodied in the federal government-university research partnership. Through the 20th Century, public universities have provided the educational opportunities, the fundamental research, and the knowledge-based services needed by a changing America.

Today public higher education faces greater pressures than ever to establish its relevance to the various constituencies in our society. A knowledge-driven society requires a highly skilled workforce, entrepreneurs and innovators, and new ideas and new technology to prosper in an ever more competitive global economy. The increasing pace

in the creation, development, and application of knowledge requires forming new relationships with both private industry and government agencies. So, too, does the direct support of university activities by institutions in both the public and private sector. Our academic institutions are drawn into new and more extensive relationships with each passing day.

We should be alert and sensitive to the new opportunities open to public higher education in the era of knowledge-driven economies. At every level--undergraduate education, graduate and professional education, research and scholarship, the provision of knowledge-intensive products and services --the public university is uniquely positioned to respond to these developments. In a sense, these changes could even come quite naturally, especially considering the individualistic entrepreneurial nature of the faculty and the loosely coupled, dynamic organizational structure of the contemporary university. Though we do know that these institutions take on far too many missions as a result, we cannot deny that they do respond to the opportunities and challenges presented by society.

However, our public universities are also highly vulnerable at each of these levels as well, particularly because they often remain in the grip of tradition and habit, public policy and politics. It will be their special challenge to identify and protect what has been useful and truly served the needs of our society, while incorporating what is new and vital into their structures.

It is certainly the case that the public university is and should be responsible to many constituents. Both the independence and competition of American universities motivate them to pay close attention to a diverse array of groups. In a very real sense, an

institution's distinction may be determined by its success in managing the tension among the various roles demanded by these diverse constituencies. Given the intense pressures recent social and economic changes have brought to bear upon the public university, our institutions have a special obligation to hold tight to our core mission: to serve society in the creation, preservation, and dissemination of knowledge by maintaining the quality of our instructional and research activities.

We must never lose sight of the fact that education and scholarship are the primary functions of a university, its primary contributions to society, and hence the most significant roles of the faculty. When universities become overly distracted by other activities, they not only compromise this core mission but they also erode their priorities within our society. So too, when faculty members lose their commitment to the life of the mind, when their interest and involvement in education and research ebbs, when they begin to view their activities as a job rather than a calling, their claim on the important perquisites of the academy such as academic freedom and tenure weakens.

It is clear that we need a new paradigm for the public university in America in order to meet the numerous challenges before higher education today: the rising costs of excellence, our changing roles, the tension of relating to various constituencies, the demands of pluralism and diversity, and the need to achieve a new spirit of liberal learning. We need a new model that can integrate and balance the various missions expected of these institutions--that can relate teaching, research, and public service, just as it does undergraduate, graduate, and professional education. We need a model capable of spanning both the public and private sectors, linking together the many concerns and contrasting values of the diverse constituencies served by higher education.¹

Chapter 4

Technology

Our rapid evolution into a knowledge-based society has been driven in part by the emergence of powerful new digital technologies such as computers, telecommunications, and high-speed networks. Such modern information technologies have vastly increased our capacity to know and to do things and to communicate and collaborate with others. They allow us to transmit information quickly and widely, linking distant places and diverse areas of endeavor in productive new ways. This technology allows us to form and sustain communities for work, play, and learning in ways unimaginable just a decade ago.

Of course, our civilization has seen other periods of dramatic change driven by technology, but never before have we experienced a technology that has evolved so rapidly, increasing in power by a hundred-fold every decade, obliterating the constraints of space and time, and reshaping the way we communicate, think, and learn.^{li} Today information technology allows us to form and sustain communities for work, play, and learning in ways unimaginable just a decade ago. Information technology changes the relationship between people and knowledge.

The university has survived other periods of technology-driven social change with its basic structure and activities intact. But the changes driven by evolving information technology are different, since they affect the very nature of the fundamental activities of the university: creating, preserving, integrating, transmitting, and applying knowledge. More fundamentally, because information technology changes the relationship between

people and knowledge, it is likely to reshape in profound ways knowledge-based institutions such as the university.

The university has already experienced significant change driven by information technology. Management and administrative processes are heavily dependent upon it, as the millions of dollars spent preparing for Y2K made all too apparent. Research and scholarship also rely upon information technology. For example, scientists use computers to simulate physical phenomena, networks link investigators in virtual laboratories or “collaboratories,” and digital libraries provide scholars with access to knowledge resources. There is an increasing sense that new technology will also have a profound impact on teaching, freeing the classroom from the constraints of space and time and enriching the learning of students through access to original materials.

Yet, while this technology has the capacity to enhance and enrich teaching and scholarship, it also poses certain threats to traditional university practices. Powerful computers and networks can be used to deliver educational services to anyone, anyplace, anytime, and are no longer confined to the campus or the academic schedule. Technology is creating powerful market forces as the student evolves into an active learner and consumer of educational services.

Today we are bombarded with news concerning the impact of information technology on the market place, from “e-commerce” to “edutainment” to “virtual universities” and “I-campuses”. The higher education marketplace has seen the entrance of hundreds of new competitors that depend heavily upon information technology. Examples include the University of Phoenix, the Caliber Learning Network, Sylvan Learning Systems, the United States Open University, the Western Governors University,

and a growing array of “dot-coms” such as Unext.com and Fathom.com. It is important to recognize that while many of these new competitors are quite different from traditional academic institutions, they are also quite sophisticated in their pedagogy, their instructional materials, and their production and marketing of educational services. They approach the market in a highly sophisticated manner, first moving into areas that have limited competition, unmet needs, and relatively low production costs, but then moving rapidly up the value chain to more sophisticated educational programs. These IT-based education providers are already becoming formidable competitors to traditional postsecondary institutions.

The implications are particularly serious for the public university, long committed to broad access and to reaching beyond the campus to serve society, and yet also constrained by public support and accountability to operate in a responsive and cost-effective manner. For example, the relationship between the available resources and scale of most public universities has long been dictated by norms such as student-to-faculty ratio (typically 15 to 25 for most institutions). Yet as information technology obliterates the constraints of space and time, it is likely to break this relationship. So too, public universities will be under considerable pressure to use the new technology to expand still further their capacity to serve even broader elements of society with distance education, even if this comes at the expense of their responsibilities for traditional campus-based instruction.

The Evolution of Information Technology

It is difficult to understand and appreciate just how rapidly information technology is evolving. For the first several decades of the information age, the evolution

of hardware technology followed the trajectory predicted by “Moore’s Law”--that the chip density and consequent computing power for a given price doubles every eighteen months.^{lii} This corresponds to a hundredfold increase in computing speed, storage capacity, and network transmission rates every decade. Other characteristics such as memory and bandwidth are evolving even more rapidly, at rates of 1,000 fold every decade or faster. Of course, if information technology is to continue to evolve at such rates, we will likely need not only new technology but even new science. But with emerging technology such as quantum computing, molecular computers, and biocomputing, there is significant possibility that the exponential evolution of digital technology will continue to hold for at least a few more decades.

To put this statement in perspective, if information technology continues to evolve at its present rate, by the year 2020, the thousand-dollar notebook computer will have a computing speed of 1 million gigahertz, a memory of thousands of terabits, and linkages to networks at data transmission speeds of gigabits per second. Put another way, it will have a data processing and memory capacity roughly comparable to the human brain.^{liii} Except it will be so tiny as to be almost invisible, and it will communicate with billions of other computers through wireless technology.

This last comment raises an important issue. The most dramatic impact on our world today from information technology is not in the continuing increase in computing power. It is in a dramatic increase in bandwidth, the rate at which we can transmit digital information. From the 300 bits-per-second modems of just a few years ago, we now routinely use 10-100 megabit-per-second local area networks in our offices and houses. Gigabit-per-second networks now provide the backbone communications to link local

networks together, and with the rapid deployment of fiber optics cables and optical switching, terabit-per-second networks are just around the corner. Fiber optics cable is currently being installed throughout the world at the astounding equivalent rate of over 3,000 mph! In a sense, the price of data transport is becoming zero, and with rapid advances in photonic and wireless technology, telecommunications will continue to evolve very rapidly for the foreseeable future.

Already the Internet links together hundreds of millions of people. Estimates are that by the end of the decade, this number will surge to billions, a substantial fraction of the world's population, driven in part by the fact that most economic activity will be based on digital communication. Bell Laboratories suggests that within two decades a "global communications skin" will have evolved, linking together billions of computers that handle the routine tasks of our society, from driving our cars to monitoring our health.

As a consequence, the nature of human interaction with the digital world--and with other humans through computer-mediated interactions--is evolving rapidly. We have moved beyond the simple text interactions of electronic mail and electronic conferencing to graphical-user interfaces (e.g., the Mac or Windows world) to voice to video. With the rapid development of sensors and robotic actuators, touch and action at a distance will soon be available. With virtual reality, it is likely that we will soon communicate with one another through simulated environments, through "telepresence," perhaps guiding our own software representations, our digital agents or avatars, to interact in a virtual world with those of our colleagues.

This is a very important point. A communications technology that increases in power by 1000-fold decade after decade will soon allow human interaction with essentially any degree of fidelity we wish--3-D, multimedia, telepresence, perhaps even directly linking our neural networks into cyberspace, à la Neuromancer,^{liv} a merging of carbon and silicon.

During the decade ahead, we can be reasonably confident that information technology will become “peta-everything” (where “peta” corresponds to 10^{15} , that is to one million-billion), in terms of processing power (operations per second), data transmission (bytes per second) and storage (bytes). IBM scientists project that within several years we will have over 10^{10} sensors, 10^9 servers, and 10^{12} software agents linked into the net. Put another way, within your lifetime you can depend on using a wireless device to reach anyone in the world and having any request for information answered with the touch of a button.

The Impact of Information Technology on the University

The Activities of the University

The earliest applications of information technology in higher education involved using the computer to solve mathematical problems in science and technology. Today, problems that used to require the computational capacity of supercomputers can be tackled with the contemporary laptop computer. The rapid evolution of this technology is enabling scholars to address previously unsolvable problems, such as proving the four-color conjecture in mathematics, analyzing molecules that have yet to be synthesized, or simulating the birth of the universe.

The availability of high bandwidth access to instrumentation, data, and colleagues is also changing the way scholars do their work. They no longer need to focus as much on

the availability of assets such as equipment or the physical proximity of colleagues, and instead can focus on hypotheses and questions. It also has changed the way graduate students interact and participate in research, opening up the environment for broader participation. In fact, information technology is “democratizing” research by allowing researchers and institutions who would normally not have access to the sophisticated facilities and libraries of research universities to become engaged in the cutting edge scholarship.

The preservation of knowledge is one of the most rapidly changing functions of the university. Throughout the centuries, the intellectual focal point of the university has been its library, its collection of written works, which preserve the knowledge of civilization. Today such knowledge exists in many forms--as text, graphics, sound, algorithms, and virtual reality simulations--and it exists almost literally in the ether, distributed in digital representations over worldwide networks, accessible by anyone, and certainly not the prerogative of the privileged few in academe. The computer--or more precisely, the “digital convergence” of various media from print-to-graphics-to-sound-to-sensory experiences through virtual reality—could well move beyond the printing press in its impact on knowledge.

The library is becoming less a collection house and more a center for knowledge navigation, a facilitator of information retrieval and dissemination.^{lv} In a sense, the library and the book are merging. One of the most profound changes will involve the evolution of software agents, that will collect, organize, relate, and summarize knowledge on behalf of their human masters. Our capacity to reproduce and distribute digital information with perfect accuracy at essentially zero cost has shaken the very foundations

of copyright and patent law and threatens to redefine the nature of the ownership of intellectual property.^{lvi} The legal and economic management of university intellectual property is rapidly becoming one of the most critical and complex issues facing higher education.

The traditional classroom paradigm is also being challenged by digital technology, driven not so much by the faculty, who have by and large optimized their teaching effort and their time commitments to a lecture format, but by our students. Members of today's digital generation of students have spent their early lives immersed in robust, visual, electronic media-- home computers, video games, cyberspace networks, and virtual reality. Unlike those of us who were raised in an era of passive, broadcast media such as radio and television, today's students expect--indeed, demand--interaction. They approach learning as a "plug-and-play" experience; they are unaccustomed and unwilling to learn sequentially--to read the manual--and instead are inclined to plunge in and learn through participation and experimentation. Although this type of learning is far different from the sequential, pyramidal approach of the traditional college curriculum, it may be far more effective for this generation, particularly when provided through a media-rich environment.

For a time, such students may tolerate the linear, sequential course paradigm of the traditional college curriculum. They still read what we assign, write the required term papers, and pass our exams. But this is decidedly not the way they learn. They learn in a highly nonlinear fashion, by skipping from beginning to end and then back again, and by building peer groups of learners, by developing sophisticated learning networks in

cyberspace. In a very real sense, they build their own learning environments that enable interactive, collaborative learning, whether we recognize and accommodate this or not.

The digital generation's tolerance for the traditional classroom and four-year curriculum model may not last long. Students will increasingly demand new learning paradigms more suited to their learning styles and more appropriate to prepare them for a lifetime of learning and change. They are comfortable living and playing in "e-space", and they will demand that their learning and work experiences adapt to this reality of the digital age.

Sophisticated networks and software environments can be used to break the classroom loose from the constraints of space and time and make learning available to anyone, anyplace, at any time. The simplest approach uses multimedia technology via the Internet to enable distance learning. Yet many believe that effective computer-network-mediated learning will not be simply an Internet extension of correspondence or broadcast courses. Since learning requires the presence of communities, the key impact of information technology may be the development of computer-mediated communications and communities that are released from the constraints of space and time. There is already sufficient experience with such asynchronous learning networks to conclude that, at least for many subjects and when appropriately constructed, the computer-mediated distance learning process is just as effective as the classroom experience.^{lvii}

The attractiveness of computer-mediated distance learning is obvious for adult learners whose work or family obligations prevent attendance at conventional campuses. But perhaps more surprising is the degree to which many on-campus students are now using computer-based distance learning to augment their traditional education.

Broadband digital networks can be used to enhance the multimedia capacity of hundreds of classrooms across campus and link them with campus residence halls and libraries. Electronic mail, teleconferencing, and collaboration technology is transforming our institutions from hierarchical, static organizations to networks of more dynamic and egalitarian communities. Distance learning based on computer-network-mediated paradigms allows universities to push their campus boundaries outward to serve learners anywhere, anytime.

In the near term, at least, traditional models of education will coexist with new learning paradigms, providing a broader spectrum of learning opportunities in the years ahead. Information technology will accelerate the transitions from student to learner, from teacher to designer/coach/consultant, and from alumnus to lifelong member of a learning community seem likely. And with these transitions and new options will come both an increasing ability and responsibility to select, design, and control the learning environment on the part of learners.

The Form and Function of the University

Colleges and universities are structured along intellectual lines, organized into schools and colleges, departments and programs, which have evolved over the decades. Furthermore, the governance, leadership, and management of the contemporary university are structured as well to reflect this intellectual organization as well as academic values of the university such as academic freedom and institutional autonomy rather than the command-communication-control administrative pyramid characterizing most organizations in business and government. The “contract” between members of the

faculty and the university also reflects the unusual character of academic values and roles, the practice of tenure being perhaps the most familiar example.

Just as the university is challenged in adapting to new forms of teaching and research stimulated by rapidly evolving information technology, so too its organization, governance, management, and its relationships to students, faculty, and staff will require serious re-evaluation and almost certain change. For example, the new tools of scholarship and scholarly communication are eroding conventional disciplinary boundaries and extending the intellectual span, interests, and activities of faculty far beyond traditional organizational units such as departments, schools, or campuses. This is particularly the case with younger faculty members whose interests and activities frequently cannot be characterized by traditional disciplinary terms.

Beyond driving a restructuring of the intellectual disciplines, information technology is likely to force a significant disaggregation of the university on both the horizontal (e.g., academic disciplines) and vertical (e.g., student services) scale. Faculty activity and even loyalty is increasingly associated with intellectual communities that extend across multiple institutions, frequently on a global scale. New providers are emerging that can far better handle many traditional university services, ranging from student housing to facilities management to health care. Colleges and universities will increasingly face the question of whether they should continue their full complement of activities or “outsource” some functions to lower cost and frequently higher quality providers, relying on new paradigms such as e-business and knowledge management.

It has become increasingly important that university planning and decision-making not only take account of technological developments and challenges, but draw

upon the expertise of people with technological backgrounds. Yet all too often, university leaders, governing boards, and even faculties ignore the rapid evolution of this technology, treating it more as science fiction than as representing serious institutional challenges and opportunities. To a degree this is not surprising, since in the early stages, new technologies sometimes look decidedly inferior to long-standing practices. For example, few would regard the current generation of computer-mediated distance learning programs as providing the socialization function associated with undergraduate education in a residential campus environment. Yet there have been countless instances of technologies, from personal computers to the Internet, which were characterized by technology learning curves far steeper than conventional practices. Such “disruptive technologies” have demonstrated the capacity to destroy entire industries, as the explosion of e-business makes all too apparent.^{lviii}

In positioning itself for this future of technology-driven change, universities should recognize several facts of life in the digital age. First, robust, high-speed networks are becoming not only available but also absolutely essential for knowledge-driven enterprises such as universities. Powerful computers and network appliances are available at reasonable prices to students, but these will require a supporting network infrastructure. There will continue to be diversity in the technology needs of faculty, with many of the most intensive needs likely to arise in parts of the university such as the arts and humanities where strong external support may not be available. All universities face major challenges in keeping pace with the profound evolution of information and its implication for their activities.

The Post-Secondary Education Enterprise

The “e-economy” is growing at an annual rate of 175%. It is estimated that by 2004, the e-economy will be \$7 trillion, roughly 20% of the global economy.^{lix} Beyond providing the graduates and knowledge needed by this digital economy, the contemporary university must be able to function in an increasingly digital world, in the way that it manages its resources, relates to clients, customers, and providers, and conducts its affairs. E-commerce, e-business, and the e-economy must become an integral part of the university’s future if it is to survive the digital age.

Information technology eliminates the barriers of space and time and new competitive forces such as virtual universities and for-profit education providers enter the marketplace to challenge credentialing.^{lx} The weakening influence of traditional regulations and the emergence of new competitive forces, driven by changing societal needs, economic realities, and technology, are likely to drive a massive restructuring of the higher education enterprise. From the experience with other restructured sectors of our economy such as health care, transportation, communications, and energy, we could expect to see a significant reorganization of higher education, complete with the mergers, acquisitions, new competitors, and new products and services that have characterized other economic transformations.

A key factor in this restructuring has been the emergence of new aggressive for-profit education providers that are able to access the private capital markets (over \$4 billion in the last year). Most of these new entrants such as the University of Phoenix and Jones International University are focusing on the adult education market. Some, such as Unext.com, have aggressive growth strategies beginning first with addressing the needs for business education of corporate employees. Using online education, they are able to

offer costs reductions of 60% or more over conventional corporate training programs since they avoid travel and employee time off.^{lxii} They are investing heavily (over \$100 million in 2000) in developing sophisticated instructional content, pedagogy, and assessment measures, and they are likely to move up the learning curve to offer broader educational programs, both at the undergraduate level and in professional areas such as engineering and law. In a sense, therefore, the initial focus of new for-profit entrants on low-end adult education is misleading, since in five years or less their capacity to compete with traditional colleges and universities could become formidable indeed.

It is appropriate to make one further comment concerning “the digital divide”, the concern many have about a widening gap between those who can afford access to information technology and those who cannot. Such stratification in our society among the haves and have-nots would be of great concern if information technology were not evolving so rapidly. However, this technology is migrating rapidly toward “thin client” systems, in which the personal computer becomes an inexpensive and ubiquitous commodity available to anyone and everyone like today’s television or telephone, while the real investment occurs in the supporting network infrastructure.

In reality, the concern should not be with the digital divide, but rather with the growing gap in prosperity, power, and social well-being between those who have access to quality education and those who do not, because of economic circumstances, jobs, families, or location. From this perspective, the development of technology-based methods for delivering educational services such as asynchronous learning networks and virtual universities may actually narrow the educational gap by providing universal access to quality educational opportunities.

This point is important. Rather than further stratifying our society, information technology will more likely become a democratizing force. It will distribute learning opportunities far more broadly than our currently highly selective education system is capable of or inclined to do. Moreover, it will likely democratize scholarship as well by providing a far broader spectrum of institutions, scholars, and perhaps even lay citizens with access to the rich intellectual resources of our most prestigious institutions.

Although this democratizing character may threaten both elite colleges and research universities, it may also be key to meeting the mass educational needs of our knowledge-driven society.

Institutional Strategies

We now turn our attention to a series of recommendations for public universities and their leaders faced not only with complex and costly decisions concerning the acquisition and use of information technology, but more broadly with the task of developing institutional strategies to cope with the digital age. Perhaps our first goal should be simply capturing their attention, since many leaders of our colleges and universities have either ignored or delegated the responsibility for developing such strategies to others in the administration or on faculty committees.

Information technology presents us with a temporal dilemma. Because of the exponential evolution of this technology, event horizons for dramatic change are much closer than we think they are. For example, getting people to think about implications of accelerating technology learning curves as well as technology cost-performance curves is very important. There are staggering increases in efficiency for an organization if one can reorganize its fundamental activities to take advantage of technology. But many colleges

and universities continue to look at IT primarily as a cost rather than seeking to understand its cost-benefit characteristics.

Surveys of campus leaders suggest that most attention is being focused on near term issues, for example, determining what information technology infrastructure for campus-based activities is necessary and how to finance it. Although academic leaders are most concerned with the implications of electronic learning environments and distance learning, many campus administrators and IT professionals are immersed in the challenge of upgrading antiquated administrative computer systems and replacing them with enterprise resource planning, knowledge management, or e-business systems, at rather considerable expense.

So what do presidents, trustees, and other leaders of our academic institutions need to know? What new technologies are likely to roll out next? Where they are likely to see the first impact on their institutions? Where various possible decisions are likely to take them? These may be the questions of most interest to some. But we rather think most leaders are more concerned with how they create the academic environment that students and faculty need for quality teaching, learning, and scholarship. They recognize this will require a tradeoff of investments between bricks (conventional physical infrastructure) and clicks (information technology). And increasingly most realize that they can no longer approach these issues in isolation. They must seek partners, both within the higher education enterprise, and beyond to include the commercial and government sectors and possibly even international collaborators.

Certainly it is important that both planning and decisions address the issues and realities of the present. Technology really does not tell us what will happen, what to do

next year. The more distant the future, the more exciting and distracting it can become. Universities should always keep in front of them the need to make decisions about issues of today, even as they consider and influence possibilities for the future.

Time is of the essence. To capture the opportunities that will be available to universities in the knowledge-driven era--or for some, even to survive--profound and far-reaching commitments must be made quickly. These commitments must be made explicitly and publicly and must be accompanied by the investments of talent and funds that can make them real. This will be a challenge in environments long acculturated to deliberation and skepticism of fads and trends originating in industry.

But university leaders need a long-term strategic context to enable near term decisions. It is important to make informed investments and launch creative initiatives today, but within a framework for the longer term. Among all of our social institutions, universities are particularly obliged to look to the long term, seeking not just the quick fix but rather the longer-term strategy and necessary commitments. To be sure, in the current era of technology-driven change, nonlinearities, killer apps, and other tipping points.

In considering these issues, we will make several assumptions about the evolution and availability of information technology for the near term (10 years or less):

- Information and communications technology will continue to evolve exponentially, doubling in power roughly every year (e.g., Moore's Law) for at least the foreseeable future.
- Ubiquitous, high speed, and economically accessible network capacity will exist nationally and to a great extent globally.

- Affordable, multimedia-capable computers and network appliances will be commonplace, and most colleges and universities will expect student ownership of such devices.
- Most colleges will deliver some portion of their instructional activities both on campus and beyond via the Internet.
- As the ability to use technology in the support of instruction improves, the differentiators of technology-enriched course offerings will continue to be price, quality, and access.
- Nontraditional sources of university-caliber instruction, such as software developers and publishers, are likely to become increasingly important suppliers of course content and materials. The employment relationships between academic institutions and their faculty will become even more complex.
- Within this timeframe the laws that govern intellectual property will change significantly. In particular, the application of publisher-preferred protections to the digital distribution of copyrighted materials is likely to have enormous revenue and expense implications for higher education in general and for technology-enriched instruction in particular. The legal and economic management of university intellectual property will become a complex area of activity.

Let us now turn our attention to several specific recommendations for university leaders faced with the challenge of leading their institutions in the face of rapidly evolving digital technology. We have grouped these into seven specific recommendations

or steps intended to help leaders shape a strategy unique to the circumstances, challenges, and opportunities facing their institution.

Recommendation 1: University leaders should recognize that the rapid evolution of information and communications technologies will stimulate--indeed, demand--a process of strategic transformation in their institutions.

We have stressed the degree to which digital technology is reshaping both our society and our social institutions. Its exponential pace of evolution drives rapid, profound, unpredictable, and discontinuous change. It is a “disruptive” technology^{lxiii} eroding, indeed, obliterating conventional constraints such as space, time and monopoly and reshaping both the structure and boundaries of institutions. The terms used to describe IT-driven change such as “e-business” and “e-learning” are simply metaphors for the pervasive, ubiquitous connectivity between and among people, knowledge, activities, and markets enabled by digital technology. In this sense, then, “e-business transformation” or “e-learning transformation” is in reality a very fundamental and strategic transformation process, driven by technology, but involving people, organizations, and cultures. It must be addressed both systemically and ecologically.

More specifically, decisions involving digital technology raise very key strategic issues for colleges and universities requiring both the attention and understanding at the very highest levels of institution leadership. Technology is comparable in importance to other key strategic issues such as finance, government relations, and private fund-raising where final responsibility must rest with the president. The pace of change is too great and the consequences of decisions too significant to simply delegate to others such as faculty committees or chief information officers. The road ahead is littered with land

mines and tipping points that require informed attention by the executive leadership and governing boards of academic institutions. Leadership on technology issues must come from the president and the provost, with the encouragement and support of the governing board.

Recommendation 2: It is our belief that universities should begin the development of their strategies for technology-driven change with a firm understanding of those key values, missions, and roles that should be protected and preserved during a time of transformation.

We believe that colleges and universities need to begin the development of a technology strategy by addressing the most fundamental of questions: For example, how should the university set priorities among its various roles such as education of the young, the preservation of culture, basic research and scholarship, serving as a social critic, and applying knowledge to serve society? Which of its values and principles should be preserved, and which should be reconsidered, e.g., academic freedom? Openness? A rational spirit of inquiry? Sustaining a community of scholars? A commitment to excellence? Almost certainly. But what about shared governance? Tenure? Are these values to be preserved?

How will colleges and universities define their students? As the young? As adults? As established professionals and perhaps even academics? The best and brightest? Members of broader society? The workforce? Local, regional, global populations? How will we define our faculty members? As the products of our graduate schools and research laboratories? As practicing professionals (a la University of Phoenix)?

What is the role of the residential campus in a future in which knowledge-base activities such as learning become increasingly independent of space and time (and perhaps reality)? Just-in-time lifelong learning and the growing desire to be educated anyplace, anytime are driving the demand for distance education. How should the university approach the challenges and opportunities of online distributed learning?

How should the university address the rapidly evolving commercial marketplace for educational services and content, including, in particular, the for-profit and dot.com providers? What policies does the university need to reconsider in light of evolving information technology (e.g., intellectual property, copyright, instructional content ownership, faculty contracts)? Will new financial models be required? Beyond the need to implement a sustainable model of investment in information technology infrastructure, the intensely competitive marketplace for higher education services stimulated by digital technology will put at risk the current system of cross-subsidies in funding university activities.

Again drawing from the experience of the business world, most companies have found that the key to e-business transformation was to first return to the fundamentals, to consider what they were and how they provided value to their customers. Universities should do the same.

Recommendation 3: It is essential to develop an integrated, coordinated technology for the institution in a systemic and ecological fashion.

Digital technology is pervasive, affecting every aspect and function of the university, from teaching and scholarship to organization, financing, and management. Yet, the challenge on many campuses is that there are too many people doing their own

thing. Although many faculty, staff, and students are knowledgeable about the applications of technology in their narrow field of interest, broader awareness is a challenge. Furthermore, many faculty members simply do not seem to understand; they are unaware of the potential applications and implications of technology for their own activities, much less the broader university. There is a digital divide at many levels throughout the contemporary university.

It is difficult to coordinate the various silos of activities in the public university into a coherent structure. A technology strategy must be systemic, drawing together diverse applications such as instruction, research, libraries, museums, archives, academic computing, university presses and so on. Yet it must also recognize and accommodate the very great diversity among university activities. Like a biological ecology, a technology strategy should be open, complex, and adaptive, with sufficient robustness and diversity to respond and adapt to the diverse and ever-changing needs of academic programs.

Yet, information and communications technologies are tools for creating and enhancing connectivity, of strengthening the sense of community across distance and time lines. More abstractly, this technology supports the knowledge environment to enable knowledge creation, dissemination, and preservation of knowledge communities.

Recommendation 4: Universities need to understand the unique features of digital technology and how these affect people and their activities.

We have stressed many of the unique features of digital technology, e.g., its exponential rate of evolution, its pervasive and ubiquitous nature, its ability to reproduce knowledge objects with perfect accuracy at zero cost, while transcending the constraints of space and time. The ever-accelerating tempo of digital technology poses great

challenges to institutions. For example, today the software testing cycle is not much longer than the software usage cycle for many applications. When the power for a given price doubles every 12 months or less, rapid obsolescence disrupts conventional infrastructure planning processes. Yet the most dramatic changes are not driven by the technology itself but rather by its applications.

The expectations of today's students (not to mention faculty and staff) are rising rapidly. They are accustomed to the convenience of electronic banking, mobile communications, and web-based retailing (a la Amazon.com or Travelocity.com) and do not tolerate well the archaic paper-based, queue-dependent cultures of universities. They also are accustomed to independent choice, not simply in technology but in sources of information. Compounding this is the changing nature of the "e-economy" in which business processes become more dynamic and activities become more transparent. Product reviews and price comparisons are now easily accessible on the web. Web-based auctions (e-Bay) and AI-based purchasing agents are revolutionizing the nature of commercial transactions. Barriers to the entry of new competitors are falling, leading to the vertical disintegration and restructuring of entire industries.

An example illustrates the point: We have noted that information technology makes more transparent and dynamic the various activities and transactions of institutions. In particular, it demands a more rational--or at least competitive--configuration of activities, requiring organizations to focus on those activities where they are really strong (e.g., core competencies) and outsource those where others are more capable. When one recognizes that the current portfolio of the contemporary college or university is determined more by history and happenstance than rational decisions, much

less the marketplace, it is logical to expect that academic institutions will need to think about unbundling some of the activities they have accumulated over the years because of the ICT revolution. For example, which among the typical activities of the university are truly core competencies: Undergraduate education? Researcher training? Knowledge creation? Knowledge archiving (libraries)? Publication? Professional Training? Most would probably agree with these. But what about entertainment (intercollegiate athletics, theatre, concerts)? Hotel services? Alumni travel? Health care?

E-learning will bring about many changes in higher ed. Students, who historically have come to learning sites, increasingly will participate at locations remote from the campus and the instructor. Rather than being affiliated with a single institution, they may be associated concurrently with multiple providers and modes of instruction. Educational services will become unbundled, with different providers carrying out various functions: curricular development, delivery of instructional modules, provision of student services, student evaluation, and awarding of credentials. Students will assume greater control over their educational experiences by designing programs that fit their specific needs with regard to program content, length, delivery mode, and location. Program completion will be defined increasingly by the knowledge gained and skills mastered rather than credit hours earned.

Faculty roles and work patterns will also change. Less emphasis will be placed on lecturing and greater emphasis on facilitating the educational process, for example by providing learning assistance in time patterns and modes tailored to the needs of individual students.

Recommendation 5: Universities should aim to build layered organizational and management structures, based upon broadly accepted values, strategies, heuristics, and protocols at the highest levels, but encouraging diversity, flexibility, and innovation at the level of execution.

Identifying and implementing the organizational and management structure appropriate for digital technology is a major issue--and barrier--at most institutions. All organizations, whether in higher education, commerce, or government face a quandary: Should they centralize, through growth or mergers, becoming conglomerates to take advantage of economies of scale, standardization, and globalization. Or should they decentralize, seeking autonomy, empowerment, and flexibility at the level of unit execution, while encouraging diversity, localization, and customization. Which path should they choose?

Actually, both...and neither. There is no unique way to organize technology-based activities, although it is likely that most colleges and universities are currently far from an effective or optimal configuration. Furthermore, flexibility and adaptability are the watchwords for any such organization during a time of extraordinarily rapid technological change. The challenge is to orchestrate and coordinate the multiple activities and diverse talent on campus that explore and transform in this area. In effect, technology-driven transformations can be viewed as a collective R&D project for the institution.

The key to achieving this is to build layered organization and management structures.^{lxiii} At the highest, centralized level one should seek a clear institutional vision, driven by broadly accepted values, guided by common heuristics, and coordinated

through standard protocols. Below this at the level of execution one should encourage diversity, flexibility, and innovation. In a sense, institutions should seek to centralize the guiding vision and strategy, that is, “where” the institution should head, while decentralizing the decision process and activities that determine “how” to achieve these institutional goals. Universities should seek to synchronize rather than homogenize their activities. Rather than obliterating silos of activity, one should use standard protocols and infrastructure to link them together, creating porous walls between them.

Public universities will face particularly serious challenges, since they are accountable to public authority and therefore averse to risk, and IT is an area where risk and success are closely linked. A large public university is too big, and its authority too widely dispersed, to make rapid decisions. Individuals and units need to be able to make many small, rapid, risky, and relatively inexpensive decisions from below and have the opportunities and resources to experiment.

Recommendation 6: One should recognize that the technology infrastructure necessary for higher education in the digital age will not only be comparable in expense to physical and human capital, but it will be pervasive and continually evolving throughout the institution.

We noted earlier that the IT infrastructure necessary to sustain university activities and administration is quite extensive, including not simply hardware (computers, networks) and software (operating systems, middleware, learningware, administration applications) but as well extensive human resources and skills (support and administration of IT systems). Not the least of these challenges is financial, since as a rule of thumb most organizations have found that staying abreast of this technology

requires an annual investment of roughly 10 percent of their operating budget. For a very large campus or university system, this can amount to hundreds of millions of dollars per year!

Historically, technology has been seen as a capital expenditure for universities or as an experimental tool to be made available to only a few. In the future, higher education should conceive of information technology both as an investment and as a strategic asset for universities, critical to their academic mission and their administrative services, which must be provided on a robust basis to the entire faculty, staff, and student body. Colleges and universities must learn an important lesson from the business community:

Investment in robust information technology represents the table stakes for survival in the age of knowledge. If you are not willing to invest in this technology, then you may as well accept being confined to a backwater in the knowledge economy, if you survive at all.

Just as with the organization and management of the university, we need to seek a layered or tiered architecture for digital technology that is characterized by a unified “backend” or centralized infrastructure and diverse and flexible “front-end” applications. Modularity and tiering are the keys to effective technology acquisition and implementation strategies. Connectedness and interoperability are key criteria in IT infrastructure design.

Part of the challenge is the accelerating pace of evolution of this technology, and the difficulty in predicting its twists and turns and the next “killer app” appears. For example, many universities were making major investments in minicomputers (PDPs, VAXs) in the early 1980s just as the personal computer appeared. The introduction of the

network browser with the appearance of Mosaic (the precursor to Netscape) in 1994 turned traditional enterprise systems on their head, demanding new Web-based services and e-commerce. If Bell Labs and others are successful in stimulating the transition from electronics to photonics and wireless technology (“fiber to the forehead”), the massive investments colleges and universities have made in networking infrastructure (their “wire-plant”) may rapidly become obsolete.

The same can be said for software evolution and administrative systems. Many universities have made massive investments in reengineering legacy administrative systems, in part to prepare for Y2K, and in part to drive change in administrative processes. But the promises of reengineering remain unrealized for many institutions. In many instances, large, expensive systems designed to institute change have been only partially implemented, often with less than expected results. Many institutions have moved on to an order of magnitude more expensive enterprise systems implementations to integrate student, financial, and human resources systems. Yet all too often these centralized systems make the organization conform to technology rather than vice versa. They essentially force academic activities such as teaching and research to conform to business IT systems. While administrative systems such as enterprise resource planning (ERP), customer relationship management (CRM), and knowledge management systems (KMS) can be useful to the administrative side of the university, they can sometimes work at odds with the academic activities.

So too, the changing nature of the core academic activities will demand changes in infrastructure. A new educational model is evolving to serve the needs of the digital age. Barriers to learning must be replaced with mechanisms to facilitate the new styles of

learning for the digital age: open learning (open access), just-in-time learning, and just-for-you learning (unbundled, customized learning). In a world in which both the student body and the professorate becomes more and more mobile, telecommuting and tele-learning, physical infrastructure, although still necessary, may decline in relative importance to robust network connectivity. Expensive research facilities will become increasingly shared resources rather than the responsibility of a single campus, but then requiring high-speed data links. Digital technology will not only facilitate but drive collaboration and hence alliances.

Recommendation 7: Getting from here to there requires a well-defined set of operational strategies and tactics aimed at institutional transformation.

We are in the very early stages of technology-driven tectonic shifts that will reshape our institutions and our enterprise. Although the university as a social institution has survived largely intact for over a millennium, it has done so in part because of its extraordinary ability to change and adapt to serve society. Beyond vision, organization, and investment, universities need a well-defined set of operational strategies and tactics. Technology-driven transformation should be viewed as steps up a ladder rather down a road, since at each level a new set of challenges will arise. Timing and the pace of change are everything, since if these are incompatible with the capacity of the institution, strong resistance and possibly even chaos can be the consequences.

It is important to challenge an institution with high expectations. But leaders should also recognize that for most institutions the limiting factors will be the availability of human resources. There are few among the faculty or administrative staff who understand the nature and implications of digital technology. There are even fewer

capable of leading a process of change. While universities typically look to their IT organizations or libraries for such leadership, it is more likely to exist among the faculty, with those who have actually utilized state-of-the-art digital technology in the fundamental academic activities of the university, teaching and research.

Yet there is another constituency capable of driving change in the university: students. This should not be surprising to those familiar with the history of higher education, since students have frequently driven change in the university, ranging from the stimulation of new academic programs to the organization of the institution. Furthermore, many students, particularly at the graduate level, drive much of the intellectual momentum of the university through their research and teaching activities. As we have noted earlier, the plug-and-play generation is far more comfortable with digital technology than most of the current generation of university faculty and leaders. They not only are more adept in applying the technology to their own activities, but frequently play key roles in its development (as the numerous IT startups led by undergraduate and graduate students make apparent). With technology, just as with other issues, students are likely to be a powerful force driving change in higher education.

The Challenge of University Leadership in the Digital Age

The digital age poses many challenges and opportunities for the contemporary university, just as it does for our society and its other social institutions. There is no evidence of slowdown in the pace of evolution of information technology, by any measure or characteristic. In fact, we appear to be on a superexponential technology learning curve that is likely to continue for at least the next several decades. Photonic technology is evolving at twice the rate of computer technology, and miniaturization and

wireless technologies are evolving even faster. Furthermore, we are likely to be surprised by unanticipated technologies at more frequent intervals, just as we were with the personal computer in 1980 and the Internet browser in 1994. Getting people to think about the implications of accelerating technology learning curves is important, since the event horizons are much closer than most realize.

For most of the history of higher education in America, we have expected students to travel to a physical place, a campus, to participate in a pedagogical process involving tightly integrated studies based mostly on lectures and seminars by recognized experts. Yet, as the constraints of time and space--and perhaps even reality itself--are relieved by information technology, will the university as a physical place continue to hold its relevance?

In the near term, a decade or less, it seems likely that the university as a physical place, a community of scholars and a center of culture, will remain. Information technology will be used to augment and enrich the traditional activities of the university, in much their traditional forms. To be sure, the current arrangements of higher education may shift. For example, students may choose to distribute their college education among residential campuses, commuter colleges, and online or virtual universities. They may also assume more responsibility for and control over their education. In this sense, information technology is rapidly becoming a liberating force in our society, not only freeing us from the mental drudgery of routine tasks, but also linking us together in ways we never dreamed possible. Furthermore, the new knowledge media enables us to build and sustain new types of learning communities, free from the constraints of space and

time. Higher education must define its relationship with these emerging possibilities in order to create a compelling vision for its future as it enters the next millennium.

For the longer term, two or more decades from now, the future of the university becomes far less certain. Although the digital age will provide a wealth of opportunities for the future, we must take great care not simply to extrapolate the past, but instead to examine the full range of possibilities for the future. There is clearly a need to explore new forms of learning and learning institutions that are capable of sensing and understanding the change and of engaging in the strategic processes necessary to adapt or control it.

While the threats posed to traditional roles and practices may serve usefully as the warning shots across the bow of colleges and universities--particularly their faculties--university leadership should not be simply reacting to threats but instead acting positively and strategically to exploit the opportunities presented by information technology. As we have suggested, this technology will provide great opportunities to improve the quality of education and scholarship. It will allow colleges and universities to serve society in new ways, perhaps more closely aligned with their fundamental academic mission and values. It will also provide strong incentives for building new alliances among diverse educational institutions, thereby providing systemic opportunities for improving the quality of higher education in America.

Hence we believe that while college and university leaders should recognize and understand the threats posed by rapidly evolving information technology to their institutions, they should seek to transform these threats into opportunities for leadership.

Information technology should be viewed as a tool of immense power to use in enhancing the fundamental roles and missions of their institutions.

Chapter 5

Market Forces

We generally think of public higher education as public enterprise, shaped by public policy and actions to serve a civic purpose. Yet market forces also act on our public colleges and universities. Students seek educational programs. Government and industry procure and sponsor research. An array of public and private organizations seek professional services. So too, academic institutions must compete for students, faculty, and resources. To be sure, the higher education marketplace is a strange one, heavily subsidized and shaped by public investment so that prices are always far less than true costs. If prices such as tuition are largely fictitious, even more so is much of the value of education services based on myths and vague perceptions such as the importance of a college degree as a ticket to success or the prestige associated with certain institutions.

Yet at the same time, in part driven by financial pressures and other priorities, governments at the state and federal level have increasingly accepted the argument that a college education should be viewed less as a public investment in an educated citizenry and more as a consumer good of primary benefit to the student. Today the buzzwords of "accountability" and "outcomes" often replace the earlier language of "access" and "opportunity" as the basis for public investment in both students and institutions. At the state and institutional levels, it is also the case that those whom the market and now public policy reward through financial aid programs are students who show greatest promise of academic achievement regardless of need. Yet the determination of academic potential for merit-based financial awards is generally based on simplistic measures such

as standardized test scores and high school grade point, student characteristics all too frequently influenced by socioeconomic factors such as family wealth.

In the past, most colleges and universities served local or regional populations. While there was competition among institutions for students, faculty, and resources--at least in the United States--the extent to which institutions controlled the awarding of degrees, that is, credentialing, led to a tightly controlled competitive market. Universities enjoyed a monopoly over advanced education because of geographical location and their monopoly on credentialing through the awarding of degrees. Statewide systems of public universities have operated essentially as cartels, with roles and markets carefully prescribed. However today all of these market constraints are being challenged with more dependence on market forces and less on regulation. The growth in the size and complexity of the postsecondary enterprise is creating an expanding array of students and educational providers. Technology is allowing new competitors to bypass the traditional barriers to entering the higher education marketplace such as large capital costs and accreditation.

As a result, higher education is rapidly evolving from a loosely federated system of colleges and universities serving traditional students from local communities to, in effect, a global knowledge and learning industry driven by strong market forces. With the emergence of new competitive forces and the weakening influence of traditional regulations, the higher education enterprise is evolving like other “deregulated” industries, such as health care or communications or energy. Yet, in contrast to these other industries which have been restructured as government regulation has disappeared, the global knowledge industry is being unleashed both by the changing educational needs

of a knowledge-driven society and the role of information technology in obliterating the constraints of space and time on human activities. Higher education is breaking loose from the moorings of physical campuses, even as its credentialing monopoly begins to erode. And, as our society becomes ever more dependent upon new knowledge and educated people, upon knowledge workers, this global knowledge business must be viewed clearly as one of the most active growth industries of our times.

This perspective of a market-driven restructuring of higher education as an industry, while perhaps both alien and distasteful to the academy, is nevertheless an important framework for considering the future of the university. While the postsecondary education market may have complex cross-subsidies and numerous public misconceptions, it is nevertheless very real and demanding, with the capacity to reward those who can respond to rapid change and punish those who cannot. Universities will have to learn to cope with the competitive pressures of this marketplace while preserving the most important of their traditional values and character.

The Winds of Change

The social, economic, and technological forces buffeting the public university have been summarized elsewhere in this book. The challenge of meeting the educational needs of a growing and highly diverse population of students is compounded by the need to transform pedagogical methods to accommodate active, collaborative, and technology-based learning. The current people- and knowledge-intensive paradigm of the university appears to be incapable of containing costs and enhancing productivity. Yet, even as the demand for educational services has grown and the operating costs to provide these services have risen, public support for higher education has flattened and declined over

the past several decades relative to other public priorities. Rapidly evolving information and communications technologies are obliterating the constraints of space, time, and monopoly, allowing new competitors to provide educational services to anyone at anyplace and anytime, confined no longer to the campus, the academic schedule, or the academic culture. Colleges and universities are caught up in an escalating competition for better students and faculty, more research funding, winning athletic programs, more prestige, and the resources to sustain both their current activities and achieve their ambition.

The experience of other sectors of our economy such as banking, health care, telecommunications, and energy provide ample evidence that dramatic changes in demand, cost, and technology can drive fundamental change in the marketplace that requires a restructuring of the industry. We believe that such is likely the case with higher education.

Yet in addition to these forces of change, we should also add public policy, since in recent years at both the state and national level, public officials have developed legislation, policies, and programs with the clear intent of stimulating a much more competitive marketplace in higher education. At the level of the states, the long-standing policy of providing sufficient public funding to enable public universities to offer a college education at only a nominal cost has been replaced by the expectation that universities will charge--and students will pay--tuition and fees sufficient to compensate for educational costs beyond what the states are willing or able to provide.

Throughout most of the 20th Century, the growth of higher education in America was sustained by growing public commitments. During this period, public institutions

saw significant growth in their primary source of support, state appropriations from general tax revenues. Tuition and other student fees played a relatively minor role. This situation began to change in the late 1970s as public support first began to slow and then actually began to decline.^{lxiv} At all levels of government--federal, state, and local--public resistance to taxation coupled with shifting priorities led to limitations on tax revenues and the allocation of limited public resources to other priorities such as health care and corrections. As a result, the public support of higher education declined throughout the 1980s and early 1990s. Although there was some recovery in public support with the strong economy of the late 1990s, state appropriations turned down once again in 2001 as the national economy began to weaken.

During these periods of declining appropriations, public universities were forced to tighten their belts, cut programs, and increase productivity. However there was no way that cost containment alone could compensate for the erosion in state support during the 1980s and 1990s. It was necessary to shift a larger share of the burden for the support of higher education in public universities to students and parents through increased tuition and fees. From an economic perspective, this was a quite reasonable approach. State tax support of public universities had provided a strong subsidy for higher education, allowing these institutions to charge a price--tuition--far below actual costs. As this public subsidy declined, the price of a college education at a public university, as represented by tuition naturally increased.^{lxv} Of course, in an absolute sense, the tuition levels at public universities were still only a small fraction of those at private universities, e.g., for the 2000-2001 academic year, the average tuition for undergraduates enrolled in

public colleges and universities was \$3,510 per year compared to an average of \$25,000 for the Ivy League universities.

In many states, this shift from the provision of a college education as an essentially free good to one with an associated price, namely tuition, was driven as much by the desire to create market forces in public higher education as to shift state funding to other priorities such as corrections and health care. Whether stated or not, it was the clear intent of public leaders at both the state and national level to shift more of the burden for the support of higher education from the shoulders of the taxpayer to those who benefited most, to students and parents. Yet, despite the strong economic rationale for increasing tuition at public colleges and universities in the face of declining public support, this action has stimulated strong public concerns and consequent political action to constrain tuition levels. Even a modest increase in the tuition levels of public colleges and universities triggers strong negative reactions from students and parents, harsh criticism from the press, and political pressure or direct legislative action to limit fee increases. Unfortunately, this concern and activism has not translated back into broad public support for renewed public investment in higher education. Today public higher education is caught on the horns of a dilemma, for although the public expects, indeed, demanded broad access to high-quality public education, it is unwilling to pay for this public benefit either through taxes or tuition.

The second example of a shift toward market philosophies is provided by the changing nature of federal student financial aid policies. As we have noted in Chapter 3, there has been a shift in the emphasis of federal support of higher education, away from institutional grants for academic programs or facilities and instead directly to students

and parents through a complex system of financial aid programs. These programs have also evolved over the years from grants to loans and most recently to tax benefits. When coupled with the broadening of eligibility for federal aid to middle- and upper-middle-income students, this represents a shift in the priorities of federal financial aid programs away from providing access to educational opportunities to those unable to afford a college education. Equally significant, the shift in federal support from institutions to individuals reflects a conscious effort to let the marketplace determine the allocation of federal dollars through student choice. As F. King Alexander notes, this shift from direct federal funding of colleges and universities to funding instead individuals through financial aid programs represents a deeper philosophical shift from the view of higher education as a public good benefiting society to that of an individual benefit.^{lxvi}

The Restructuring of the Higher Education Enterprise

As the need for advanced education becomes more intense, there are already signs that some institutions are responding to market forces and moving far beyond their traditional geographical areas to compete for students and resources. Colleges and universities increasingly view themselves as competing in a national or even global marketplace. Even within regions such as local communities, colleges and universities that used to enjoy a geographical monopoly now find that other institutions are establishing beachheads through extension services, distance learning, or even branch campuses. With advances in communication, transportation, and global commerce, several universities in the United States and abroad increasingly view themselves as international institutions, competing in the global marketplace.

Beyond competition among colleges and universities, there are new educational providers entering the marketplace with the aim of providing cost-competitive, high quality education to selected markets.^{lxvii} Sophisticated for-profit entities such as the University of Phoenix and Unext.com are moving into markets throughout the United States, Europe, and Asia. Already more than 1,000 virtual universities are listed in college directories with over one million students enrolled in their programs. It has been estimated that today there are over 1,600 corporate training schools in the United States providing both education and training to employees at the college level. Industry currently spends over \$66 billion per year on corporate training. It is only a matter of time before some of these enter the marketplace to provide educational services more broadly.

Although education contributes almost 10% of GDP in the United States, strong public subsidy has provided little incentive in the past to access the \$16 trillion U.S. capital market. Higher education alone represents a market of \$237 billion, of which only \$5 billion is served by the for-profit sector. As Davis and Botkin have noted, in the past the principal barrier to private sector entry into higher education has been the huge sunk cost and unprofitability of the traditional campus-based university. Today, however, technology and changing societal needs enable the entrance of new focused, low cost, and profitable private sector competitors.^{lxviii}

In recent years we have seen an explosion in the number of new competitors in the higher education marketplace. It is estimated that in 2001 there were over 650 for-profit and proprietary educational providers in the United States. For the first time in our history, the for-profit sector perceives higher education as a significant investment

opportunity. As an investment report by NationsBanc Montgomery Securities concluded: “...Education represents the most fertile new market for investors in many years. It has a combination of large size (approximately the same as health care), disgruntled users, low utilization of technology, and the highest strategic importance of any activity in which this country engages. Finally, existing managements are sleepy after years of monopoly.”^{lxix} Higher education generates an enormous amount of cash, and it is furthermore heavily subsidized by states and the federal government through financial aid programs. It is a very attractive target for for-profit providers.^{lxx}

Many of these efforts target highly selective markets, such as the University of Phoenix (UOP), which already operates over one hundred learning centers in thirty-two states, serving over 100,000 students. UOP targets the educational needs of adult learners whose career and family responsibilities make access to traditional colleges and universities difficult. By relying on highly structured courses formatted for the student’s convenience, and taught by practitioners as part-time instructors, UOP has developed a highly competitive paradigm.

Other for-profit industry-based educational institutions are evolving rapidly, such as Sylvan Learning Systems and its subsidiaries, Athena University, Computer Learning Centers, and the World Learning Network. These join an existing array of proprietary institutions such as the DeVry Institute of Technology and ITT Educational Services. Not far behind are an array of sophisticated industrial training programs, such as Motorola University and the Disney Institute, originally formed to meet internal corporate training needs, but now exploring offering educational services to broader markets. Of particular

note here are the efforts of information services companies such as Accenture and McKinsey that are increasingly viewing education as just another information service.

An extraordinarily diverse array of new products, services, and providers are entering the e-learning marketplace, from curriculum and content development (OnlineLearning, NYR Online, educational publishers), software learning environments (Lotus, Convene, WebCT, Blackboard.com, Eduprise.com), teleconferencing (Caliber, One-Touch) and educational management organizations (Unext.com, University of Phoenix). Of particular interest is the rapid evolution of higher education Web portals that bring for-profit companies into direct contact with students, through websites that link useful information for students with advertising and e-commerce.

It is important to recognize that while many of these new competitors are quite different than traditional academic institutions, they are also quite sophisticated both in their pedagogy, their instructional materials, and their production and marketing of educational services. For example, Caliber Learning and the British Open University invest heavily in the production of sophisticated learning materials and environments, utilizing state-of-the-art knowledge concerning learning methods from cognitive sciences and psychology. They develop alliances with well-known academic institutions to take advantage of their brand names (e.g., Wharton in business and MIT in technology). They approach the market in a highly sophisticated manner, as we noted earlier, first moving into areas with limited competition, unmet needs, and relatively low production costs such as large undergraduate survey courses amenable to mass production and commodization, but then moving rapidly up the value chain to more lucrative, highly customized professional education.

Traditional colleges and universities tend to focus on inputs such as entering student quality and metrics such as expenditure per student, as well as upon process dictated by established student-to-faculty ratios, credit hours, and degree programs. The new for-profit providers focus instead on outputs, on measuring student learning and the competency achieved by particular programs, forms of pedagogy, and faculty. They have set aside the factory model of student credit hours, seat time, and degree programs long preferred by the higher education establishment, and instead are moving to anytime, anyplace, any length, anyone flexibility, customized to the needs of the learner, and verified as to effectiveness.

In the face of such competition, traditional colleges and universities are also responding with an array of new activities. Most university extension programs are moving rapidly to provide Internet-based instruction in their portfolios. University collaboratives such as the National Technological University and the Midwest University Consortium for International Activities have become quite formidable competitors. They are being joined by a number of new organizations such as the Western Governors' University, the Michigan Virtual University, and an array of university-stimulated "dot-coms" such as UNext.com and versity.com that aim to exploit both new technology and new paradigms of learning.

But not all such efforts are successful. The Western Governors University, a venture started by 17 western states, opened its online doors to much fanfare in 1999 but has enrolled only a few hundred students. The British Open University opened a North American subsidiary, the United States Open University, with much fanfare in the late 1990s, only to close it in 2002 as it became clear that the open university paradigm did

not adapt easily to the American marketplace. The California Virtual University, a project launched in 1997, folded in 1999 citing financial problems. The Michigan Virtual University, launched by a consortium of public universities in the state, has been somewhat more successful, first targeting the corporate marketplace and more recently branching out into K-12 teacher training, and enrolling to date over 5,000 students.^{lxxi}

The academy has long been accustomed to deciding what it wishes to teach, how it will teach it, and where and when the learning will occur. Students must travel to the campus to learn. They must work their way through the bureaucracy of university admissions, counseling, scheduling, and residential living. And they must pay for the privilege. If they navigate through the maze of requirements, they are finally awarded a certificate to recognize their experience--a college degree. This process is sustained by accrediting associations, professional societies, and state and federal governments.

This carefully regulated and controlled enterprise could be eroded considerably by several factors. First, the great demand for advanced education and training cannot be met by such a carefully rationed and controlled enterprise. Second, the expanding marketplace will attract new competitors who will exploit new learning paradigms and increasingly threatening traditional providers. And perhaps most important of all, newly emerging information technology will not only eliminate the constraints of space and time, but it will also transform students into learners and consumers. Open learning environments will provide learners with choice in the marketplace--access to learning opportunities, knowledge-rich networks, collections of scholars and expert consultants, and other avenues for learning.

The Achilles heel of the modern university is its over-extension, its attempt to control all aspects of learning. Universities provide courses at the undergraduate, graduate, and professional level. They support residential colleges, professional schools, lifelong learning, athletics, libraries, museums, hospitals, and entertainment. They have assumed responsibility for all manner of activities beyond classroom education: housing and feeding students, providing police and other security protection, counseling and financial services--even operating power plants on many Midwestern campuses! Yet market competition tends to seek out and exploit weakness and underperformance, a frequent consequence of overextension.

Today's monolithic universities, at least as full-service organizations, are at considerable risk. These institutions have become highly vertically integrated over the past several decades. Yet today we are already beginning to see a growing number of differentiated competitors for many of these activities. Universities are under increasing pressure to spin off or sell off or close down parts of their traditional operations in the face of this new competition and to examine the contributions and cost-effectiveness of other heretofore-integral components.

The most significant impact of a deregulated higher education "industry" may be to break apart this monolith, much as other industries have been broken apart through deregulation. As universities are forced to evolve from "faculty-centered" to "learner-centered," they may well find it necessary to unbundle their many functions, ranging from admissions and counseling to instruction and certification. Capitalizing on one's strengths and outsourcing the rest is commonplace in many industries. Consider, for example, the computer industry, in which webs of alliances exist among hardware

developers, manufacturers, software developers, and marketers of hardware and software. These are constantly being created and modified in response to competitive dynamics.

This idea can be applied to academia. While universities are very good at producing intellectual content for education, there may be other organizations that are far better at packaging and delivering that content such as the publishing or entertainment industry. While in the past universities have had a monopoly on certifying learning, there may be others, whether they are accreditation agencies or other kinds of providers, more capable of assessing and certifying that learning has occurred. Many of our other activities, e.g., financial management and facilities management, might be outsourced and better handled by specialists.

Throughout most of its history, higher education has been a cottage industry. Individual courses are a handicraft, made-to-order product. Faculty members design from scratch the courses they teach, whether they are for a dozen or several hundred students. They may use standard textbooks from time to time--although most do not--but their organization, their lectures, their assignments, and their exams are developed for the particular course at the time it is taught. Students would be surprised to know that their tuition dollars per hour of lecture at our more elite universities amount to over \$50--the price of a ticket to a Broadway show.

In a very real sense, the industrial age bypassed the university. So too our social institutions for learning--schools, colleges, and universities--continue to favor programs and practices based more on past traditions than upon contemporary needs. Yet, it may be quite wrong to suggest that higher education needs to evolve into a mass production or broadcasting mode to keep pace with our civilization. In a sense, this was the

evolutionary path taken by K-12 education, with disastrous consequences. Besides, even industry is rapidly discarding the mass production approach of the twentieth century and moving toward products more customized to particular markets.

Our ability to introduce new, more effective avenues for learning, not merely new media in which to convey information, will change the nature of higher education. This will bring with it new modes of organization, new relationships among universities and between universities and the private sector. The individual handicraft model for course development may give way to a much more complex method of creating instructional materials. Even the standard packaging of an undergraduate education into “courses,” in the past required by the need to have all the students in the same place at the same time, may no longer be necessary with new forms of asynchronous learning. Of course, it will be a challenge to break the handicraft model while still protecting the traditional independence of the faculty to determine curricular content. Beyond that, there is also a long-standing culture in which most faculty members assume that they own the intellectual content of their courses and are free to market these to others for personal gain, e.g., through textbooks or off-campus consulting services. But universities may have to restructure these paradigms and renegotiate ownership of the intellectual products represented by classroom courses if they are to constrain costs and respond to the needs of society.

Let us return to our earlier example of content preparation. As we have noted, universities--more correctly, faculty--are skilled at creating the content for educational programs. Indeed, we might identify this as one of their core competencies. But they have not traditionally been particularly adept at “packaging” this content for mass audiences.

To be sure, many faculty have written best-selling textbooks, but these have been produced and distributed by textbook publishers. In the future of multimedia, Net-distributed educational services, perhaps the university will have to outsource both production and distribution to those most experienced in reaching mass audiences--the entertainment industry.

In such commodity markets, brand names can be very important. Traditionally branding in higher education has been based primarily on prestige, e.g., the Harvard paradigm of whomever spends the most on the fewest students (and consequently most highly rated by U.S. News & World Report) becomes the lead brand. However it is also possible that in a commodity market, brand names could well become more closely related to learning value-added. In such a marketplace, it would well be that for-profit education providers that establish clear evidence of strong student learning outcomes could begin to compete with and perhaps even dominate traditional elite institutions with brand names based more on institutional reputation and prestige.

Higher education is an industry ripe for the unbundling of activities. Universities, like other institutions in our society, will have to come to terms with what their true strengths are and how those strengths support their strategies--and then be willing to outsource needed capabilities in areas where they do not have a unique advantage.

The new learning services are increasingly available among many providers, learning agents, and intermediary organizations. Such an open, network-based learning enterprise certainly seems more capable of responding to the staggering demand for advanced education, learning, and knowledge. It also seems certain not only to provide

learners with far more choices but also to create far more competition for the provision of knowledge and learning services.

The perception of the higher education enterprise as a deregulated industry has several other implications. In a sense, education today is one of the last remaining sectors of our economy dominated by public control that has failed to achieve the standards of quality, cost-effectiveness, and technological innovation demanded by our knowledge-driven society. Furthermore, compared to other sectors that have been subject to massive restructuring, ranging from utilities to telecommunications to transportation to health care, the education industry represents the largest market opportunity for the private sector since health care in the 1970s.

As we have noted, there are currently 4,048 colleges and universities in the United States (including 672 for-profit colleges), characterized by a great diversity in size, mission, constituencies, and funding sources.^{lxxii} Not only are we likely to see the appearance of new educational entities in the years ahead, but as in other deregulated industries, there could well be a period of fundamental restructuring of the enterprise itself. Some colleges and universities might disappear. Others might merge. Some might actually acquire other institutions. One might even imagine Darwinian “hostile takeovers,” where some institutions devour their competitors and eliminate their obsolete practices. Such events have occurred in deregulated industries in the past, and all are possible in the future we envision for higher education.

One might also imagine affiliations between comprehensive research universities and liberal arts colleges. This might allow the students enrolling at large research universities to enjoy the intense, highly personal experience of a liberal-arts education at

a small college while allowing the faculty members at these colleges to participate in the type of research activities occurring only on a large research campus.

Actually, this has happened before. As the population of college-age students swelled during the decades following World War II, many of our public universities evolved into complex systems, spawning regional campuses, absorbing formerly normal schools and technical colleges, and attempting to dominate statewide or regional markets. But this expansion was driven by strong growth of public tax support to respond to the education needs of a growing population. Today we see the possibility of market competition and private dollars driving a rearrangement of higher education.

As much as some resist thinking about education in these terms, taking the perspective of higher education as a postsecondary knowledge industry in a vast network is an important viewpoint that will require a new paradigm for how we think about what we have to offer. Internally it suggests the possibility of radical changes in the academic structure of the university, its educational processes such as teaching and research. Externally it suggests both competing and collaborating with an array of non-educational organizations such as the telecommunications and entertainment industry. As our society becomes ever more dependent upon new knowledge and educated people, this global knowledge business must be viewed as one of the most active growth industries of our times. It is clear that no one, no government, and no corporation, will be in control of the higher-education industry. It will respond to forces of the marketplace.

Perhaps the most serious threat of the emerging competitive marketplace for knowledge and education is the danger that it will not only erode but distort the most

important values and purposes of the university. In a highly competitive market economy short-term pressing issues usually win out over long-term societal investments.

The early for-profit entrants into postsecondary education are aiming first at the corporate market for business education. After all, the corporate training market is huge, \$66 billion in 2000, and growing 11% a year. Furthermore, online education has the potential of eliminating the considerable costs of employee travel and payment for time spent in training programs, estimated at 60% of corporate training costs. David Collis estimates that roughly 60% of for-profit education is aimed at corporate clients, and 75% of educational content is business education.^{lxxiii}

As a result, colleges and universities might first be tempted to breathe a bit more easily, since the for-profit sector appears to be going after adult markets they have not traditionally served. Yet this may be deceptive. The new entrants are investing at very significant levels in developing education content, improving pedagogical methods, and assessing student learning outcomes. They are moving up the learning curve very rapidly, and it is only a question of time before they broaden out to provide additional educational services at both the graduate and undergraduate education levels. The threat to incumbents is that they may be overwhelmed, as the for-profit providers not only learn how to provide cost-effective, high quality online education, but furthermore develop the brand names for quality through demonstrated competence. The impact on traditional colleges and universities may be delayed, but it will be no less dramatic--indeed, traumatic--when it occurs, in part because they are procrastinating the necessary investments and activities to learn how to exploit technology-delivered education and the new adult marketplace.

As Collis puts it, the emerging for-profit, online education enterprise is like a tsunami, with colleges and universities sitting on the beach, sunning themselves in the warm glow of a hot economy, while believing that the gentle surf before them is simply the tide coming in. Little do they realize that out over the horizon is a building 100-foot tsunami wave, bearing down upon them, with little chance to outrun it.

Of course, there may be some near term steps to slow the tsunami of commercial online education. States might apply regulations to constrain offering degree programs or credentials across state lines (although this could also run afoul of interstate commerce regulations). Nations might do the same. But as we have learned from e-commerce and other Internet activities, IT-based commercial activities eventually become formidable, irresistible, and pervasive. As the early entrants jockey to define the Amazon.com for e-learning, it seems inevitable that the tsunami will sweep across state and national borders, possibly inundating those colleges and universities in their path that ignore this threat or are slow to respond.

As each wave of transformation sweeps through our economy and our society, with an ever more rapid tempo, the existing infrastructure of educational institutions, programs, and policies becomes more outdated and perhaps even obsolete. While the pervasive need for advanced education dictated by the high performance workforce has expanded significantly the student population, it has also transformed it significantly in character and need. While young adults continue to seek the experience of intellectual maturation and socialization associated with undergraduate education, their numbers are now exceeded by working adults, seeking knowledge and skills of direct relevance to careers and expecting a professional, businesslike relationship with learning institutions.

For these learners, convenience and cost-effectiveness have become comparable to academic quality and institutional reputation in importance. They demand that institutions focus on providing educational services that meet their needs, rather than stressing the scholarly achievement of faculty, public services such as health care or entertainment (intercollegiate athletics), or building institutional prestige (brand name).

Today it is estimated that higher education represents roughly \$225 B of the \$665 B education market in the United States.^{lxxiv} But even these markets are dwarfed by the size of the “knowledge and learning” marketplace, estimated in excess of \$2.2 trillion. Furthermore, with the current population of 84 million students enrolled in higher education worldwide estimated to double over the next two decades, the size of the global market place is considerably larger.

Little wonder that many believe that the market forces created by the workforce skills needs of a knowledge economy and driven by new competitors and technologies will present a formidable challenge to existing colleges and universities. Although the expanding educational needs of growing population, the high performance workplace, and developing nations will sustain the size of the market served by traditional higher education, this market share is almost certain to decline as new, technology-based competitors appear to serve new educational markets.

Market Strategies

How should traditional colleges and universities approach the challenges and opportunities presented by an evolving post-secondary education market? Clearly the first objective is to develop a unique strategy that helps an institution focus on and improve in areas of strength, or, in business language, identify and stress its core competencies.

Every institution, no matter how strong or prestigious needs a dynamic competitive strategy capable of adapting to a rapidly changing marketplace.

In the effort to develop such a market strategy, every institution must revisit some very basic issues. Should they remain focused on their traditional roles and clients, allowing new competitors to serve the growing marketplace of nontraditional students and educational/knowledge needs without challenge? Or should they develop the capacity to serve these new and growing needs of a knowledge-intensive society? Where would the resources come from to support such an expansion of educational missions: Students? Taxpayers? Corporate clients? Perhaps of even more immediate concern is how colleges and universities can cope with the potential erosion of revenue from high profit margin activities such as general education and professional education that appear to be the early targets of for-profit competitors?

More generally, how can conventional academic institutions accommodate the likely evolution and integration of education into a global knowledge and learning industry? Should universities seek to establish their traditional academic activities as sufficiently world-class to be competitive in this global marketplace? Or should they outsource world-class services provided by other institutions to their regional market and instead focus their own efforts on homegrown educational products designed for local markets? How important will reputational characteristics such as prestige or brand name be in such a global marketplace? Clearly there will not be one best educational approach that works for all institutions. The diverse nature of learning and learners will provide many opportunities for differentiation.

From a broader perspective, we can see the rapid evolution of a global knowledge and learning industry as a continuation of an ever-expanding role and presence of the university during the past century. From the commitment to universal access to higher education after World War II to the concern about cost and efficiency in the 1980s to the role of the university in a knowledge-driven society, there have been both a growth in the number and complexity of the missions of the university, and the entry into postsecondary education of new players and competitors. Today we think of the postsecondary education industry as consisting of a core of educational institutions, research, doctoral, and comprehensive institutions; four-year colleges; two-year colleges; proprietary institutions, and professional and specialized institutions. This core is supported, sustained, and augmented by an array of external players, including state and federal government, business and industry, and foundations. The traditional postsecondary institutions will be joined at the core of the emerging knowledge and learning industry by new players: telecommunications companies, entertainment companies, information technology companies, information service providers, and corporate and governmental education providers.^{lxxv}

At the top of the food chain are the elite research universities, the Harvards and the Stanfords, as well as the UC-Berkeleys and the Michigans, that provide a intellectually rich--and financially very expensive--educational experience to a relatively small number of students. For example, even a large university such as UC-Berkeley enrolls fewer than 30,000 students compared to the 260,000 enrolled in the California State University System. Harvard and Stanford enroll even fewer, about 10,000 each. And the elite liberal arts colleges such as Amherst and Oberlin are even more focused,

with only about 2,000 students participating in their faculty-intensive residential campus experience.

At the other extreme are adult education institutions such as the University of Phoenix and the British Open University that use a combination of standardized regional centers and online technology to reach hundreds of thousands of students. Addressing the educational needs of even larger numbers are the systems of regional state universities and community colleges. Although these institutions do not provide the rich educational experience of a residential campus with low student-to-faculty ratios--indeed, most of their students are commuters and many are part-time with full-time jobs--they do educate the bulk of the roughly 14 million students enrolled in higher education programs in the United States.

In understanding how these diverse institutions relate to the higher education marketplace, it is important to keep several points in mind. First, most students tend to pay for the credential of a college degree rather than for an educational experience, since they perceive this to be the ticket to satisfying and well-compensated careers. Furthermore, for those who can afford it, the prestige of a college or university is usually viewed as more important than the quality of the educational experience they actually will receive in its academic programs. Of course, university brand names have long been important because of the social networks based upon college and alumni experiences. But branding has become even more important in recent years as federal funding and private giving become increasingly correlated with faculty reputation, and as the college ratings provided by publications such as *U.S. News and World Report* have established the rankings of various institutions firmly in the minds of the marketplace.

The educational needs of the nation have evolved from focusing on the leaders of our society to providing broad, quality educational opportunities for our entire population, in a sense, universal and pervasive educational opportunities. Society will expect from their educational institutions the production of an educated workforce capable of competing in the changing global economic landscape. Institutions that can continually change to keep up with the needs of the transforming economy they serve will survive. Those that cannot or will not change will become less relevant and more vulnerable to newly emerging competitors.

Of course, technology will play a critical role in this, since digital technology is emerging as a primary delivery mechanism for educational services and intellectual content. The burgeoning use of the Internet and other national and international networks is creating environments where intellectual capacity, information and knowledge bases, methodologies, and other educational services are made available to learners anywhere, anytime. Almost every function of the contemporary university will be affected by--and possibly even displaced by--digital technology. New competitors will appear, threatening the status quo with more effective and less costly alternatives. With over 100 million new learners at stake globally, the competition will be keen indeed. As individuals, business and government turn to network alternatives, the franchise of the college degree or college credit will face significant challenges. Although it will take a long time for the full impact of technology-driven transformation of the marketplace to be fully appreciated, even small shifts in the core activities of the university could have dramatic impact.

Although the most prestigious and prosperous institutions will have significant advantages in this restructured marketplace for higher education, they too will face serious challenges. For the most expensive institutions, the early impact could well be price pressures. For all but the most elite institutions (the most prominent brand names), the cost pressure imposed by comparisons of student tuition rates could be enormous. How can a family justify spending \$20,000 to \$30,000 per year on tuition when a new competitor may be able to provide academic offerings of comparative quality at \$5,000 to \$10,000, based on actual measurement and comparison of student learning achievements? Similarly, public officials and politicians will also become more conscious of such comparisons during a time when state and federal budgets are under increasing pressure from limited revenues and competing public priorities such as health care, corrections, and K-12 education. Already we see some states beginning to question the need to invest in more campus-based facilities when distance learning may provide lower cost alternatives.

Perhaps even more immediate will be significant price competition from new competitors in low-cost, high-profit margin academic programs such as business education and general education. Technology-intensive, for-profit competitors such as Jones International University and Unext.com initially target business education for adults in the workplace because these are frequently subsidized by employers and online education can offer significant cost savings by eliminating travel and time-off-job expenses. But as experience is gained in these online programs, it is logical to expect them to compete more directly with established business schools both for degree programs and executive education. Moving further up the learning curve, several for-

profit competitors have already announced their intention to enter the general education market, which is also characterized by relatively low cost instructional costs and large student populations.

Some of the most elite institutions may adopt a strategy of relying on their prestige and their prosperity to isolate themselves from change, to continue to do just what they have done in the past, and to be comfortable with their roles as niche players in the higher education enterprise. But for most of the larger, more comprehensive institutions, the activities of elite education and basic research are simply too expensive to sustain without some attention to the cross-subsidies from activities more responsive to the marketplace.

Clearly colleges and universities should play to their strengths as they develop market strategies. The capabilities of the faculty and student body; the vast physical, financial, and intellectual resources; and the reputation of major research universities represent very considerable assets in competing for the new educational markets. Many public universities already have both a mission and a culture supportive of off-campus activities, particularly land-grant institutions with decades of experience in sophisticated extension activities in agriculture, industrial development, and adult education.

The financial pressures of the early 1980s and 1990s taught most universities the wisdom of focusing resources to achieve quality in selected areas of strength rather than attempting to be all things to all people. An increasingly competitive and rapidly changing marketplace will demand even more focus and differentiation. There are strong incentives to meet the broad expectations of various stakeholders through alliances of institutions with particular focused strengths rather than continuing to broaden

institutional mission with the consequent dilution of resources, since the breadth and extent of the diverse demands of society tend to exceed the resources and capacities of a single institution.

Two examples illustrate the point: Many students and families believe that the teaching-intensive residential campuses of small liberal arts colleges provide a far more effective learning environment than the mega-campuses of large research universities. Yet, public research universities provide extraordinary resources such as libraries, laboratories, and performance centers, not to mention faculty members who are leading scholars in a broad array of disciplines and professional fields. One might imagine combining the strengths of both types of institutions by forming alliances among liberal arts colleges and research universities. This might allow the students enrolling at large research universities to enjoy the intense, highly personal experience of a liberal arts education at a small college while allowing the faculty members at these colleges to participate in the type of research activities occurring only on a large research campus.

There are also strong incentives to form alliances involving universities and commercial competitors. Universities can benefit from the experience gained from commercial competitors as well as their ability to access private capital markets to invest in product development and assessment. The corporate partners, in turn, can benefit from the “brand name” of established universities. Past experience from restructured industries suggests the marketplace rewards suggests those who enter early, adapt rapidly, and are ready to seize opportunities when they arise. While the diversity of the higher education marketplace makes it unlikely that a true monopoly will long survive, the value of brand

name and the huge fixed cost, low variable cost nature of the new business suggests that early movers will have sustainable advantages.

In a similar sense, states and communities are certain to rethink whether their existing higher education infrastructure is strategically positioned to serve their needs in the face of such a rapidly evolving marketplace of new needs and new providers. Does New York really need 64 separate state universities? Does California need nine major public research universities? From this perspective, the current trend of state and federal governments to shift public support from institutions to students may make perfect sense from a market viewpoint. It is certainly a possible strategy to increase competition and reduce the burden on the public purse by redirecting funding to consumers.

The Brave New World of Commercial Education

The market forces unleashed by technology and driven by increasing demand for higher education are very powerful. If allowed to dominate and reshape the higher education enterprise, we could well find ourselves facing a brave, new world in which some of the most important values and traditions of the university fall by the wayside. After all, while universities teach the skills and convey knowledge demanded by the marketplace, they do much more. They also preserve and convey our cultural heritage from one generation to the next, perform the research necessary to generate new knowledge, serve as constructive social critics, and provide a broad array of knowledge-based services to our society, ranging from health care to technology transfer. These latter roles may be unlikely to be valued in quite the same way by the commercial marketplace for post-secondary education.

Although traditional colleges and universities are likely to continue to play a significant role in this future, they are likely to be both threatened and reshaped by shifting societal needs, rapidly evolving technology, and aggressive for-profit entities and commercial forces. Together these could drive the higher education enterprise toward the mediocrity that has characterized other mass media markets such as television and journalism. While the commercial, convenience-store model of the University of Phoenix may be a very effective way to meet the workplace skill needs of some adults, it certainly is not a paradigm that would be suitable for many of the higher purposes of the university. As we assess these market-driven emerging learning structures, we must bear in mind the importance of preserving the ability of the university to serve a broader public purpose.

The experience with restructuring in other industries has not been altogether encouraging, particularly with market-driven, media-based enterprises. While the dissolution of the AT&T monopolies has indeed stimulated competition in telecommunications, it also resulted in the weakening of one of this nation's greatest intellectual assets, the Bell Laboratories. Furthermore, anyone who has suffered through the cattle-car experience of hub-spoke air travel can question whether the deregulation of commercial aviation has been worth it. And although the rate of increase in the cost of health care has been slowed very significantly by the competition unleashed in a restructured marketplace, there are increasing concerns about the quality and convenience of health-care delivery in our intensely competitive--and many would maintain chaotic--deregulated health-care marketplace.

The broadcasting and publication industries suggest that commercial concerns can lead to mediocrity, an intellectual wasteland in which the lowest common denominator of quality dominates. One can imagine a future in which the escalating costs of a residential, campus-based college education could price this form of higher learning beyond the range of all but the affluent, relegating much if not most of the population to low-cost (and perhaps low-quality) education via shopping mall learning centers or computer-mediated distance learning. In this dark, market-driven future, the residential college campus could well become the gated community of the higher education enterprise, available only to the rich and privileged.

There is an important lesson here. Without a broader recognition of the growing learning needs of our society, an exploration of more radical learning paradigms, and an overarching national strategy that acknowledges the public purpose of higher education and the important values of the academy, higher education will be driven down roads that would indeed lead to a winter of despair. Many of the pressures on our public universities are similar to those that have contributed so heavily to the current plight of K--12 education. Education has been viewed as an industry, demanding higher productivity according to poorly designed performance measures. The political forces associated with mass education have intruded on school management in general and governing boards in particular. The faculty has no recourse but to circle the wagons, to accept a labor-management relationship, and to cease to regard their vocation as a calling rather than a job.

The primary concern here is that unbridled market forces could distract public colleges and universities from acting in the public interest and instead lead them to

become, in their activities and their philosophies, indistinguishable from the for-profit sector. Quality could sink to a lowest common denominator provided by commodity products in the mass marketplace. The academy could lose control of content to commercial providers, particularly of e-learning products.

Balancing Market Forces with Public Purpose

Will this restructuring of the higher education enterprise really happen? If you doubt it, just consider the health care industry. While Washington debated federal programs to control health care costs, the marketplace took over with new paradigms such as managed care and for-profit health centers. In less than a decade the health care industry was totally changed and continues to change rapidly today. Today, higher education is a \$180 billion per year enterprise, a significant part of \$600 billion per year spent in the United States on education. In many ways the education industry represents the last of the economic sectors dominated by public control and yet at risk because of quality, cost-effectiveness, and changing demands.

Regardless of who or what drives change, the higher education enterprise is likely to be dramatically transformed over the next decade.^{lxxvi} It could happen from within, in an effort to respond to growing societal needs and limited resources. But it is more likely to be transformed by new markets, new technologies, and new competition. In this rapidly evolving knowledge business, the institutions most at risk will not be of any particular type or size but rather those most constrained by tradition, culture, or governance.

Both public and private universities alike will be faced with the intense competition of the marketplace, driven by growing demands for advanced education,

unleashed by emerging technology, and intensified by the entry of new competitors. All institutions will be seriously challenged to respond. Yet, public institutions will have considerably greater difficulty in coping with these market pressures.

In this regard, it is important to recall once again that the American public university was the result of public policy and public investment by way of both federal and state government.^{lxxvii} It was the federal government's commitment to extend the benefits of higher education to a broad segment of our society that stimulated a range of policy actions, from the land-grant acts to the GI Bill to the Higher Education Acts, coupled with the support of higher education by state governments, that led to a public education enterprise that leads the world both in the quality of educational and scholarship and in the opportunities it provides to citizens. These policies, programs, and commitments were driven by strong social values and a sense of national and regional priorities.

Yet today, public leaders are increasingly discarding public policy in favor of market forces to determine priorities for social investment. The shift toward high-tuition/high-aid funding models, from grants to loans to tax benefits as the mechanism for student financial aid, from state-supported to state-assisted public higher education, all reinforce the sense that higher education today is seen increasingly as an individual benefit rather than a social good. Public higher education can no longer assume that public policies and investment will shield them from market competition.

Yet, even as state and federal government place increasing faith in the marketplace, they sometimes also hinder the capacity of public higher education to respond. In part, the capacity of public universities to respond and compete is

complicated by their size, inertia, and awkward governance structure. But even more significant is the reactive nature of public expectations and other, more overt, political forces like university governing boards. Efforts by public universities to respond to the market place will threaten both internal and external constituencies--the contented sacred cows who feed off of the status quo--thereby triggering political forces that will destabilize their governing boards.

Public universities hear time and time again from elected public officials and governing board members alike that they desire a more market-focused, cost-effective, and competitive paradigm for the university. Yet these are also the first people to hold up their hand to halt any of the changes necessary to respond to the marketplace. If this ambivalence toward the marketplace arose from a recognition of the civic purpose of the public university, then perhaps it would be not only understandable but also acceptable. Clearly market forces do not respond to many important needs of our society, and would not favor the broader purposes of higher education. The marketplace cares little about under-served elements of our society or the role of the university as a social critic.

Yet, more likely, the conflicting pressures on the public university to compete in the marketplace while being constrained by political pressures is probably due as much to the nature of contemporary policies as to any public recognition of broader social purpose. Politics tends to be reactive rather than strategic and visionary. It tends to defend the status quo rather than embracing change. It is driven by image rather than by issue, preoccupied with the here and now rather than concerned about the future.

Hence, we may be unable to protect the civic purpose of the public university--which, of course, might be best served by changing the public university into a more

learner-centered and society-serving institution. Instead the reactive and constraining nature of political forces and public perceptions may thwart those very efforts to preserve and protect the capacity of these institutions to serve a changing society.

In facing the prospects of a deregulated and restructured marketplace for higher education, it is essential for academic leaders and policymakers to develop policies that protect the public interest. They need to protect both the core values of the universities and the broader character of the public university as a public good rather than simply a source of market products.

Those organizations and industries that produce and distribute information and knowledge are entering a stage of convergence redefining entire value chains in many industries. As it emerges, the mega-industry created by the union of computers, communications, entertainment, media, and publishing will deliver education and learning in new ways and vast amounts that it will parallel, rival, and in some instances even displace schools as the major deliverer of learning.

The real danger will not be to any particular class of institutions but rather to those universities without a strategy or focus, and without a willingness to change and improve. Those institutions that choose to ignore the realities of the emerging marketplace either because of complacency or simply because of the glacial speed of their governance are at considerable risk.^{lxxviii}

The market forces driven by increasing demand for higher education and unleashed by technology are very powerful. Yet, if allowed to dominate and reshape the higher education enterprise, we could well find ourselves facing a brave, new world in which some of the most important values and traditions of the university fall by the

wayside. As we assess these market-driven emerging learning structures, we must bear in mind the importance of preserving the ability of the university to serve a broader public purpose.

Chapter 6

Financing the Public University

The financing of the university--the structure of its internal costs, the pricing of its educational services, the acquisition of the resources necessary to support its activities--has become the center of a national debate. The rising costs of higher education during a period of stagnant or declining public support and the consequent increases in tuition have triggered great concern about both the access to and quality of higher education. Nowhere is this debate more intense than in public universities, where most of the nation's college students are educated.

The ever-increasing costs of the university should not be surprising in view of the exponential increase in knowledge and the growing educational needs of our society. The demands upon our public colleges and universities continue to increase, with the population of college age students growing once again while the needs of adult learners are expanding rapidly. States expect public universities to provide the basic and applied research so important to economic growth in a technology-dependent economy. The needs for professional services in areas such as health care, technology transfer, and extension all continue to grow. Yet, state governments are less inclined to provide the funding increases necessary to allow public universities to respond to these growing needs of a knowledge-driven society in the face of other social priorities such as crime, health care, and K-12 education.

The acquisition, allocation, and management of financial resources is a particular challenge to the public research university, both because of its scale and breadth of

activities. With budgets in the hundreds of millions to billions of dollars, enrollments and employees numbering in the tens of thousands, and activities spanning the range from instruction to research to health care to economic development, financial issues are highly complex and consequential, particularly in the harsh light of public accountability. Both because of these complexities and our own experience, we will focus primarily on the financial challenges to public research universities, including their changing resource base and the array of options available to cope with these changes. In particular we will stress the importance of new financial models that strive to build far more diversified funding portfolios, less dependent upon state appropriations, that enable public universities not only to increase the resources available for academic program support but moreover provide resilience against the inevitable ebb and flow of state support. Of particular importance here is the need to build adequate reserve capacity, both in the budgets of operating units and through endowment accounts. The allocation and management of resources, the containment of costs, and the adoption of efficiency measures common from business such as systems re-engineering and total quality management are also topics of concern.

But perhaps most significant is an entirely new approach to financial management, responsibility, and accountability that would enable the public research university to thrive during a period of constrained public support. We will make the case that these public institutions must break free from those traditions and practices that depend heavily upon generous state support and instead manage their financial affairs much as private universities. They must become more entrepreneurial and proactive, seeking both the resources and the autonomy that will allow them to thrive in spite of the

vicissitudes of public funding. In a sense, they must become increasingly privately financed and privately managed public universities, even as they maintain their public commitments.

The Challenge of Financial Constraints

Throughout most of our history, public universities have relied heavily upon state appropriations to support their activities. But there has always been an ebb and flow in public support of higher education, dependent upon the fortunes of state economies. The sustained growth in appropriations during the 1960s and 1970s, associated with a strong economy and the growing needs of the baby boom population were followed by recession and deep cuts in state appropriations in the early 1980s and 1990s. More recently, the unusual prosperity of the late 1990s stimulated not only a growth in state and federal expenditures for higher education, but created a bull market sustaining growth in private giving and endowments. Yet, once again boom has been followed by bust, as state appropriations and investment incomes have begun to decline with a weakening national and global economy as we enter a new century.

Sometimes university leaders and governing boards seem to forget this cyclic nature of the financial resources available to public universities. They relax in the warm glow of a prosperous economy, typically committing to longer term recurring expenditures associated with staff growth or new capital facilities, and lose much of the discipline necessary for containing costs and prioritizing expenditures. Then when the inevitable downturn occurs, they awake to a series of financial crises demanding program retrenchment or even elimination. Although there is sufficient experience to suggest that such cycles of prosperity and austerity are a regular occurrence in public higher

education, with a periodicity typically ranging from five to ten years, few institutions are prepared--or perhaps able--to take the actions during good times such as sustaining adequate growth in tuition or cost containment that would prepare them for the inevitable downturn.

Beyond these economic cycles, however, there are longer-term trends in the public funding of higher education that suggest that bolder strategies are necessary. During the boom years following World War II, higher education accounted for a very significant portion of all appropriations from state tax dollars. However, growth in state support of higher education began to slow in the late 1970s and early 1980s as the states faced a host of competing demands for their limited resources. The public's demand for stiffer penalties for criminals called for huge outlays for prison construction and ongoing commitments for prison operations. The alarming deterioration in the quality of K-12 education boosted it ahead of higher education in public priority. Unfunded federal mandates such as Medicaid placed ever-greater burdens on limited state resources. Over a longer period of several decades, there has been decided erosion in state support for public colleges and universities.

From a broader perspective, public higher education, like many other social services, has experienced a sea change in the nature of public support. Throughout the 1980s and early 1990s, public colleges and universities faced the consequences of the structural flaws appearing in the budgets of federal and state governments that were experiencing a growing imbalance between tax revenues and public expenditures. This undermined support for higher education and other essential public services as governments struggled to meet short-term demands at the expense of long-term

investment.^{lxxix} Between 1978 and 1998, direct state appropriations as a proportion of the total revenue of public colleges and universities declined by nearly 25 percent despite a continued growth in college enrollments.^{lxxx} During the same period, the net tuition revenues per full-time student in public institutions increased by over 60 percent. The booming economy of the late 1990s allowed some restoration of state support, but appropriations turned down once again as yet another economic recession greeted the new century.

Even in the face of declining public support, there was a continued expansion in the demand for higher education and a consequent expansion of the higher education enterprise. Strong local interests drove both growth in the number of regional institutions and the evolution of established institutions. It was the aspiration of community colleges to become four-year institutions, four-year colleges to start graduate programs and become universities, and regional universities to become national research universities. This was sustained by willing and energetic political constituencies. In the face of more limited public support, this over-expansion of the enterprise raised serious concerns about eroding quality.

The costs of providing education, research, and service per unit of activity have increased at an even faster rate, since these university activities are dependent upon a highly skilled, professional workforce (faculty and staff); they require expensive new facilities and equipment; and they are driven by an ever-expanding knowledge base. Higher education has yet to take the bold steps to constrain cost increases that have been required in other sectors of our society such as business and industry. This is in part because of the way our colleges and universities are organized, managed, and governed.

But, even if our universities should acquire both the capacity and the determination to restructure costs more radically, it is debatable whether those actions adopted from the experience of the business community in containing cost and enhancing productivity could have the same impact in education. The current paradigm of higher education is simply too people- and knowledge-intensive. Furthermore, the organization of the contemporary university (e.g., semi-autonomous academic and professional disciplines) and its governance and management style (e.g., shared governance and limited authority for line officers) make cost containment and productivity enhancement very difficult.

Public colleges and universities have been faced with the daunting task of maintaining quality within severely restricted revenues from traditional sources such as state appropriations. The better institutions have tried to compensate for declining appropriations by increasing tuition and launching private fund-raising campaigns. But as the cost of attending college began to rise at rates outstripping the CPI, both students and parents have raised their objections. Although most public institutions have been able to keep the tuition levels far below those charged at private schools, their rate of increase also has outstripped the CPI, alarming students, parents, the public, politicians, and eventually governing boards.

Today it is clear that the strategy of increasing tuition to compensate for eroding public support cannot continue indefinitely. Although the competitive marketplace alone would certainly tolerate such price increases in public universities where tuition is still at a very nominal level, public resistance, as manifested through political pressures at the federal, state, and governing board level, simply will not allow institutions to continue to balance their books through tuition increases. Tuition levels stabilized in the mid to late

1990s with strong state appropriations and even stronger political pressure. But as state economies weakened at the end of the decade, tuition levels at public colleges and universities once again began to rise and are likely to continue to do so.

The reason is simple. The underlying structural factors leading to an imbalance between the costs of public university activities and the resources available from traditional sources such as state appropriation remain. Higher education has done little or nothing to address the inadequacy of its fundamental cost structure. Increased productivity based upon changing methods of teaching and research has not occurred. Faculties still behave in all material respects as they always have. Costs have continued to increase on a per unit of activity basis, technology is employed in uneven ways and seldom integral to the learning process, and the shift of blame has become a fine art. In fact, we continue to benchmark instructional costs in terms of old-fashioned parameters such as students-per-faculty or instructional contact hours, thereby implicitly assuming that pedagogy has not changed for decades (which it has not in most institutions).

Perhaps more troubling and undermining to reform has been mission creep. During the past two decades, auxiliary services such as hospitals, intercollegiate athletics, and technology transfer have grown in number and breadth. On many campuses, the amount spent on academic programs is less than half of the total university budget. These peripheral businesses are only tangentially related to the fundamental purposes of the university, but they consume disproportionate amounts of time, energy, and financial resources.

Everywhere there are signs that even the best public universities are at risk. As costs have risen, many able students have sought less expensive options such as

community colleges for at least a portion of their education. A few business schools have capitalized on executive education programs, and those that have done so have prospered handsomely. But even these schools with significant successes are often looked upon by their arts and science colleagues as not being really serious members of the academy. The most prestigious public institutions have failed to appreciate the economic as well as the scholarly value of lifelong learning.

For the most part, faculties have been both uninterested and detached from the financial challenges faced by the university--unless, of course, it has had direct impact on faculty compensation. Professors have been insulated by their administrations from the realities of the market place--indeed, many are even unaware of the existence of a marketplace for higher education. Many believe that the sheltered life they live will continue and that fundamental systemic change is unnecessary and damaging to high quality educational programs. Competition for the higher education dollar does not even appear on their radar screen.

The basic structure of the academy, its reward system, its selection of potential members, all contribute to a condition that cannot long survive in its present form. Technological change and opportunity have made alternative options for learning not only possible but in many ways preferable. The cloistered environment where scholars separated students from the distractions of broader society in order to prepare them to become productive and contributing members of that society becomes increasingly irrelevant to a connected global economy. The higher education enterprise in America must change dramatically if it is to restore a balance between the costs and availability of

educational services needed by our society and the resources available to support these services.

Diversifying the Resource Base of the Public University

Many public colleges and universities are almost entirely dependent upon state appropriations. They exist from one legislative session to the next, experiencing good times or hard times determined by the generosity of higher education appropriation committees. They experience periods of boom and bust, first expanding programs and capacity during times of prosperity and generous state support, and then cutting programs and enduring financial hardship when their state's economy goes into the tank.

Little wonder, then, that many leaders of public universities have tried to break the cycle and reduce dependence upon state appropriations by developing alternative sources of funding. They see a more diverse resource portfolio as not only essential to building and sustaining the quality of their institution, but moreover as essential to providing the flexibility to ride out the inevitable downturns in state support. Closely related to this is a strategy to build reserve funds, both through cost controls generating budget savings that could be carried over into reserve accounts and through private gifts and additional revenues from auxiliary activities such as university health centers that could be invested in funds functioning as endowments. Such reserves provide an important hedge against downtimes, allowing more stability in institutional planning and operation. Furthermore, by enhancing the financial strength of the university, they frequently lead to higher Wall Street credit ratings and hence lower interest rates for debt financing major capital facility needs.

Although most public colleges and universities are heavily dependent upon state appropriations, they do have access to other resources:

- Federal support for research and student financial aid
- State appropriations
- Tuition and fees paid by students
- Gifts and endowment income
- Auxiliary activities (such as hospitals, residence halls, and athletics)
- Technology transfer licensing and equity investments in spin-offs

The availability and attractiveness of each of these options varies greatly and depends upon the nature of the institution and its political environment.

For many public institutions heavily dependent upon state appropriations, an appropriate strategy might be to build the political influence necessary to protect or enhance state support. Small private institutions with modest endowments depend heavily upon tuition and fees, and issues such as enrollments and tuition pricing play a key role in financial strategies. Highly focused research universities such as MIT and Caltech are heavily dependent upon federal research support and seek to influence federal research policies.

Although all dollars may be green, their utility for supporting the operations of the university varies greatly. Most resources have strings attached that restrict their use. For example, the funds provided by research grants and contracts are usually restricted to quite specific research activities. Most private support is given for particular purposes, such as supporting student financial aid or a specific building project. Tuition income and state appropriations generally have more flexibility, but here too there may be many

constraints, for example, restrictions to the support of particular academic programs or the support of students who are state residents.

To understand better some of the issues involved in financing public higher education, it is useful to comment briefly on each of these revenue and expenditure elements. Federal support of higher education occurs through direct programs such as research grants from federal agencies, student financial aid, and program support in critical areas such as health care. It also occurs through indirect mechanisms such as favorable tax treatment of private gifts or endowment appreciation. Although federal support grew rapidly during the post-war years, it began to level off in the 1980s as other national priorities moved ahead of higher education and efforts were launched to limit federal spending.^{lxxxii} More specifically, research funding has stayed roughly constant since the 1980s, although the number of universities and faculty seeking federal research support has grown. Although there has been some modest growth in recent years, this has been heavily biased toward biomedical research which primarily benefits universities with large medical centers. Federal programs aimed at funding specific academic programs to sustain social priorities such as public health and education have largely disappeared.

Although the federal support of student financial aid has remained relatively stable, its shifting nature from need-based grants to more broadly available loans to tax benefits has redirected funding from those with needs to those with political power. The Taxpayer Relief Act of 1997 was good news for the middle class, with almost \$40 billion of tax assistance for college expenses. But this government support will flow to students and families, not necessarily to higher education. Furthermore, this budget-balancing

strategy is only a stopgap measure. Without a major restructuring in federal entitlement programs or a dramatic increase in national productivity, the imbalance between federal commitments and revenues is likely to become even more serious over the next two decades as the baby boomers move into retirement. It is also likely that the trend toward increasing federal regulation will continue (health, safety, conflict of interest, scientific misconduct, foreign involvement)--and the costs associated with compliance will continue to rise.

It is in the states where the public role in supporting higher education has changed most dramatically over the past decade.^{lxxxiii} As late as 1980, the states contributed 45 percent of all higher education revenues. By 1993 that share had fallen to 35 percent. Although there has been some mild recovery with the economic prosperity of the past several years, most public universities are barely back to where they were in the 1970s, although they once again are facing declining appropriations as the economy weakens. For public institutions, the contribution of state and local government spending has reached its lowest level since World War II, comprising roughly 53 percent of the support base. Cost shifting from the federal government through unfunded mandates, such as Medicare, Medicaid, ADA, and OSHA, has destabilized state budgets. Many states have made massive investments in prisons and commitments to funding K-12 education through earmarks off the top of the state budget. These have undermined their capacity to support higher education. In fact, in many states today the appropriations for prisons have now surpassed the funding for higher education and show no signs of slowing.

There is a growing consensus that, unlike the need for retrenchment experienced in the 1980s, the erosion in state support for higher education in the early 1990s and then

once again a decade later is part of a more permanent shift in funding priorities. Generous public support of higher education is unlikely to be sustained in most states over the longer term, even though the echo of the baby boom will lead to a significant growth in college age students in many parts of the country over the next decade. Ironically, even as states throttle back public support of higher education in the face of other competing social priorities and demand increasing accountability, they are also demanding that public universities serve the ever expanding needs of the growing population of college-age students and the research and service needs of an increasingly knowledge driven economy.

Whether public or private, most colleges and universities draw the majority of their revenues from operations--tuition from instruction, rentals from housing, clinical income from health care, and so on. In many states, even appropriations are indexed to instructional activity. An increasingly significant revenue source for many public universities is tuition, the price charged to students for their college education. Yet we have seen in Chapter 3 that the relationship between revenue and pricing in higher education is very complex. In both public and private colleges and universities the true costs of a college education are heavily subsidized with public and private funds. Often tuition is discounted still further through financial aid programs. This is certainly an important consideration from the point of view of the student, but it is also important from the perspective of financial operations, since financial aid is a direct write-off against tuition revenue in many institutions, particularly at the margin. Some institutions have found that the incremental cost of financial aid programs necessary to protect their student applicant pool actually exceeds the additional revenue from tuition increases.

Determining tuition rates involves a complex set of considerations including the actual costs of instruction at the institution, the availability of other revenue sources that can be used to subsidize instructional costs (tax support, private giving, and income from endowment), competition with other institutions for students, and an array of other political factors. These factors can be woven together in the determination of tuition levels in several ways. Private universities relying on high-tuition/high-financial aid strategies are much more constrained by market concerns. Institutions of comparable reputation generally have comparable tuition levels.

For most public colleges and universities, the determination of pricing, tends to be influenced far more by political pressures than by considerations of educational costs, financial needs, or market sensitivity. As we have noted, tuition levels in public universities were held at very nominal levels amounting to only a small fraction of actual costs until the 1980s. As institutions attempted to compensate for eroding state appropriations by increasing tuition in the late 1980s and early 1990s, they triggered first public concern and then political reactions.

As a consequence, today many state legislatures and public university governing boards have learned that strong opposition to tuition increases makes eminently good politics, even during times when state appropriations are dropping. Although they sometimes rationalize this behavior by suggesting that universities will become more efficient if they have less money to spend, it is also clear that concerns about quality in higher education do not carry as much political weight as concerns about prices. In some states, public institutions have also found that there is a direct link between tuition and

state appropriation; increasing one decreases the other. For most institutions, either market forces or political pressures strongly constrain tuition increases and revenues.

Clearly, public agencies such as state legislatures and university governing bodies need to understand better the interplay between market pressures and the impact of public subsidy. While it may be tempting to respond to the public demand for low cost higher education by simply mandating low tuition levels, this will conflict with an educational marketplace in which pricing will be increasingly set by private institutions and proprietary providers. If the state constrains the tuition levels of public institutions far below this natural market price, then it must either provide adequate public appropriations to offset the difference or accept the inevitable deterioration in quality that will occur in public institutions.

In the face of inadequate appropriations and constrained tuitions many institutions have no choice but to sacrifice quality. However, some universities do have the reputation and capability to restructure themselves to stress those activities with income-generating potential that are less regulated. For example, professional education, applied research, technology transfer, and professional services are examples of relatively unregulated and sometimes profitable activities. Yet, here too there is a public concern, since shifting institutional focus from state-appropriation-starved, tuition-constrained academic programs such as undergraduate education to profitable professional education may not respond to the highest public priorities.

For many universities, private fund raising provides the most immediate opportunity for enhancing support.^{lxxxiii} For private colleges and universities, private fund raising, particularly that aimed at building endowments, has long been a critical priority.

But increasingly even for public universities, private fund raising may represent a more realistic option in the face of strong political opposition to tuition increases. Most colleges and universities are making major investments in their fund-raising activities, increasing development staff and developing new public relations efforts. Yet, while there is generally near-term payoff to these efforts, they also find themselves competing with other institutions for private gifts from the same sources.

People give to universities for many reasons. Some contribute to say thanks, to pay institutions back for the educational opportunities they enjoyed. Others support higher education as a way to have impact on the future. Some wish to achieve immortality through contributions to a perpetual or endowment fund. Still others want monuments through funding campus construction. Yet all too often donors prefer to give to wealthy universities, to see their names associated with buildings or endowed chairs at elite institutions (what some refer to as “the edifice complex”). The old maxim seems to apply in higher education as elsewhere: the rich get richer, and the poor fall further and further behind.

The revenue generated by auxiliary units of the universities--particularly, their academic medical centers--has been the fastest growing component of the resource base of many large public universities over the past two decades. Yet these are also the most uncertain elements of a university's resource base since they depend upon rapidly changing markets and shifting public policies. With the rapid evolution of managed care and capitation and the entry of for-profit health care providers, the academic medical center has become an endangered species. Most other auxiliary units such as intercollegiate athletics generate revenue barely sufficient to cover their own operating

expenses. But there are occasional opportunities elsewhere. For example, continuing education presents an excellent opportunity to generate additional revenue. The executive education programs conducted by many business schools provide examples of the degree to which high-quality programs, aggressively marketed, can generate resources that directly benefit academic units, while aligning well with the teaching mission of the institution. Technology transfer activities, through royalty licenses and equity interest in business startups, have provided revenue streams for some research universities.

The diverse and ever-changing nature of the portfolio of resources available to finance higher education has stimulated and been tapped by marketlike or entrepreneurial behavior of universities and their faculties. For major private and public research universities alike, most of the resources necessary to support academic activities are generated through the entrepreneurial activities of the institutions, for example, by attracting sufficient enrollment to generate the necessary tuition revenue, by competing for federal research grants, or by seeking private gifts. As a result, faculty members became quite skillful at generating the resources necessary to support their activities.^{lxxxiv}

While creating highly resilient institutions capable of weathering financial storms, such a market-driven, entrepreneurial culture has also had less beneficial consequences. Many contemporary universities resemble shopping malls, with programs and activities determined largely by available resources rather than strategic intent. Those programs such as business, medicine, and engineering with strong resource opportunities are usually winners; others such as the arts and the humanities, with fewer opportunities for external support, can become impoverished backwaters. Furthermore, with the ebb and flow of various elements of the university's resource portfolio, both its missions and

programs would shift to adapt. Put another way, our shifting revenue streams and obsolete cost structures suggest that the very nature of our business is changing. For the longer term, we cannot depend upon simply substituting one revenue stream for another or cutting costs at the margin. We must consider changing our entire mix of activities to respond to the changing needs of those whom we serve.^{lxxxv}

Yet here public universities will face the challenge of relating to the ever-broadening constituencies associated with a diversified resource portfolio. As tuitions rise, students and parents will demand more in the way of educational quality and campus experiences. Donors, whether individuals, foundations, or corporations, will expect more attention to their interests and needs as their contributions to public universities rise. The resources provided by state and federal government programs such as sponsored research or medical training generally have strings attached that require both accountability and adherence to complex rules and regulations. And, as public universities become more actively involved in the commercial marketplace with revenue generating activities such as technology licensing, distance learning, and equity interest in spin-off companies, they will be subject to the same market forces that press upon for-profit companies.

Public universities may have a particularly difficult time in responding to the diversity of patron expectations and needs because of the politics and public pressures that swirl about their activities. It seems obvious that universities must take care in deciding what they are willing to do for additional resources. Yet this may prove difficult for public colleges and universities long accustomed to attempting to satisfy all of the needs of their many constituencies. Furthermore, as the share of university support provided by state appropriation declines, the other patrons of the public university may

demand more attention to their needs in the face of political and public pressure to do even more to respond to state needs even with more limited public funding.

The Importance of Reserves

Many public colleges and universities have been forced to operate in a hand-to-mouth mode, totally dependent on state largesse from appropriation cycle to appropriation cycle, with little funding capacity to respond to unusual challenges or opportunities. Some public institutions have even been required to return unexpended appropriations to the state treasury at the end of each fiscal year.

Yet the obligations of the public university are far too significant to leave to the whims of the legislative appropriation process, at least for the short term. Students must be educated. Patients must be treated. There are federal obligations for research grants and contracts to be fulfilled. And the university must respond to a host of other important services to both the public and private sector. Moreover, while costs structures are generally both relatively fixed and straightforward to estimate, the revenues associated with many activities such as patient care in hospitals or television income for athletic events can be quite unpredictable. For this reason, prudent management would suggest the wisdom of building significant reserves in the accounts associated with key activities.

For example, at the University of Michigan, where we had sufficient autonomy from state government to allow us to manage our own financial affairs, we made it a very high priority to accumulate sufficient reserves to protect both the university and its programs and employees in the event of a serious downturn in state support. We had learned a hard lesson from the difficult days of the late 1970s and 1980s when a serious recession reduced state appropriations by roughly 30%, necessitating traumatic budget

cuts, program reductions, and staff downsizing. To this end, we used expenditure control to build reserves in both operating and capital academic accounts at both the central and department level. Furthermore, we used excess revenues during prosperous years to build reserves in the accounts of volatile auxiliary activities to levels such that the interest earned by investing these reserves would cover any conceivable shortfall in revenues. For example, in intercollegiate athletics, we tried to carry reserves of at least \$25 to \$30 M, while for our university hospitals, we built reserves to over \$1 billion. In both cases, the reserves were roughly comparable to one year of total revenue.

While such reserves had an important impact on our capacity to effectively manage the university in the face of the inevitable and unpredictable challenges and opportunities, they also had a second important benefit. They allowed us to make the case for higher credit ratings from Wall Street agencies, raising it to the highest Aaa level in 1997 and allowing us to issue debt through bonds and other instruments at minimal interest rates.

Of comparable importance to the financial strength of public universities are endowment funds. Endowments are contributed funds, held and invested by the university in perpetuity, whose proceeds are dedicated for a particular purpose such as supporting a distinguished faculty member (an endowed professorial chair), a student (an endowed scholarship or fellowship), or perhaps an academic program. Frequently the benefactor's name is associated with the endowed activity.

Since the management of endowments is intended to honor the original intent of the donor in perpetuity, only a fraction of the income is distributed for the designated purpose of the fund. The rest is reinvested to maintain the purchasing power of the fund

in the face of inflation. For example, although an endowment fund might earn a 10 percent return, only 4 percent might be distributed while 6 percent would be reinvested, thereby allowing the endowment to appreciate.

However, even during the 1990s when endowment investment returns frequently have been in the 15 percent to 20 percent range, many of the wealthier institutions have set distributions at 3 percent or less, thereby allowing the funds to appreciate to enormous magnitudes (e.g., Harvard currently has an endowment of \$19.2 billion; Yale, \$10.1 billion; Texas, \$10 billion; and Michigan \$3.5 billion).^{lxxxvi} The soaring magnitude of some endowment funds has raised concerns both of the appropriateness of such a low distribution rate, which invests in future opportunity rather than meeting current needs, and the staggering magnitude of some endowment funds. In fact, it has been suggested that some universities, from a financial perspective, look more like banks than educational institutions, since their most significant economic activity involves managing their endowment investments.

Yet it must also be stressed that in 1998, only 31 universities in America had endowments over \$1 billion. In fact, only 10 percent of the nation's 3,600 colleges and universities had endowments above \$50 million, with the vast majority having endowments well under \$10 million. Hence, while endowment income is important to a small number of elite institutions, it remains inconsequential to most of higher education in America.^{lxxxvii}

The Allocation and Management of Resources

The operation of a university, like other enterprises in our society, requires the acquisition, allocation, and management of adequate resources to cover the costs of

activities. This is a somewhat more complex task for academic institutions because of the great diversity of the constituencies they serve, the wide array of their activities, and the cross subsidies that flow among these activities.

The not-for-profit culture of the university, whether public or private, leads to a somewhat different approach to the development of a business plan than one would find in business. Universities usually begin with the assumption that all of their current activities are both worthwhile and necessary. They first seek to identify the resources that can fund these activities. Beyond that, since there are always an array of meritorious proposals for expanding ongoing activities or launching new activities, the university always seeks additional resources. It has only been in recent years that the possibility of reallocating resources away from ongoing activities to fund new endeavors has been seriously considered.

Financial Budgeting and Management

Over the past decade, it has become increasingly clear that universities must develop more effective financial management systems, capable of sustaining their core missions--teaching, research, and service--in the face of the rapid changes occurring in their resource base. Good managers will make good (cost-effective) decisions when they are provided with the necessary information and proper incentives. The first challenge for a university is to select good managers and to provide training for them. The second challenge is to identify the appropriate level at which decision-making authority should lie with respect to each type of decision. If it is at too high a level there may not be an understanding of the primary impact on the unit or individuals (e.g., if the president were to assign faculty to courses). If it is at too low a level there may not be an understanding

of the secondary impact on related units or individuals (e.g., if each faculty member were to choose his or her own courses).

Many universities--particularly public universities--have relied for decades on a system of resource allocation best described as “incremental budgeting” based on a fund-accounting system.^{lxxxviii} In this system, a unit begins each fiscal year with the same base level of support it had received the previous year, incremented by some amount reflecting inflation, a unit’s additional needs and aspirations, and the university’s capacity to provide additional funds. These resources are partitioned into specific funds, more determined by historic traditions than strategic management, e.g., the General and Education Fund, Restricted Fund, Restricted Expendable Fund, Auxiliary Fund, and Capital Fund. Beyond simply serving as an accounting tool, firewalls are constructed between these funds to limit transfers.

This system worked well enough during the three decades following World War II when the increases in public support outpaced inflation. Universities had the additional dollars each year to launch many new initiatives, to do many important new things, without disturbing the resource stream to ongoing activities. But, with the erosion in public support--particularly state support--that began to occur in the late 1970s and has continued through today, it has become apparent that such incremental budgeting/fund accounting approaches are increasingly incapable of meeting new challenges and opportunities. Indeed, in the face of a more limited resource base, they eventually lead to the slow starvation of all university activities.

The more constrained resource base facing higher education during the 1990s and beyond will force many institutions to abandon incremental budgeting if they are to

preserve their core values, mission, and character. Universities must retain the capacity to set priorities and allocate resources to these priorities. There are many ways to do this. One can continue to implement targeted resource reallocation based upon decisions made by the central administration, assisted by faculty advisory groups. But in most universities today, not only are most costs incurred at the unit level, but this is also where most of the institution's revenues are generated. Hence centralized resource-management schemes are increasingly incompatible with the realities of highly decentralized resource generation and expenditure.

An alternative is to totally decentralize resource management, that is, to institute an "every tub on its own bottom (ETOB)" strategy, similar to that used at several private institutions. Each unit has full authority and responsibility for its financial operation. A serious drawback is that it is difficult to address university-wide values or objectives with such a highly decentralized approach.

Many private universities and a few public universities have chosen an intermediate route to decentralize resource management through a system known as responsibility center management as an alternative to the more commonly used incremental fund-accounting system.^{lxxxix} In its simplest form, this system allows units to keep the resources they generate. It holds them responsible for meeting the costs they incur. It then levies a tax on all expenditures to provide a central pool of resources necessary to support central operations (such as the university library) while providing the additional support needed by academic units unable to generate sufficient resources to support their activities.

Although the appropriate degree of decentralization in resource control and responsibility will depend on institutional character, culture, and tradition, it is clear that the highly centralized, incremental budgeting accompanied by fund-accounting systems may no longer suffice in the rapidly changing resource environment of the contemporary university. Moving from crisis to crisis or subjecting institutions to gradual starvation through across-the-board cuts simply are not adequate long-term strategies.

Another necessary change will be in the way universities plan. The changing financial environment demands that planning exercises be conducted with significantly tightened and restrictive revenue assumptions. No longer will it be feasible--or even acceptable--to develop expenditure budgets first and then to close the gap between expenditure plans and revenue projections by a price increase (e.g., tuition). There will have to be much more care in setting priorities, along with a painful acknowledgment that in order to do something new we generally will have to eliminate something old. Innovation by substitution, not growth by incremental resources, will have to become the operative management philosophy. For instance, an academic unit that wishes to embrace a new sub-field of its basic discipline may be required to phase out some other activity in order to make room for the new endeavor.

The necessity for cost containment need not be placed in a negative context. It is an opportunity to restore credibility with the various clients and stakeholders of the university. It is an opportunity to demonstrate to the potential private supporters of the university that we are serious about cost effectiveness and institutional efficiency. They need to know that their future support will be used wisely in the delivery of instructional, research, and public service programs.

Underlying nearly all of these comments is the fundamental premise that we cannot afford to engage in planning which is always "cost-plus" in nature. We cannot always start with where we are in a given unit and allocate existing resources to ongoing activities, and then depend on additional resources to undertake a new or innovative activity. We must instead consider eliminating, reducing, or otherwise changing a current activity to make budgetary room for the new activity that we believe to be important.

To reduce costs, to improve productivity, to enhance quality in order to generate flexible operating funds does not sound easy. It will not be easy. But it has been done in other environments, and it can be done in the university.

Cost Drivers

Most institutions now realize that they need to focus instead on the other side of the ledger, on costs. Not only do they need to reduce costs and increase productivity, but they also need to consider reducing the number of activities so that they can better focus their limited resources to sustain and enhance quality. All universities have some capacity to become more efficient or productive. Some will be able to achieve sufficient productivity gain to retain or enhance their existing portfolio of programs and activities while achieving desired levels of quality. For most, the dominant strategy will be the painful process of focusing resources to achieve quality by shedding missions and activities.

A number of factors drive the costs of a college education: salaries paid to faculty and staff; costs of building and maintaining instructional facilities; infrastructure costs, such as libraries, computer centers, and laboratories; and costs of various support and administrative services. As one attempts to understand the nature of cost increases in

higher education, it is tempting to place the blame for the increasing costs of a college education on external forces. These might include the need to compete for high-quality faculty, staff, and students; the external imposition of new rules and regulations; or the increasing litigiousness of our society. While these forces clearly influence a university's costs, they are only part of the picture. Just as important are those costs universities impose on themselves by operating in less than the most efficient manner by continuing to depend upon systems and processes that allow or even encourage waste, duplication, and rework. Waste of resources--due to our mode of operations--occurs more often than we care to admit.

Market-driven external forces that greatly influence costs are in large part the result of institutional objectives, like comprehensiveness or quality. Such objectives require that institutions of the same caliber compete with one another for both faculty and students. They must meet market rates for faculty salaries, workloads, and other resources and must compete effectively for the best undergraduate and graduate students. Faculty needs for computing services, library resources, laboratory facilities, support staff, and associated expenses such as travel are also competitively driven. It is clear that different choices related to comprehensiveness or excellence lead to different markets and potentially lower cost resources.

There also exist many costly external forces that are not market driven. These consist of rules, regulations, and social forces. In addition, the university is asked to provide public service as well as time and talent to local, state, national, and international organizations for a wide variety of important activities and concerns.

We should also recognize that certain cultural factors sustain the current cost structures of higher education. Most institutions tend to focus on inputs rather than outputs. We tend to recruit those faculty with the highest reputations and those students with the highest scores on standardized tests. We measure the success of leaders of higher education by how many private gifts they procure or the size of the university endowment they create. Rarely do we focus on more traditional measures of productivity or value-added: the learning of students or the impact of scholarship.

In part this arises from the priority given institutional reputation or prestige in management decisions. Most colleges and universities are driven by the competitive marketplace to continually increase their financial capacity to hire better faculty, attract more talented students, and enhance the reputation of their academic programs. During the 1990s the exceptional growth in the equity markets and consequent surge in private giving and endowments, coupled with substantial tuition increases, and subsidized in part by favorable federal financial aid policies, have allowed private colleges and universities to become ever more competitive in the prestige war. Although public universities have attempted to keep pace, political constraints on tuition levels and state appropriations have eroded the competitive position of public higher education for the top faculty and best students.

Even during periods of relative prosperity such as the late 1990s, states appeared reluctant to increase appropriations for the purposes of enhancing faculty salaries or establishing new programs. As long as the market is being driven by institutions who believe that high expenditures correlate with national prestige, these fiscal trends will

disadvantage public universities who are increasingly being monitored and evaluated for greater efficiency.

Financial Restructuring

The fiscal pressures resulting from reduced revenue streams and uncontrolled cost drivers can be substantial. These pressures could lead to negative results within the normal university environment with a long tradition of incremental budgeting. How can such pressures be made positive, and how can the funds that will be needed for new ideas and continuing improvement be found?

Cost Containment and Productivity

Higher education has been slow to focus creative attention on a careful understanding of quality and how quality relates to costs. As we face an era in which incremental resources become scarcer for the university, learning how to achieve higher quality while containing costs will be absolutely vital. During the past two decades, people in many organizations, in business, government, and health care, learned that to improve quality and overall institutional performance, they needed--often for the first time--to carefully identify their customers, to learn more about the needs and expectations of those customers, then strive to improve their performance based upon what they have learned. Although some faculty members bristle at the term, in truth, the university does indeed have customers. Those most obvious are external to the institution, such as prospective students or faculty. But customers may also be internal--that is, one university unit may be the customer of another. Attention to defining a unit's customers and to understanding their needs and expectations is key to quality improvement and a step toward understanding and eliminating unnecessary costs.

A second major insight from industry experience with quality in the 1980s is that the pursuit of certain dimensions of quality clearly increases costs (e.g., hiring "star" faculty members, increasing the specialized programs available to undergraduates, adding staff to improve the quality of support for any activity). But the pursuit of some dimensions of quality can actually lead to cost reductions. This is a major change from the traditional thinking that quality (always) costs more. For example, by providing students and faculty with direct access to university services through the Internet, an institution can not only improve the timeliness and effectiveness of service activities but as well eliminate the costs associated with layers of unnecessary management and bureaucracy.

Restructuring and Reengineering

Beyond the continual efforts to contain costs, increase productivity, and innovate through substitution rather than growth, universities need to follow industry's lead by asking more fundamental questions. They need to shift from asking "Are we doing things right?" to "Are we doing the right things?" They need to grapple with the difficult challenge of restructuring and re-engineering the most fundamental activities of the institution.^{xc}

Most institutions have considered the redesign of administrative processes, such as managing financial operations, student services, and research administration. But since the core activity of the university involves academic processes, this too will eventually need fundamental reexamination. Here institutions face more serious challenges. First among these is the faculty culture that strongly resists business methods. But there are other fundamental obstacles as well.

For decades universities have defined academic quality in terms of inputs--student and faculty quality, resources, facilities--rather than outputs such as student performance. Rethinking the core academic functions of the university requires a shift in perspective from resources to results. This turns the institutional focus from faculty productivity to student productivity; from faculty disciplinary interests to what students need to learn; from faculty teaching styles to student learning styles. It reconceptualizes the university as learner-centered rather than faculty-centered. It grapples with the most fundamental processes, such as the way decisions are made, how information is shared, how students are taught, how students learn, how faculty work, how research is conducted, and how auxiliary enterprises are managed.

Nonetheless, there are constraints on the internal actions an institution can take to control costs. The impact of tenure or collective bargaining agreements limits the institution's capacity to reduce faculty size. Political pressures can influence the maintenance of enrollment levels and program breadth. And, as a matter of fact, many institutions are already operating at the margin in terms of cost reduction--at least within the current higher education paradigms. Ironically, the only unconstrained variable that many institutions can adjust is quality. Efforts to reduce costs to stay within a given budget can sometimes only be achieved by accepting lower quality standards. In sharp contrast to the business sector, revenue-driven models of higher education could well lead to significant erosion in program quality.

Even for those universities that accept the challenge of restructuring academic processes, there can be disappointment.^{xci} The pattern of retrenchment, reorganization, restructuring, and reengineering may not yield substantial productivity gains. Something

more may be needed: fundamental transformation of both the university and the higher education enterprise, a topic for the later chapters of this book.

Financial Management, Responsibility, and Accountability

Despite the fact that in many ways, the public university has become one of the most complex institutions in modern society--far more complex, for example, than most corporations or governments--its management and governance could best be described as "amateur." That is, although competent professionals have usually been sought to manage key administrative areas such as investments, finances, and accounting, the general leadership, management, and governance of the university has been the responsibility of either academics or lay board members. In fact, many public universities take great pride in the fact that they not only are led and managed by "true academics" with little professional experience, but also governed by lay boards with little business or educational experience.

Yet today the typical public university affects the lives not simply of thousands of students and faculty but thousands more staff members and hundreds of thousands of community and state citizens that depend upon its critical services such as education, health care, and economic development. Furthermore, these institutions attract and expend billions of dollars of public and private funds. We can no longer pretend that the detached, amateurish academic leadership model is sufficient. Nor is it any longer sufficient to rely upon politically selected lay boards for their governance. Like other major institutions in our society, we must demand new levels of accountability of the university for the integrity of its financial operations, the quality of its services, and the stewardship of its resources.

Although some universities still draw much of their leadership from academic ranks, more and more are recognizing that the vast scope, complexity, and impact of these institutions requires the presence of talented and qualified management professionals. Too much is at stake, both for the institution and the society it serves, to tolerate the limited experience and business acumen of the academy. In fact, there are increasing calls for more formal training in business and management for all of those in academic administration, from presidents to deans to department chairs. Too many people depend upon their decisions; too many dollars are involved; too much legal liability is at stake, to rely upon the limited management experience of most academics.

Yet, even with adequate training and experience, the administration of the public university faces many challenges. Most institutions lack serious financial planning-- which is not surprising given that the academy resists any suggestion that academic units should develop a business plan. Universities are plagued by a serious incompatibility in the responsibility and authority assigned to those in administration. All too often those charged with the responsibility for various activities simply are not provided with the authority to carry out these tasks. By the same token, many with relatively little responsibility have great authority to prevent decisive action. Little wonder that the university administration is frequently unable and unwilling to tackle major issues such as the downsizing or elimination of obsolete programs in order to free up resources for new initiatives. Sacred cows such as intercollegiate athletics continue to graze on the core academic programs of the institution.

This mismatch between authority and responsibility can be attributed to many factors, for instance, a faculty culture that resists strong leadership, or the relatively short

tenure of most academic administrators. But ultimately all of these factors trace to the political nature and the limited experience of the governing boards at most public institutions. In a legal sense, the governing board of a public university is responsible for its integrity. They have a fiduciary responsibility for its financial operations, as well as a legal responsibility for its welfare. Yet, this responsibility exists largely in theory and not practice, since board members are rarely held personally accountable for their decisions or actions. Indeed, governing boards as bodies are rarely evaluated with respect to their competence and actions.

This should be contrasted with the liability of directors of a major corporation, who can be held not only personally liable for their board decisions and actions, but can be removed in a timely fashion by a vote of the shareholders. Furthermore, the governing boards of private universities can deal with unsatisfactory performance by removing any of their members through board action. Not so for the members of public governing boards, who can be removed only by action of the electorate or the governor--and then only when their term has expired.

This absence of direct accountability of the governing board is one of the most serious factors in leading to weak management and leadership of public universities. Since these boards rarely have sufficient experience or breadth to understand the complexities of the contemporary university, they are disinclined to seek or support strong administrations that might challenge their limited expertise and authority. All too frequently they tend to focus on short-term personal agendas at the expense of the long-term welfare of the institution. In fact, some boards hide their own inexperience behind

the inexperience of the institutional leaders they select, leading eventually to a cascade of incompetence throughout the administration of the university.

A Broader Perspective

The current trends in both the funding and costs of higher education suggest that we may be headed toward a crisis in the years ahead. The dilemma has been described earlier: if colleges and universities continue to increase tuition to compensate for the imbalance between societal demand for higher education and rising costs on one hand, and stagnant public support on the other, millions of Americans will find a college education priced beyond their means. While cost containment and renewed public investment are clearly needed, it could well be that entirely new paradigms for providing and financing higher education are required for the longer term.

It will become even more important to use increasingly limited public dollars for higher education wisely. We have noted that recent experience has demonstrated that raising prices for middle- and upper-income students in public higher education does not discourage enrollments. In a similar sense, using federal dollars to subsidize the lending costs of middle- and upper-income students does little to create new opportunities for college enrollment.

In fact, some go still further and suggest that the very principle of low tuition levels at public universities is, in reality, a highly regressive social policy that subsidizes the rich at the expense of the poor. Few families will ever pay sufficient state taxes to cover the educational costs of their children at a public university. Low tuition levels subsidize many middle- and upper-income families who could afford to send their students to far more expensive institutions. This subsidy is being provided through the tax

dollars paid by many lower-income families whose children may never have the opportunity to benefit from a college education at four-year institutions, public or private, because of inadequate availability of financial aid.^{xcii}

This issue becomes even more serious when it is recognized that public higher education has increasingly become the choice of higher income students. In 1994, 38 percent of students from families earning more than \$200,000 were enrolled in public institutions, compared to 31% in 1980.^{xciii} Parents and students from wealthy backgrounds are increasingly asking why they should attend the elite private colleges when they can get an education almost as good for one-third the price. In fact, in several states, the average income of students enrolling in public universities is now higher than that of private colleges. Clearly this raises a public policy issue, since these wealthier students, who could afford to attend more expensive private institutions, are displacing students from less fortunate economic circumstances in public higher education. While holding tuition to nominal levels in public higher education may be good politics, it is questionable social policy. In effect we ask those who cannot afford a college education to pay taxes to subsidize those who can--welfare for the rich at the expense of the poor. For this reason many believe that a high-tuition, high-financial-aid policy would be far more socially progressive, since it would mean that rich students pay at or near full fare, while public subsidy is provided to low-income students.

To be sure, some of the stronger public universities do have the capacity to compensate the loss of state funding with other sources such as tuition revenue, private gifts, and sponsored research. Some, like the University of Michigan, have already been forced to move quite far down the road to becoming a privately-financed state university,

with state support declining to less than ten percent of its revenue base. But there are important issues raised by the “privatizing” of the support base for public higher education. For example, how does one preserve the public character of a privately financed institution? How does a “state-related” university adequately represent the interests of its majority shareholders--namely, parents, patients, federal agencies, and donors--in its governance? Can one sustain an institution of the size and breadth characterizing our leading public research universities on self-generated (“private”) revenues alone?

Equally troubling is the academic culture itself. In most colleges and universities, the professorate expects to be kept. They view the support of their teaching, research, and professional activities largely as an entitlement. Although faculty entrepreneurs are essential in generating the resources needed for quality education and scholarship, in many institutions these individuals are held in low regard by the rank-and-file. The awards of the academy go most often to those who behave in traditional roles, depending upon others for their very existence, and not seeing themselves with any responsibility to bring resources to the institution. Yet it may very well be that the most vibrant universities of the future will be those institutions with faculties who are deeply engaged in the economics of education. The most productive scholars would be rewarded for that effort and those rewards would attract other able colleagues to follow.

This direct engagement by the academy in the financing of public higher education is important, as suggested by a comparison with the plight of K-12 education in the United States. In many ways, the great challenges faced by primary and secondary education today arose because of the loss of control of public financing by our public

school systems. The property tax simply did not have the elasticity to sustain an educational system operating under demands made by legislators, congress, parents, and students. The fundamental mission of the public schools was enlarged to take on a whole host of society's wishes, but these were not expected to take away from the primary mission. When that failed, the criticism increased. Property owners revolted. Legislatures and governors enacted programs that were reactions rather than prescriptions. Because the schools were at the sufferance of the local taxpayer, they could not make the changes required to become efficient. Special interest candidates were elected to local school boards in the name of accountability, and the curriculum became the domain of the dominant constituency. Teachers were powerless. Had they been able to become more entrepreneurial with prices set according to demand, they would have been players in the debate, as suggested by the recent trend toward charter schools.

Higher education, with high costs, embedded inefficiencies, and disparate missions, faces a similar and no less daunting task. □ As stewards of the public trust, academic leaders and governing boards share with federal and state leaders the responsibility to find a better way to deliver educational and financial resources to the people who need them. We must not allow our public colleges and universities to follow the path taken by K-12 education during the twentieth century.

The system of higher education in the United States is regarded as the best in the world. But having high-quality universities means little if our own people cannot attend them, or if the quality of life that a college education promises, for the individual and for the nation, becomes unattainable. It is in our national interest to provide educational opportunities to all who have the desire and the ability to learn. Many believe that it is

time to halt the erosion in public support of higher education and once again reaffirm the national commitment one generation makes to the next. Yet it is unlikely that the fiscal constraints faced by local, state, and federal governments will lessen in the years ahead, since there continues to be strong public resistance against further taxation.

The Privatization of Public Higher Education in America

Today in the face of limited resources and more pressing social priorities, the century-long expansion of public support of higher education has slowed. While the needs of our society for advanced education can only intensify as we evolve into a knowledge-driven world culture, it is not evident that these needs will be met by further growth of our existing system of public universities.

The terms of the social contract that led to these institutions are changing rapidly. The principle of general tax support for public higher education as a public good and the partnership between the federal government and the universities for the conduct of research are both at risk. These changes are being driven in part by increasingly limited tax resources and the declining priority given higher education in the face of other social needs.^{xciv}

We now have at least two decades of experience that would suggest that the states are simply not able--or willing--to provide the resources to sustain growth in public higher education, at least at the rate experienced in the decades following World War II. In many parts of the nation, states will be hard pressed to even sustain the present capacity and quality of their institutions. Little wonder that public university leaders are increasingly reluctant to cede control of their activities to state governments. Some institutions are even bargaining for more autonomy from state control as an alternative to

growth in state support, arguing that if granted more control over their own destiny, they can better protect their capacity to serve the public.

Most pessimistically, one might even conclude that America's great experiment of building world-class public universities supported primarily by tax dollars has come to an end. The concept of a world-class, comprehensive state university might not be viable over the longer term, at least in terms of an institution heavily dependent upon state appropriations. It simply may not be possible to justify the level of tax support necessary to sustain the quality of these institutions in the face of other public priorities, such as health care, K-12 education, and public infrastructure needs--particularly during a time of slowly rising or stagnant economic activity.^{xcv}

One obvious consequence of declining state support is that several of the leading public universities may increasingly resemble private universities in the way they are financed and managed. They will move toward higher tuition-high financial aid strategies. They will use their reputation, developed and sustained during earlier times of more generous state support, to attract the resources they need from federal and private sources to replace declining state appropriations. Many will embrace a strategy to become increasingly privately financed, even as they strive to retain their public character.

In such "privately financed, public universities" only a small fraction of operating or capital support will come from state appropriations. Like private universities, these hybrid institutions will depend primarily upon revenue they generate directly from their activities--tuition, federal grants and contracts, private gifts, and revenue from auxiliary services such as health care--rather than upon direct appropriations. They will manage

these resources much as private universities, moving toward more decentralized “tub-on-their-own-bottom” budgeting philosophies in which their academic units have both the responsibilities and incentives for generating resources and containing costs.

State universities choosing--or forced--to undergo this “privatization” transition in financing must appeal to a broad array of constituencies at the national and global level, while continuing to exhibit a strong mission focused on state needs. In the same way as private universities, they must earn the majority of their support in the competitive marketplace, i.e., via tuition, research grants, and gifts, and this will sometimes require actions that come into conflict from time to time with state priorities. Hence the autonomy of the public university will become one of its most critical assets, perhaps even more critical than state support for some institutions.

Several public universities such as the University of Michigan and the University of Virginia are well down this road. Several other leading public research universities are likely to follow as state appropriations continue to decline as a fraction of their revenue base. However even if this strategy represents a viable option for some of the leading public universities to maintain their quality during a time of constrained or declining public support, it does raise a number of important issues. For example, how does one preserve the public character of a privately financed institution? Clearly as a public university becomes more independent of the purse strings from state appropriations, it becomes less inclined to follow the dictates of state government, particularly if it possesses constitutional or statutory autonomy. No longer is its “public” simply the taxpayer, but rather an array of stakeholders including parents and students, federal agencies, donors, and business and industry. Such privately-supported public universities

face a particular challenge in balancing their traditional public purpose with the pressures of the marketplace.

Chapter 7

University Leadership

Like other social institutions, the public university needs capable leadership during today's time of great change, challenge, and opportunity. Clearly those universities capable of attracting and supporting strong, decisive, and visionary leadership will not only survive with quality intact, but will likely flourish during of times of change. Yet many public universities seem to drift, to seek leaders who will preserve the status quo, who will not rock the boat.

Stated simply, the current environment for leadership on many public campuses today neither tolerates nor supports strong, visionary leadership. The governing boards of public institutions are far too political, its members far too focused on personal agendas or chained to special interest groups and far too threatened by anyone who would challenge the status quo. The faculty is highly fragmented, comfortable in their own narrow disciplinary worlds, and resistant to any changes that might threaten their comfortable niche, even if it would benefit their university. Scattered throughout our institutions is a large herd of sacred cows--obsolete programs, outdated practices, archaic policies--grazing on the seed corn of the future, and defended by those determined to hang onto power and control, even at the expense of the institution. Public opinion is largely reactionary, and when manipulated by the media, can block even the most urgently needed change.

Although capable leadership is clearly important to universities, just as it is in other organizations, it is also not well accepted by several of the most important constituencies in a university: the faculty, the student body, and, most ironically, the

governing board. Faculty members resist--indeed, deplore--the command/control style of leadership characterizing the traditional pyramid organizations of business and government. Most among the faculty are offended by any suggestion that the university can be compared to other institutional forms such as corporations and governments. The academy takes great pride in functioning as a creative anarchy.

Yet the faculty also recognizes the need for leadership, not in details of teaching and scholarship, but in the abstract, in providing a vision for their university, and stimulating a sense of optimism and excitement. They also seek protection from the forces of darkness that rage outside the university's ivy-covered walls: the forces of politics, greed, anti-intellectualism, and mediocrity that would threaten the most important academic values of the university.

So too, the student body generally tends to resist leadership. After all, many young students are that age when challenging authority is an important part of growing up. Whether it be a residence hall supervisor, a classroom instructor, or even a president of the university, student acceptance of the authority necessary for effective leadership can be problematic.

One might expect that governing boards would seek and support strong leadership for their universities. After all, in the end they will be (or should be) held publicly accountable for the welfare of their institution. Yet the political nature of the lay boards governing public universities lead them all too frequently to seek leaders chosen primarily for their willingness to accommodate the particular agendas, indeed, whims, of board members while avoiding those who might challenge the faculty, the alumni, or the

status quo. Characteristics such as energy, vision, and sometimes even experience are not only viewed as less important but perhaps even as a threat to the authority of the board.

All large, complex organizations require not only leadership at the helm, but also effective management at each level where important decisions occur. To be sure, organizations in business, industry, and government are finding it important to flatten administrative structures by removing layers of management. Yet, despite what the press, many politicians, and even a few trustees think, most universities have rather thin and ineffective management organizations compared to corporations, inherited from earlier times when academic life was far simpler and institutions were far smaller.

There is a growing epidemic of presidential turnover that is both a consequence of these problems and a factor that contributes to them. The average tenure for the presidents of major public universities is about five years, far too brief to provide the stability in leadership necessary for achieving effective change.^{xvii} While some of these changes in university leadership are the result of natural processes such as retirement, others reflect the serious challenges and stresses faced by universities, which all too frequently destabilize their leadership. The politics of college campuses, from students to faculty to governing boards, coupled with the external pressures exerted by state and federal governments, alumni, sports fans, the media, and the public-at-large, all make the public university presidency a very hazardous profession these days. At a time when universities require courageous, and visionary leadership, the eroding tenure and deteriorating attractiveness of the public university presidency roles pose a significant threat to the future of our institutions.^{xviii}

The Issues

There is a seemingly endless array of decisions bubbling up, swirling through and about, the contemporary university. At the core are those academic decisions that affect most directly the academic process: Whom do we select as students (admissions)? Who should teach them (faculty hiring, promotion, and tenure)? What should they be taught (curriculum and degree requirements)? How should they be taught (pedagogy)? There is a long-standing tradition that the decisions most directly affecting the activities of teaching and scholarship are best left to the faculty itself. Yet in many institutions, particularly those that suffer from overly intrusive government controls or adversarial labor-management relationships between faculty and administration, this academic autonomy can be compromised.

Since most universities are large, complex organizations, enrolling tens of thousands of students, employing thousands of faculty and staff, and involving annual expenditures of hundreds of millions or even billions of dollars, there is also an array of important administrative decisions. Where do we get the funds necessary to support our programs and how do we spend them (resource acquisition and allocation, budget development). How do we build and maintain the campus environment necessary for quality teaching and research (capital facilities)? How do we honor our responsibilities and accountability to broader society (financial audits, compliance with state and federal regulations)? How do we manage our relationships with the multiple stakeholders of the university (public relations, government relations, and development)?

In addition to the ongoing academic and administrative decisions necessary to keep the university moving ahead, there are always an array of unforeseen events--challenges or opportunities--that require immediate attention and rapid decision-making.

For example, when student activism explodes on the campus, an athletic violation is uncovered, or the university is attacked by politicians or the media, crisis management becomes critical. While the handling of such matters requires the time and attention of many senior university administrators, from deans to executive officers and governing boards, all too frequently crisis management becomes the responsibility of the university president. At any meeting of university presidents, the frequent disruption of pagers, faxes, or phone calls provides evidence of just how tightly contemporary university leaders are coupled to the issues of the day. A carefully developed strategy is necessary for handling such crises, both to prevent universities from lapsing into a reactive mode, as well as to take full advantage of the occasional possibility of transforming a crisis into an opportunity.

More generally, universities need to develop a more strategic context for decision making during a period of rapid change. Yet strategic planning in higher education has had mixed success, particularly in institutions of the size, breadth, and complexity of the public university. Planning exercises are all too frequently attacked by faculty and staff alike as bureaucratic. In fact, many universities have traditionally focused planning efforts on the gathering of data for supporting the routine decision process rather than on providing a context for longer-term considerations. As a result, all too often universities tend to react to--or even resist--external pressures and opportunities rather than take strong, decisive actions to determine and pursue their own goals. They frequently become preoccupied with process rather than objectives, with "how" rather than "what."

The final class of decisions consists of those involving more fundamental or even radical transformations of the university. The major paradigm shifts that will likely take

place in higher education in the years ahead will require a more strategic approach to institutional transformation, capable of staying the course until the desired changes have occurred. Many institutions already have embarked on transformation agendas similar to those adopted by organizations in the private sector.^{xcviii} Some even use similar language as they refer to their efforts to “transform,” “restructure,” or even “reinvent” their institutions. But herein lies one of the great challenges to universities, since our various missions and our diverse array of constituencies give us a complexity far beyond that encountered in business or government. For universities, the process of institutional transformation is necessarily more complex and possibly more hazardous. It must be approached strategically rather than reactively, with a deep understanding of the role and character of our institutions, their important traditions and values from the past, and a clear and compelling vision for their future.

The University Administration

Universities, like other institutions, depend increasingly on strong leadership and effective management if they are to face the challenges and opportunities posed by a changing world. Yet in many universities, the concept of management is held in very low regard, particularly by the faculty. To both students and faculty alike, the term “university administration” has a sinister connotation, like “federal government” or “bureaucracy” or “corporate organization.” In reality, the university administration is simply a leadership network, primarily comprised of members of the faculty themselves, sometimes on temporary assignment, which extends throughout the university. The academic programs of the university are organized into units that reflect the intellectual organization of the university. At the highest level are schools and colleges organized along accepted

disciplinary or professional lines, such as Arts and Sciences, Medicine, Engineering, and Music. These are broken down into more manageable size through departments, such as Philosophy or Geology. At each level the administration consists of academic leaders, a dean or department chair, assisted by other academic and professional staff.

At the highest organizational level, the central administration consists of the president, the provost, and various vice-presidents with broad administrative responsibilities comprise the “executive officers” of the university. For example, the provost or vice-president for academic affairs has responsibility for the various reporting lines of the academic units, including the deans, faculty appointments, budget allocations, and academic program evaluation. Other executive officers are responsible for particular functions of activities of the university, like research, student services, public relations, and business operations. As a general rule, those executive officers responsible for academic programs and personnel (faculty and students) are generally selected from among the faculty and continue to have academic rank. Those responsible for various administrative, support, and business functions of the university such as finance, physical plant, and government relations generally have experience and training in these latter areas. Like other complex organizations in business or government the university requires a high level of professional management and administration in areas such as finance, physical plant maintenance, and information technology. While perhaps long ago universities were treated by our society--and its various government bodies--as largely well-intentioned and benign stewards of truth, justice, and the American way, today we find the university faces the same pressures, standards, and demands for accountability characterizing any billion-dollar public corporation.

Yet all large, complex organizations require not only leadership at the helm, but also effective management at each level where important decisions occur. All presidents, provosts, and deans have heard the suggestion on occasion—usually from one of the more outspoken members of the faculty senate—that any one on the faculty, chosen at random, could be an adequate administrator. After all, if you can be a strong teacher and scholar, these skills should be easily transferable to other areas such as administration. Yet, in reality, talent in management is probably as rare a human attribute as the ability to contribute original scholarship. And there is little reason to suspect that talent in one characteristic implies the presence of talent in the other.

One of the great myths concerning higher education in America, and one that is particularly appealing to faculty members and trustees alike, is that university administrations are bloated and excessive. To be sure, organizations in business, industry, and government are finding it important to flatten administrative structures by removing layers of management. Yet most universities have rather lean management organizations, inherited from earlier times when academic life was far simpler and institutions were far smaller, particularly when compared to the increasing complexity and accountability of these institutions.

The Role of the University President

The American university presidency is both distinctive and complex. In Europe and Asia the role of institutional leadership--a rector, vice-chancellor, or president--is frequently a temporary assignment held by a faculty member, sometimes elected, and generally without true executive authority. In these cases, the institution's leader serves as a representative of collegial faculty views, while government officials or civil servants

actually administer the university. In contrast, the American presidency has more of the character of a chief executive officer, with ultimate executive authority for all decisions made within the institution. Although today's university presidents are less visible and authoritative than in earlier times, they are clearly of great importance to higher education in America. Yet, while their leadership can be essential, particularly during times of change, most university presidents do not currently have the authority commensurate with the responsibilities of their positions.^{xcix} As one colleague put it, we may have shared governance, but nobody wants to share power with the president.

American university presidents are expected to develop, articulate, and implement visions for their institutions that sustain and enhance its quality. This includes a broad array of intellectual, social, financial, human, and capital facilities, and political issues that envelope the university. Through their roles as the chief executive officers of their institutions, they also have significant management responsibilities for a diverse collection of activities, ranging from education to health care to public entertainment (e.g., intercollegiate athletics). Since these generally require the expertise and experience of talented professionals, the president is the university's leading recruiter, identifying talented people, recruiting them into key university positions, and directing and supporting their activities. Unlike most corporate CEOs, however, the president is expected to play an active role generating the resources needed by the university, whether by lobbying state and federal governments, seeking gifts and bequests from alumni and friends, or clever entrepreneurial efforts. There is an implicit expectation on most campuses that the president's job is to raise money for the provost and deans to spend,

while the chief financial officer and administrative staff watch over their shoulders to make certain it is done wisely and prudently.

The university president also has a broad range of important responsibilities that might best be termed symbolic leadership. In the role as head of the university, the president has a responsibility for the complex array of relationships with both internal and external constituencies. These include students, faculty, and staff on the campus. The myriad external constituencies include alumni and parents, local, state, and federal government, business and labor, foundations, the higher education community, the media, and the public at large. The president has become a defender of the university and its fundamental qualities of knowledge and wisdom, truth and freedom, academic excellence and public service. Needless to say, the diverse perspectives and often-conflicting needs and expectations of these various groups make the management of relationships an extremely complex and time-consuming task.

Of course there is an important and obvious fact of life here. No president can possibly fulfill all the dimensions of this role. Hence one must first determine which aspects of the role best utilize his or her talents. Then a team of executive officers and senior staff must be assembled which can extend and complement the activities of the president to deal with the full spectrum of the University leadership role. In this sense, then, a most important skill of presidential leadership lies in the exercise of “good taste” in identifying talented leaders and then persuading them to join the presidential leadership team. Just as in college sports, recruiting becomes as important as coaching!

The presidency of a major public university is an unusual leadership position from another interesting perspective. Although the responsibility for everything involving the

university usually floats up to the president's desk, direct authority for university activities almost invariably rests elsewhere. There is a mismatch between responsibility and authority that is unparalleled in other social institutions. As a result, there are many, including many university presidents, who have become quite convinced that the contemporary public university is basically unmanageable and unleadable.

There are numerous approaches to university leadership. Some presidents adopt a fatalistic approach, taking to heart the idea that the university is basically unmanageable. They instead focus their attention on a small set of issues, usually tactical in nature, and let the institution essentially drift undirected in other areas. This laissez-faire approach assumes that the university will do fine on its own; indeed, most institutions can drift along for a time without strategic direction, although they will eventually find themselves mired in a swamp of commitments that are largely reactive rather than strategic.

Others view themselves as change agents, setting bold visions for their institution, and launching efforts to move toward these visions. Like generals who lead their troops into battle rather than sending orders from far behind the front lines, these leaders recognize that winning the war sometimes requires personal sacrifice. The risks associated with proposing bold visions and leading change are high, and the tenure of such leaders is short--at least in public universities.

The Presidential Search

Despite the stress and rigor of the position, many people view a university presidency as the top rung in the academic ladder. The university presidency can be--or at least, should be--an important position, if only because of the importance of this remarkable social institution. It is therefore logical to expect that the selection of a

university president ought to be a careful, thoughtful, and rational process. In reality, however, the search for a university president is a complex, time-consuming task conducted by the governing board of the university using a Byzantine process more akin to the selection of a pope than a corporate CEO. In public universities, presidential searches are more similar to a political campaign and election than a careful search for an academic leader.

The search process usually begins rationally enough. Typically a group of distinguished faculty is asked to serve as a screening committee, with the assignment of sifting through the hundreds of nominations of candidates to determine a small group for consideration of the governing board. This task seems straightforward enough, yet it can be difficult in public universities because of the impact of sunshine laws--notably those laws requiring public meetings of governing bodies and allowing press access to written materials via freedom of information laws. So too, faculty members on the search committee are lobbied hard by their colleagues, by neighbors, and even occasionally by trustees to make certain that the right people appear on the short list of candidates they finally submit to the governing board.

In an effort both to expedite and protect the faculty search process, there is an increasing trend at major universities to use executive search firms to assist in the presidential search process. These search consultants are useful in helping the faculty search committees to keep the search process on track, in gathering background information, developing realistic timetables, and even in identifying key candidates. Furthermore, particularly for public institutions subject to sunshine laws, search

consultants can provide a secure, confidential mechanism to communicate with potential candidates without public exposure--at least during the early stages of the search.

Of course there are sometimes downsides to the use of search consultants. Some consultants tend to take on too many assignments at one time. There have been many instances of failure to check background references thoroughly. More seriously, there have even been instances in which search consultants have actually attempted to influence the search process by pushing a preferred candidate. Yet most consultants act in a highly professional way and view their role as one of facilitating rather than influencing the search.

While the early stage of a presidential search is generally steered in a thoughtful way by the faculty screening committee, the final selection phase more frequently than not involves a bizarre interplay of politics and personalities. Many states have sunshine laws that not only require the final slate of candidates be made public, but moreover require these candidates to be interviewed and even compared and selected in public by the governing board.

These public beauty pageants can be extremely disruptive both to the integrity of the search process as well as to the reputation of the candidates. In fact, a great many attractive candidates will simply not participate in such a public circus because of the high risk such public exposure presents to their current jobs. Universities subject to such sunshine laws generally find their candidate pools restricted to those who really have nothing to lose by public exposure, e.g., those in lower positions such as provosts or deans or perhaps leaders of second-rank institutions or perhaps even politicians. For these candidates public exposure poses little risk with the potential for significant gain.

Furthermore, the interview process, whether public or private, is simply not a very effective way to assess the credentials of candidates. As former University of Texas president Peter Flawn has noted, many the governing board that has been burned by a “charmer,” an accomplished candidate for the president who is charming and engaging, eloquent about “the academy,” politically astute, yet who once in the job, will turn the management over to vice-presidents, enjoy the emoluments, entertaining, and social interactions for a few years, and then move on, leaving the institution as good as the vice-presidents can make it.^c Flawn observes that only in extraordinary situations does the charisma last for more than three years.

Trustees are lobbied hard both by internal constituencies (faculty, students, and administrators) and by external constituencies (alumni, key donors, politicians, and the press). Since the governing board making the selection is usually rather small, strong personalities among governing board members can have a powerful influence over the outcome. The politics of presidential selection becomes particularly intense for public universities, since their governing boards are themselves selected by a partisan political process--gubernatorial appointment or election. The open nature of these searches, dictated by sunshine laws, allow the media to have unusual influence in not only evaluating candidates but actually putting political pressure on governing board members to support particular individuals.

Many public university presidential searches are “wired” from the beginning, with powerful board members manipulating the search to favor preferred internal or external candidates. Sometimes political groups sabotage the candidacy of individuals during the public phase by misrepresenting the background of a candidate or leaking false

information to the media. Many who have participated in good faith in public university searches have been seriously compromised.

As a result of these factors, the selection of presidents for most public universities has become increasingly similar to the public process to select K-12 school superintendents. Not only do various political constituencies affect the process, but also each time the governing board changes its political stripes, the current president is suddenly put at risk.

So what characteristics should one look for in a president? What checklist should the governing board give the faculty search committee and the search consultant? Of course the specific wish list will depend on the institution, its challenges and its opportunities. But there are some generic qualifications for the leader of a public university.

First, there are matters of character, hard to measure, but obviously of great importance. These include attributes such as integrity, courage, fair-mindedness, compassion, and a fundamental and profound understanding of academic culture. The leadership of an educational institution requires a certain degree of moral authority, hence moral character and behavior also becomes quite important.

Second, there are a number of characteristics, also obvious but somewhat easier to measure from a candidate's track record:

- Academic credibility: Strong credentials as a teacher and a scholar, since otherwise the faculty will not take the president very seriously, and neither will peer institutions.

- Strong, proven management skills: After all, the comprehensive public university is one of the most complex institutions in our society. In these days of increasing legal and financial accountability, universities appoint amateurs to campus leadership at their own risk.
- Strong, proven leadership skills: Of course, leadership goes far beyond management skills. Although public governing boards and faculty senates sometimes shy away from strong candidates, times of challenge and change require strong leadership.
- Other measurable experience: There are an array of other experiences that are useful, although not mandatory, in the candidates for public university presidencies, including some familiarity with state and federal relations, private fund-raising, and, perhaps unfortunately, some understanding of the complex world of intercollegiate athletics.

Beyond these obvious criteria, there is another set of qualifications, again harder to measure, but of particular importance at this moment in the history of public higher education in America:

- Vision: The ability to work with the university community and its multiple constituencies to develop a shared vision of the future, and to unite these communities in a common effort to pursue this vision.
- A strong commitment to excellence, including the ability to recognize excellence when it is present, and to admit it when it is absent.
- A driving passion to achieve diversity, and to achieve and defend equity for all members of the university community.

- An impeccable “taste” in the choice of people, the ability to identify and attract the most outstanding talent into key leadership positions in the university, to shape them into teams, and provide them with strong support and leadership.
- Physical stamina, energy, and a very thick skin.

Most of these important characteristics should be easily discernable from the track record of candidates and not left simply to the vagaries of superficial impressions from interviews. In fact, candidates with the experience and achievement necessary to be considered as a public university president will likely have a track record a mile long and a mile wide to examine. The typical career path to a university presidency is through a sequence of administrative assignments as department chair, dean, and provost. These experiences provide search committees and governing boards with ample opportunities to assess the full qualifications of presidential candidates long before they are invited to the campus. Ironically, however, many search committees do not give adequate due diligence to assessing the background of candidates, with sometimes disastrous results.

There have been relatively few truly successful searches at major public universities in recent years. Sometimes this is actually by design. Some public university governing boards avoid seeking strong, visionary leadership, fearful that their own authority will be challenged or weaknesses exposed. The political, public nature of the searches and the manipulative nature of governing boards all too frequently lead to the selection of individuals who will serve as figureheads, unwilling to rock the boat, but willing to pamper the board members and support their personal agendas. Not surprisingly, more and more public university presidencies are being filled by politicians, either by profession or persuasion.

Occasionally, inexperienced or insecure governing boards will intentionally select amateur leadership, that is, individuals who clearly do not have the experience or level of previous achievement that would qualify them for a major university presidency. Such individuals are viewed as far more controllable and non-threatening to board members. But these presidents quickly become overwhelmed by the complexity of their roles and all too frequently follow the same pattern of insecurity by selecting subordinates even less qualified than they are. As a result, some universities have had to contend with a cascade of incompetence, kind of a sequential Peter's principle, in which inexperienced amateurs, in far over their heads, populate most of the administrative positions in an institution.

Of course some might suggest that such amateur leadership might be preferable to a professional bureaucracy that characterizes many administrative organizations in business or government. And to be sure, in earlier and far simpler times, amateur leadership by seasoned academics was sometimes acceptable. But in today's unforgiving political and financial climate, amateur leadership can all too frequent lead to disastrous consequences, putting faculty members, students, staff, and the institution itself at great risk.

Similarly, we would challenge the belief that some governing boards that since the president of a public university must function in an intensely political environment, they should place political skills highest on the list of qualifications. All too frequently, while such leaders may be effective in pleasing politically determined boards or politically elected state leaders, they may be totally lacking in the intellectual skills necessary to lead an academic institution or the executive skills necessary to manage the

complexity of the contemporary university. While such leadership might be tolerated for the short term if paired with strong, experienced academic administrators in roles such as provosts and deans, when isolated from academic traditions and values, such political appointments can also lead to disaster.

A final stereotype is provided by itinerant university presidents, those individuals who view their presidency as simply another step in a career path, from one academic institution to another. While some itinerant presidents can occasionally accomplish a good deal in the short time they remain at a particular institution, more frequently they simply take the easy course, appeasing trustees, faculty, and alumni, and avoiding anything that might rock the boat.

In the good old days, selection as a university president usually occurred late in one's career, typically at an age of 55 or 60. It was common to serve in this role for several years and then retire from academe. However the challenges of today's university require great energy and stamina. It is a job for the young. Hence we find the itinerant president model has become more the norm--individuals who serve in executive roles at several universities, jumping from institution to institution every five years or so, leaving just before the honeymoon ends (or the axe falls).

The Challenges to Presidential Leadership

Public universities by their very nature can become caldrons of boiling political controversy. From their governing boards, determined by the political process of either gubernatorial appointment or popular election, to the contentious nature of academic politics, student unrest, or strident attacks by the press, public university presidencies are subject to stresses far more intense than other arenas of higher education. As a result,

public university presidents must not only develop an unusually thick skin, but as well an acute instinct to sense danger.

As indicated earlier, the president is expected to be part chief executive officer, intellectual leader of the faculty, educational leader, parent of the students (occasionally), political lobbyist with both state and federal politicians, cheerleader for the university, spokesman to the media, fund-raiser extraordinary, entertainer par excellence, and servant to the governing board. And usually the performance in any particular one of these roles is considered as the singular basis for evaluating the president's performance by the corresponding affected constituency.

Perhaps one of the reasons for the great stresses upon university presidents has to do with the role they play in responding to crisis. Of course, each president has a particular suite of skills and talents. Some are good at politics; some at fund-raising; some are particularly skillful at pampering trustees; and so forth. But regardless of the particular strengths of presidents, all are expected to play key leadership roles during times of crisis. For example, when student activism explodes on campus, or an athletic violation is uncovered, or the university is attacked by politicians or the media, the president is expected to lead the response.

But public universities are also characterized by the more partisan politics of state government, federal government, and political governing boards. In fact, to many, including the press, the central administration of a university is viewed just as an administration in Washington. When an election changes the political stripes of the governing board, then the president may become a political casualty. All too often governing boards and entering presidents adopt the philosophy of a changing political

administration, sweeping through the layers of leadership of the institution and replacing large numbers of long serving and experienced administrators. While such administrative housecleaning is understandable in the political environment of government, sustained by an experienced and immovable civil service, it can lead to absolute disaster in universities heavily dependent upon loyal and experienced staff to balance the administrative inexperience and naiveté of academic administrators. So too, it is important to achieve an appropriate balance between the appointment of internal and external candidates to key posts of academic or administrative leadership. While perhaps capable, the institution-hopping careers of many external candidates undermine both their ability to understand the culture and traditions of the university as well as the perception of their loyalty to their new institution.

Yet universities are not governments. They are institutions based on long standing traditions and practices. Forcing them to function as state or federal government would not only destroy any sense of continuity, but it would conflict with the most important values of an academic institution. For this reason, universities have been provided with certain characteristics designed to protect them from the intrusion of partisan politics: academic freedom, tenure, and, at least in theory, institutional autonomy as manifested in independent governing boards.

The Environment for Leadership

The environment for leadership in the contemporary university is a challenging one. Beyond the complexity of the role, the sometimes bewildering array of issues, and the limited authority most university administrators possess to deal with their considerable responsibilities, the academic culture itself is not particularly tolerant of the

leadership role. The rank and file faculty sees the world quite differently from campus administrators.^{ci} There are significant differences in perceptions and understandings of the rights and responsibility of the faculty and the challenges and opportunities facing the institution and higher education more broadly. Such a gap can lead to an erosion in trust and confidence on the part of the faculty toward university leadership and undercut the ability of universities to make difficult yet important decisions and move ahead.

In part, the widening gap between faculty and administration has to do with the changing nature of the university itself. The modern university is a large, complex, and multidimensional organization, engaged not only in the traditional roles of teaching and research, but in a host of other activities such as health care, economic development, and social change. At the same time, the intellectual demands of scholarship have focused faculty increasingly within their particular disciplines, with little opportunity for involvement in the far broader array of activities characterizing their university. While they are--and should always remain--the cornerstone of the university's academic activities, they rarely have deep understanding or responsibility for the many other missions of the university in modern society.

The increasing specialization of faculty, the pressure of the marketplace for their skills, and the degree to which the university has become simply a way station for faculty careers have destroyed institutional loyalty and stimulated more of a "what's-in-it-for-me" attitude on the part of many faculty members. So too has the university reward structure. The system for determining salary, promotion, and tenure is clearly a meritocracy in which there are clear "haves" and "have-nots." The former generally are too busy to become heavily involved in institutional issues. The latter are increasingly

frustrated and vocal in their complaints. Yet they are also all too often the squeaky wheels that drown out others and capture attention.

Finally, many large campuses have allowed the deterioration in the authority and attractiveness of mid-level leadership positions such as department chairs or project directors. This has arisen in part due to the increasing accountability demands on the management structure of the university, and in part in deference to concerns of formal faculty governance bodies that generally harbor deep suspicions of all administrative posts. As a result, many universities are characterized by an awkward and ineffective administration structure, in which faculty leaders in posts such as department chair and deans simply do not have the authority to manage, much less lead their units. So too, the lack of career paths and mechanisms for leadership development for junior faculty and staff has decimated much of the mid-level management. This mismatch between authority and responsibility propagates upward throughout the administrations of most public universities until it reaches its most extreme in the office of the president.

A recent report of the National Commission on the Academic Presidency, sponsored by the Association of Governing Boards, reinforced these views about the limited capacity of the modern university presidency to provide leadership.^{cii} The Commission stressed its belief that the governance structure at most colleges and universities is inadequate. At a time when higher education should be alert and nimble, they believed that most institutions were slow and cautious instead, hindered by traditions and mechanisms of governing that did not allow the responsiveness and decisiveness the times required. At the heart of this situation is the weakness of the academic presidency. The Commission found that the authority of university presidents is being undercut by all

of its partners--trustees, faculty members, and political leaders--and, at times, by the presidents' own lack of assertiveness and willingness to take risks for change.

As a result, the Commission concluded that most university presidents are currently unable to lead their institutions effectively. They operate from one of the most anemic power bases in any of the major institutions in American society, lacking the clear lines of authority they need to act effectively, and forever compelled to discuss, negotiate, and seek consensus. And all too often, when controversy develops, presidents find that their major partner--their governing board--does not back them up.

With trustees and faculty immersed in a broad range of everyday decision-making processes, presidents are bogged down by demands for excessive consultation, a burdensome requirement for consensus, and a fear of change. "Consultation" has become a code word for consent or capitulation. In practice, either of the two groups--governing boards or faculty--can effectively veto proposals for action, either through endless consultation or public opposition.

Of course, there are some who believe that the president of a university should be simply an employee of its governing board. Some argue that in the case of public universities, the president and other senior officers are essentially senior civil servants. As such, they are obligated to carry out with total dedication--and silence--all decisions and edicts of their boards, whether they agree with them or not. In this sense, presidents are seen primarily as administrators carrying out governing board policies rather than as leaders of the institution.

Yet, governance in higher education is far more complex, particularly in a world in which various constituencies, including both faculty bodies and governing boards, may

occasionally drift away from the best interests of the university. As the Commission put it, “The current practice of shared governance leads to gridlock. Whether the problem is with presidents who lack the courage to lead an agenda for change, trustees who ignore institutional goals in favor of the football team, or faculty members who are loath to surrender the status quo, the fact is that each is an obstacle to progress.”

The environment for presidential leadership is particularly challenging in public universities. These institutions have become increasingly a political tempest in which all the contentious political issues swirling about our society churn together, e.g., civil rights vs. racial preference, social responsibility vs. market-driven cost-effectiveness. Little wonder that the public university president is frequently caught in a crossfire from opposing political viewpoints. Little wonder as well that the presidency of a major public university is both less attractive and considerably more difficult than it once was. And, as the all too frequent departures of public university presidents suggest, the job is substantially less attractive than the counterpart position in a private university.

The presidencies of most major public universities now tend to turn over every few years. Increasingly these changes in presidential leadership reflect not only the wear and tear of the myriad pressures on public universities and their leadership, but also the tensions and confusion that exist between the governing boards and the presidents about the roles of each. All too frequently, politically appointed or elected governing boards have taken an activist stance that demands that university presidents carry out the policies of a particular political philosophy or constituency without regard for the concerns of the faculty, the student body, or even the president’s personal vision for the future of the institution. Little wonder that university leaders are becoming more timid, passive, and

bureaucratic. Little wonder that they jump ship to private institutions, offering greater opportunities for true leadership, with supportive governing boards and free from the public glare and political accountability.^{ciii}

This instability in the public university presidency has significantly weakened the office and will harm public higher education over the long run. Unless the presidents of public universities can be provided with more security, more authority, and more capacity for leadership, the public university will be at significant risk during a period of rapid social change.

Leadership for a Time of Change

The presidency of a public university may indeed be one of the more challenging roles in our society because of the imbalance between responsibility and authority. Yet it is nevertheless a position of great importance. While a particular style of leadership may be appropriate for a particular institution at a particular time, the general leadership attributes outlined in this chapter seem to be of universal importance.^{civ}

Governing boards, faculty, students, alumni, and the press tend to judge a university president on the issue of the day. Their true impact on the institution is usually not apparent for many years after their tenure. Decisions and actions must always be taken within the perspective of the long-standing history and traditions of the university and for the benefit of not only those currently served by the institution, but on behalf of future generations.

Yet all too frequently, particularly in public universities, the environment is simply not tolerant of strong leadership. All too often university presidents and other academic leaders take the easy way out, deferring to the whims of outspoken faculty

members or the political agendas of governing boards. Why rock the boat when one's tenure is only a few brief years? Little wonder that weak leadership characterizes much of public higher education. The other partners in the academic tradition of shared governance--the faculty and the governing board--would not have it any other way.

Yet we will need strong leadership in the years ahead as academia faces more fundamental questioning. Politicians, pundits, and the public increasingly challenge us at the same time that technology increasingly drives us. No question is out of bounds: What is our purpose? What are we to teach and how are we to teach it? Who teaches under what terms? Who measures quality and who decides what measures to apply? Who pays for education and research? Who benefits? Who governs and how? What and how much public service is part of our mission? What are appropriate alliances, partnerships, and sponsorships? To face these challenges, to respond effectively, the public university requires strong, visionary, and courageous leadership. This, in turn, requires a governing board, a faculty, and a public understanding that will not only tolerate but demand strong leadership.

Chapter 8

The Governance of the Public University

The public university is one of the most complex social institutions of our times. The importance of this institution to our society, its myriad activities and stakeholders, and the changing nature of the society it serves, all suggest the importance of experienced, responsible, and enlightened university leadership, governance, and management. Here perhaps we should distinguish between leadership and management at the institution or academic unit level, as exercised by administrative officers such as presidents, deans, and chairs, and governance of the institution itself as exercised by governing boards, statewide coordinating bodies, or state and federal government. The governance of public universities is particularly complex, involving the participation and interaction of many organizations with responsibilities for not only the welfare of the institution but as well the funding and the regulation of its activities and its accountability to the public. Beyond the creation of specific governing bodies such as appointed or elected lay boards of regents or trustees, both state and federal government have also developed and implemented a broad array of public policies and regulations that shape and guide public higher education.

American universities have long embraced the concept of shared governance involving public oversight and trusteeship, collegial faculty governance, and experienced but generally short-term and usually amateur administrative leadership. While this system of shared governance engages a variety of stakeholders in the decisions concerning the

university, it does so with an awkwardness that tends to inhibit change and responsiveness.

Furthermore, while this collegial style of governance has a long history both in this country and abroad, the extraordinary expansion of the roles and mission of the university over the past century has resulted in a contemporary institution with only the faintest resemblance to those in which shared governance first evolved. Despite dramatic changes in the nature of scholarship, pedagogy, and service to society, the university today is organized, managed, and governed in a manner little different from the far simpler colleges of the early twentieth century. This is particularly true, and particularly inappropriate, for the contemporary public university.

University governing boards already face a serious challenge in their attempts to understand and govern the increasingly complex nature of the university and its relationships to broader society because of their lay character. This is made even more difficult by the politics swirling about and within governing boards, particularly in public universities, that not only distract boards from their important responsibilities and stewardship, but also discourage many of our most experienced, talented, and dedicated citizens from serving on these bodies. The increasing intrusion of state and federal government in the affairs of the university, in the name of performance and public accountability, but all too frequently driven by political opportunism, can trample upon academic values and micromanage institutions into mediocrity. Furthermore, while the public expects its institutions to be managed effectively and efficiently, it weaves a web of constraints through public laws that make this difficult. Sunshine laws demand that even the most sensitive business of the university must be conducted in the public arena,

including the search for a president. State and federal laws entangle all aspects of the university in rules and regulations, from student admissions to financial accounting to environmental impact.

Efforts to include the faculty in shared governance also encounter obstacles. While faculty governance continues to be both effective and essential for academic matters such as faculty hiring and tenure evaluation, it is increasingly difficult to achieve true faculty participation in broader university matters such as finance, capital facilities, or external relations. When faculty members do become involved in university governance and decision making, all too often they tend to become preoccupied with peripheral matters such as parking or intercollegiate athletics rather than strategic issues such as academic programs or undergraduate education. The faculty traditions of debate and consensus building, along with the highly compartmentalized organization of academic departments and disciplines, seem incompatible with the breadth and rapid pace required to keep up with today's high momentum, high risk university-wide decision environment.

The university presidency is all too frequently caught between these opposing forces, between external pressures and internal campus politics, between governing boards and faculty governance, between a rock and a hard place. Today there is an increasing sense that neither the lay governing board nor elected faculty governance has either the expertise nor the discipline—not to mention the accountability—necessary to cope with the powerful social, economic, and technological forces driving change in our society and its institutions. The glacial pace of university decision-making and academic change simply may not be sufficiently responsive or strategic enough to allow the

university to control its own destiny. In this chapter we will explore governance and decision-making in the public university—the issues, the players, the process, and the many compelling challenges and necessary changes.

The Players

Governance in a university involves a diverse array of internal and external constituencies that depend on the university in one way or another, just as our educational institutions depend upon each of them in turn. Internally the key players include students, faculty, staff, and governing boards. Externally the stakeholders include parents, the public and their elected leaders in government, business and labor, industry and foundations, the press and other media, and the full range of other public and private institutions in our society. The management of the complex roles and relationships between the university and these many constituencies is one of the most important challenges facing higher education, particularly when these relationships are rapidly changing.

The Internal Stakeholders

Power in a university is broadly dispersed and in many cases difficult to perceive. Although the views roles of each of the players in shared university governance are highly diverse, most groups do share one common perspective: that they all believe they need and deserve more power than they currently have.

Of course, the key stakeholders in the university should be its students. These are our principal clients, customers, and increasingly, consumers of our educational services. Although students pressed in the 1960s for more direct involvement in university decisions ranging from student life to presidential selection, today's students seem more

detached. Their primary concerns appear to be the cost of their education and their employability following graduation, not in participating directly in the myriad decisions affecting their education and their university.

Probably the most important internal constituency of a university is its faculty, since the quality and achievements of this body, more than any other factor, determine the quality of the institution. From the perspective of the academy, any great university should be “run by the faculty for the faculty” (an statement that would be contested by students or elements of broader society, of course). The involvement of faculty in the governance of the modern university in a meaningful and effective fashion is both an important goal and a major challenge. While the faculty plays the key role in the academic matters of most universities, particularly at the level of the academic department, its ability to become directly involved in the broader management of the institution has long since disappeared as issues have become more complex and the time-scale of the decision process has contracted. Little wonder that the faculty frequently feels powerless and thwarted by bureaucracy at every turn.

Historically, there has been relatively little faculty involvement in the strategic evolution of higher education in America. Although some public universities such as Michigan began as faculty-governed institutions, faculty governance was rapidly replaced by lay boards and state coordinating bodies. And although there were also some efforts to assert faculty power at different points during the twentieth century, these were frequently overwhelmed by more powerful social trends—the war effort, the depression, the great expansion of higher education following WWII, and the social protests of the 1960s.

The operation of a university requires a large, professional, and dedicated staff. From accountants to receptionists, investment officers to janitors, computer programmers to nurses, the contemporary university would rapidly grind to a halt without the efforts of thousands of staff members who perform critical services in support of its academic mission. Although staff members make many of the routine decisions affecting academic life, from admissions to counseling to financial aid, they frequently view themselves as only a small cog in a gigantic machine, working long and hard for an institution that sometimes does not even appear to recognize or appreciate their existence or loyalty.

American higher education is unique in its use of lay boards to govern its colleges and universities. Here it is important to recognize that by law or charter, essentially all of the legal powers of the university are held by its governing board, although generally delegated to exercised by the administration and the faculty, particularly in academic matters. In the case of private institutions, governing boards are typically elected by alumni of the institution or self-perpetuated by the board itself. In public institutions, board members are generally either appointed by governors or elected in public elections that are often highly politically charged. While the primary responsibility of such lay boards is at the policy level, they frequently find themselves drawn into detailed management decisions. Boards are expected first and foremost to act as trustees, responsible for the welfare of their institution. But, in many public institutions, politically selected board members tend to view themselves more as governors or legislators rather than trustees, responsible to particular political constituencies rather than simply to the welfare of the institution they serve. Instead of buffering the university from various

political forces, they sometimes bring their politics into the boardroom and focus it on the activities of the institution.^{cv}

The External Constituencies

The university's external constituencies are both broad and complex, and include clients of university services such as patients of our hospitals and spectators at our athletic events; federal, state, and local governments; business and industry; the public and the media. The university is, however, not only accountable to this vast base of present stakeholders, but it also must accept a stewardship to the past and a responsibility for future stakeholders. In many ways, the increasing complexity and diversity of the modern university and its many missions reflect the character of American and global society. Yet this diversity—indeed, incompatibility—of the values, needs, and expectations of the various constituencies served by higher education poses a major challenge.

Compared with higher education in other nations, American higher education has been relatively free from government interference. Yet, while we have never had a national ministry of education, the impact of federal, state, and local government on higher education in America has been substantial. But so too have the resources provided to higher education by each of these entities.

The federal government channels most of its support of higher education through individuals—financial aid grants and loans to students, research grants and contracts to faculty members. With this federal support, now amounting to almost \$70 billion in direct grants and considerably more in tax benefits, has also come federal intrusion. Universities have been forced to build large administrative bureaucracies to manage their

interactions with those in Washington. From occupational safety to control of hazardous substances to health-care regulations to accounting requirements to campus crime reporting, federal regulations reach into every part of the university. Furthermore, universities tend to be whipsawed by the unpredictable changes in Washington's policies with regard to regulation, taxation, and funding, shifting with the political winds each election cycle.

Despite this strong federal role, it has been left to the states and the private sector to provide the majority of the resources necessary to support and sustain the contemporary university. The relationship between public universities and state government is a particularly complex one, and it varies significantly from state to state. Increasingly, state governments have moved to regulate public higher education, thereby lessening the institutional autonomy of universities. In many states, public universities are caught in a tight web of state government rules, regulations, and bureaucracy. Statewide systems and coordinating bodies exercise greater power than ever over public institutions. An example here is the rise of performance funding, in which state appropriations are based on institutional performance as measured by a set of quantitative outcome indicators such as student credit hours, faculty contact hours, and graduate rates. These metrics are often specified by the state legislature and rarely related to program quality.

However, while recognizing the opportunism inherent in state politics, we also should not underestimate the growing and legitimate frustration on the part of many state leaders about what they perceive as higher education's lack of accountability and its unwillingness to consider the changes taking place in other parts of society. This erosion

in political support is becoming more serious in many states. Certainly, the state should have some role in higher education beyond simply providing adequate funding. Public policies are necessary not only to protect universities but also to ensure they are responsive to the public interest. Yet states can—and do—sometimes intrude too far into the operation of their universities, threatening their efforts to achieve quality and serve society.

The relationship between a university and its surrounding community is also a complex one, particularly in cities dominated by major universities. For these communities, the plus side is the fact that the university provides the community with an extraordinary quality of life and economic stability. It stimulates strong primary and secondary schools, provides rich cultural opportunities, and generates an exciting and cosmopolitan community. But there are also drawbacks, since the presence of such large, nonprofit institutions takes a great amount of property off the tax rolls. The impact of these universities, whether it is through parking, crowds, or student behavior, can create inevitable tensions between town and gown. These issues become particularly important to public universities, since they can trigger powerful political forces. For example, most universities have governing board members living in the community, who can serve as lightning rods for community concerns. So too, a community's state representatives can exert legislative pressure on the university to conform to local agendas.

Public opinion surveys reveal that at the most general level the public strongly supports high-quality education in our colleges and universities.^{cvi} But, when we probe public attitudes more deeply, we find many concerns about cost, improper student behavior (alcohol, drugs, political activism), and intercollegiate athletics. Perhaps more

significantly, there has been erosion in the priority that the public places on higher education relative to other social needs. This is particularly true on the part of our elected officials, who generally rank health care, welfare, K–12 education, and even prison systems higher on the funding priority list than higher education. This parallels a growing spirit of cynicism toward higher education and its efforts to achieve excellence.

Ironically, this growing criticism of higher education has come at a time when the taxpayer has become an ever smaller contributor to the support of public colleges and universities.

Universities are clearly accountable to many constituents. We have an obligation to communicate with the people who support us—to be open and accessible. For many years the public university was not the object of much public or media interest—aside from intercollegiate athletics. Many of our institutions essentially ignored the need to develop strong relationships with the media. Our communications efforts have been frequently combined with public relations and focused on supporting fund raising rather than media relations.

But things are different now. People want to know what we are doing, where we are going. We have an obligation to be forthcoming. But here we face several major challenges. First, we have to be honest in admitting that communication with the public, especially via the media, doesn't always come easily to academics. We are not always comfortable when we try to reach a broader audience. We speak a highly specialized and more exacting language among ourselves, and it can be difficult to explain ourselves to others. But we need to communicate to the public to explain our mission, to convey the findings of our research, to share our learning.

In earlier times, the relationship between the university and the press was one of mutual trust and respect. Since there were many values common to both the professions of journalism and the academy, journalists, faculty, and academic leaders related quite well to one another. The press understood the importance of the university, accepted that its need for some degree of autonomy similar to its own freedoms, and frequently worked to build public understanding and support for higher education.

In today's world, where all societal institutions have come under attack by the press, universities prove to be no exception. Part of this is no doubt due to an increasingly adversarial approach taken by journalists toward all of society, embracing a certain distrust of everything and everyone as a necessary component of investigative journalism. Partly to blame is the arrogance of many members of the academy, university leaders among them, in assuming that the university is somehow less accountable to society than other social institutions. Yet in the long run, without an interested, informed, and responsible press, the public understanding necessary for the support of public colleges and universities is at risk.

The issue of sunshine laws is a particular concern for public institutions. Although laws requiring open meetings and freedom of information were created to ensure the accountability of government, they have been extended and broadened to apply to most public institutions through court decisions. Ironically the only public organizations typically exempted are those very legislative bodies responsible for the drafting of the laws and those judicial bodies that have extended them. Today public universities increasingly find that these sunshine laws seriously constrain their operations. They prevent governing boards from discussing sensitive policy matters. They allow the press

to go on fishing expeditions through all manners of university documents. They have also been used to hamstring the searches for senior leadership, especially university presidents.

Most of America's colleges and universities have more than once suffered the consequences of ill-informed efforts by politicians to influence everything from what subjects can be taught, to who is fit to teach, and whom should be allowed to study. As universities have grown in importance and influence, more political groups are tempted to use them to achieve some purpose in broader society. To some degree, the changing political environment of the university reflects a more fundamental shift from issue-oriented to image-dominated politics at all levels—federal, state, and local. Public opinion drives political contributions, and vice-versa, and these determine successful candidates and eventually legislation. Policy is largely an aftermath exercise, since the agenda is really set by polling and political contributions. Issues, strategy, and "the vision thing" are largely left on the sidelines. And since higher education has never been particularly influential either in determining public policy or in making campaign contributions, the university is frequently left with only the option of reacting as best it can to the agenda set by others.

Higher education today faces greater pressure than ever to establish its relevance to its various stakeholders in our society. The diversity—indeed, incompatibility—of the values, needs, and expectations of the various constituencies served by higher education poses one of its most serious challenges. The future of our colleges and universities will be determined in many cases by their success in linking together the many concerns and

values of these diverse groups, even as the relationships with these constituencies continue to change.

The Process

Throughout its long history the American university has been granted special governance status because of the unique character of the academic process. The university has been able to sustain a public acceptance that its activities of teaching and scholarship could best be judged and guided by the academy itself rather than by the external bodies such as governments or the public opinion that govern other social institutions. Key in this effort was the evolution of a tradition of shared governance involving several key constituencies: a governing board of lay trustees or regents as both stewards for the institution and protectors of broader public interest, the faculty as those most knowledgeable about teaching and scholarship, and the university administration as leaders and managers of the institution.

Institutional Autonomy

The relationship between the university and the broader society it serves is a particularly delicate one, because the university has a role not only as a servant to society but as a critic as well. It serves not merely to create and disseminate knowledge, but to assume an independent and questioning stance toward accepted judgments and values. To facilitate this role as critic, universities have been allowed a certain autonomy as a part of a social contract between the university and society. To this end, universities have enjoyed three important traditions: academic freedom, faculty tenure, and institutional autonomy.^{civii} Although there is a considerable degree of diversity in practice—as well as a good deal of myth—there is a general agreement about the importance of these

traditions. In practice, government, through its legislative, executive, and judicial activities, can easily intrude on university matters.^{cviii} The autonomy of the university depends both on the attitudes of the public and the degree to which it serves a civic purpose. If the public or its voices in the media lose confidence in the university, in its accountability, its costs, or its quality, it will begin to ask whether that autonomy has been earned and at what price. In the long run, institutional autonomy rests primarily on the amount of trust that exists between state government and institutions of higher education.

The Influence of Governments

The federal government plays a significant role in shaping the nature and agenda of higher education in the United States. We have discussed earlier examples such as the federal land-grant acts of the nineteenth century creating public colleges and universities and the GI Bill following World War II that rapidly expanded the campuses to provide the opportunities for a college education to a significant portion of the American population. Federal funding for campus-based research in support of national security and health care shaped the evolution of the contemporary research university. Federal investments in key professional programs such as medicine, public health, and engineering have shaped the curriculum. Federal financial aid programs involving grants, loans, and work-study have provided the opportunity for a college education to millions of students from lower- and middle-class families. And federal tax policies have not only granted colleges and universities tax-exempt status, but they have also provided strong incentives for private giving.

For the most part, the federal government's influence on higher education has been channeled through programs aimed at individuals rather than institutions. The GI Bill and federal financial aid programs provide grants and loans to individual students. Federal support of academic health centers flows through programs such as Medicare and Medicaid that provide funds to reimburse the costs of treating individual patients. Research grants and contracts fund the activities of individual faculty investigators or small teams of researchers. Even federal tax benefits are most clearly seen in the tax deductibility of gifts to universities which are treated as charitable donations in the tax code. While such federal programs may have been stimulated by public policies designed to influence the higher education enterprise, they generally work through the activities of individuals—that is, in effect, through the marketplace.

The federal government has a more direct impact on higher education through the labyrinth of rules and regulations it weaves about colleges and universities. Since all academic institutions receive some degree of federal support, even if only indirectly through mechanisms such as student financial aid or Medicare reimbursement, all are subject to an array of regulations in areas such as equal opportunity, occupational health and safety, and environmental impact. Furthermore, the wide-ranging activities of the contemporary universities in areas such as research, technology transfer, and student housing come under further layers of rules. Finally, the financial activities of the university are subject to a degree of accounting scrutiny from the IRS and various federal agencies similar to that of business corporations.

Yet, despite these broad federal roles and powers, state governments have historically been assigned the primary role for supporting and governing public higher

education in the United States. At the most basic level, the principles embodied in the Constitution make matters of education an explicit state assignment. Public colleges and universities are largely creatures of the state. Through both constitution and statute, the states have distributed the responsibility and authority for the governance of public universities through a hierarchy of governing bodies including the legislature, state executive branch agencies or coordinating boards, institutional governing boards, and institutional executive administrations. In recent years there has been a trend toward expanding the role of state governments in shaping the course of higher education, thereby diminishing the institutional autonomy of universities. Few outside of this hierarchy are brought into the formal decision process, although they may have strong interests at stake, for example, students, patients of university health clinics, and corporate clients.

As state entities, public universities must usually comply with the rules and regulations governing other state agencies. These vary widely, from contracting to personnel requirements to purchasing to even limitations on out-of-state travel. Although regulation is probably the most ubiquitous of the policy tools employed by state government to influence institutional behavior, policies governing the allocation and use of state funds are probably ultimately the most powerful, and these decisions are generally controlled by governors and legislatures.

Statewide Systems and Coordinating Boards

In response to the growing complexity of higher education needs and resources, coupled with an increasing call for public accountability and responsiveness, most states have created statewide higher education systems and/or coordinating or governance

boards at the state level. In the United States today, forty-five states have such statewide structures aimed at allocating public funding for higher education among institutions, preventing unnecessary duplication of programs, and ensuring that state educational needs are met. Today almost 80% of all students enrolled in higher education in the United States today attend an institution that is part of a statewide system.

While such statewide governance structures can be useful in coordinating the delivery of educational services from a diverse system of public colleges and universities, they can pose a challenge to public research universities with more complex missions. For instance, statewide coordinating boards can sometimes make it difficult for flagship state universities to make the case for the differential appropriations necessary for professional and graduate programs. They sometimes constrain faculty compensation and support per student to the lowest common denominator of institutions. In general, they are frequently more focused on quantity than quality. And in some cases their coordinating role has even evolved into a regulatory function, similar to other government agencies.

Governing Boards

The lay board has been the distinctive American device for “public” authority in connection with universities.^{cix} The function of the lay board in American higher education is simple, at least in theory: the governing board has final authority for key policy decisions and accepts both fiduciary and legal responsibility for the welfare of the institution. But because of its very limited expertise, it is expected to delegate the responsibility for policy development, academic programs, and administration to professionals with the necessary training and experience. For example, essentially all

governing boards share their authority over academic matters with the faculty, generally acceding to the academy the control of academic programs. Furthermore, the day-to-day management of the university is delegated to the president and the administration of the university, since these provide the necessary experience in academic, financial, and legal matters.

Faculty Governance

There has long been an acceptance of the premise that faculty members should govern themselves in academic matters, making key decisions about what should be taught, who should be hired, and other key academic issues. There are actually two levels of faculty governance in the contemporary university. The key to the effective governance of the academic mission of the university is actually not at the level of the governing board or the administration but rather at the level of the academic unit, typically at the department or school level. At this level the faculty generally has a very significant role in most of the key decisions concerning who gets hired, who gets promoted, what gets taught, how funds are allocated and spent, and so on. The mechanism for faculty governance at this level usually involves committee structures, for example, promotion committees, curriculum committees, and executive committees. Although the administrative leader, a department chair or dean, may have considerable authority, he or she is generally tolerated and sustained only with the support of the faculty leaders within the unit.

The second level of faculty governance occurs at the university level and usually involves an elected body of faculty representatives, such as an academic senate, that serves to debate institution-wide issues and advise the university administration. Faculties

have long cherished and defended the tradition of being consulted in other institutional matters, of “sharing governance” with the governing board and university officers. In sharp contrast to faculty governance at the unit level that has considerable power and influence, the university-wide faculty governance bodies are generally advisory on most issues, without true power. Although they may be consulted on important university matters, they rarely have any executive role. Most key decisions are made by the university administration or governing board.

Actually, there is a third level of informal faculty power and control in the contemporary research university, since an increasing share of institutional resources flow directly to faculty entrepreneurs as research grants and contracts from the federal government, corporations, and private foundations. These research programs act as quasi-independent revenue centers with very considerable influence, frequently at odds with more formal faculty governance structures such as faculty senates.

The Challenges to Effective Governance

While public universities have been both remarkably resilient during times of change and responsive to the needs of society, this same willingness and ability to adapt can make effective decision-making and enlightened governance challenging indeed.

The Complexity of the University. The modern university is comprised of many activities, some nonprofit, some publicly regulated, and some operating in intensely competitive marketplaces. It teaches students; it conducts research for various clients; it provides health care; it engages in economic development; it stimulates social change; and it provides mass entertainment (athletics). The organization of the contemporary university would compare in both scale and complexity with many major global

corporations. Yet at the same time, the intellectual demands of scholarship have focused faculty increasingly within their particular disciplines, with little opportunity for involvement in the far broader array of activities characterizing their university. While faculty members are—and should always remain—the cornerstone of the university's academic activities, they rarely have deep understanding or will accept the accountability necessary for the many other missions of the university in modern society.

Faculties have been quite influential and effective within the narrow domain of their academic programs. However the very complexity of their institutions has made substantive involvement in the broader governance of the university problematic. The current disciplinary-driven governance structure makes it very difficult to deal with broader, strategic issues. Since universities are highly fragmented and decentralized, one frequently finds a chimney organization structure, with little coordination or even concern about university-wide needs or priorities. The broader concerns of the university are always someone else's problem. Ironically, the same can be said for many governing boards, usually comprised of lay volunteers with limited understanding of academic activities or cultures, and in the case of many public universities, far more experience in political patronage than experience in managing organizations on the vast scale of the contemporary university.

Bureaucracy: The increased complexity, financial pressures, and accountability of universities demanded by government, the media, and the public at large has required far stronger management than in the past.^{cx} Recent furors over issues such as federal research policy, labor relations, financial aid and tuition agreements, and state funding models, all involve complex policy, financial, and political issues. While perhaps long ago

universities were treated by our society—and its various government bodies—as largely well-intentioned and benign stewards of education and learning, today we find the university faces the same pressures, standards, and demands for accountability of any other billion-dollar corporation. Yet as universities have developed the administrative staffs, policies, and procedures to handle such issues, they have also created a thicket of paperwork, regulations, and bureaucracy that has eroded the authority and attractiveness of academic leadership.

It is increasingly difficult to attract faculty members into key leadership positions such as department chairs, deans, and project directors. The traditional anarchy of faculty committee and consensus decision making have long made these jobs difficult, but today's additional demands for accountability imposed by university management structures have eroded the authority to manage, much less lead academic programs. Perhaps because of the critical, questioning nature of academic disciplines, universities suffer from an inability to allocate decisions to the most appropriate level of the organization and then to lodge trust in the individuals with this responsibility. The lack of career paths and adequate mechanisms for leadership development for junior faculty and staff also has decimated much of the strength of mid-level management. Many of our most talented faculty leaders have concluded that becoming a chair, director, or dean is just not worth the effort and the frustration any longer.

Part of the challenge is to clear the administrative underbrush cluttering our institutions. Both decision-making and leadership are hampered by bureaucratic policies and procedures and practices, along with the anarchy of committee and consensus decision making. Many of the most outstanding members of the faculty feel quite

constrained by the university, constrained by their colleagues, constrained by the “administration”, and constrained by bureaucracy. Yet leadership is important. If higher education is to keep pace with the extraordinary changes and challenges in our society, someone in academe must eventually be given the authority to make certain that the good ideas that rise up from the faculty and staff are actually put into practice. Universities need to devise a system that releases the creativity of faculty members while strengthening the authority of responsible leaders.

The Deterioration in the Quality of Governing Boards: Across the nation, public university presidents are united in—although understandably discrete in stating—their belief that one of the greatest challenges they face is protecting their institutions from their own governing boards. The burdens boards place on their presidents is particularly severe: the amount of time required to accommodate the special interests of board members, the abuse presidents receive from board members with strong personal or political agendas, the increasing tentativeness presidents exhibit because they never know whether their boards will support or attack them. At a recent international conference on university governance, Harold Williams, former regent of the University of California and president of the Getty Foundation, summarized the current situation well: “While the principle of lay boards instead of government control is still of value, the public board system is in trouble, suffering from a poor process for selecting, educating, and evaluating board membership.”

Traditionally the governing boards of public universities have served as advocates for higher education to the public and the body politic as well as defenders to protect academic programs from political intervention. However in recent years there has been a

pronounced shift in board roles from advocacy to a greater emphasis on oversight and public accountability. As the politics of board selection have become more contentious, board members have increasingly advocated strong political agendas, e.g., to restructure the curriculum to stress a specific ideology, to reduce costs even at the expense of quality, or even to oust a particular university president (usually because he or she was not adequately accommodating to the whims of particular board members). In a sense, governing boards have become conduits for many of the political issues swirling beyond the campus. Political factors are far more important than expertise or institutional commitment in determining board members. Once appointed or elected, board members generally serve for long terms—typically 6 to 10 years—subject only to a recall action taken by the electorate or removal for malfeasance by the courts. There is ample evidence to suggest that, for all practical purposes, board members are effectively isolated from accountability for even the most blatant incompetence or grievous misbehavior.^{cxii} Political accountability falls far short of true fiduciary accountability.

William's comment was bolstered as well by a recent study commissioned by the Association of Governing Boards, which highlighted many of the weaknesses of public boards.^{cxiii} This report states that too many trustees of public university boards lack a basic understanding of higher education or a significant commitment to it. Many trustees understand neither the concept of service on a board as a public trust nor their responsibilities to the entire institution. Public boards tend to spend far too much of their time concentrating on administrative matters rather than the urgent questions of educational policy. Inexperienced boards all too often become captivated by the illusion of the quick and easy fix, believing that if only the right strategic plan is developed, or

the right personnel change is made, then everything will be fine, their responsibilities will be met, and their personal influence over the university will be visible. Finally, most public governing boards are quite small (from eight to twelve members) compared to private governing boards (thirty to fifty). This makes it difficult for public governing boards to span the broad range of institutional interests and needs of the contemporary university. Furthermore, a small board can be held hostage by the special interests, narrow perspectives, or personality of a single member.

There is little doubt that the deterioration in the quality of governing boards, the confusion concerning their roles, and the increasingly political nature of their activities has damaged many public universities and threatens many others. While perhaps superficially reassuring government leaders, the media, and the public that greater oversight and accountability is being exercised, the quality of leadership, faculty, and academic programs of many public universities is all too frequently at risk because of the political agendas of their board. There used to be an old saying that no institution can be better than its governing board. Today, however, the counterpoint seems to apply to public universities: A governing board is rarely as good as the institution it serves.

Shared Governance or Shared Anarchy? Although shared governance is viewed by many, at least among the faculty, as a cornerstone of higher education, history suggests the faculty has had relatively little influence over the evolution of the university in America, especially when balanced against transformative pressures brought to bear upon the university by the society it serves, by government policy, and by market forces. Furthermore, the contemporary university has many activities, many responsibilities, and many constituencies, resulting in many overlapping lines of authority that tend to

mitigate any direct power faculty might exert. To some degree, shared governance is in reality an ever-changing balance of forces involving faculty, trustees, staff, and administration.

True faculty participation in university governance and leadership is problematic for many reasons. First, as we have noted, the contemporary university is far too complex and fragmented to allow for substantive faculty involvement in the broader governance of the university. On most campuses faculty suffer from a chronic shortage of information—and hence understanding—about how the university really works. In part, this arises because university administrations have attempted to shield the faculty and the academic programs from the forces of economic, social, and technology change raging beyond the campus. But there are deeper issues. The faculty culture typically holds values that are not necessarily well aligned with those required to manage a complex institution. For example, the faculty values academic freedom and independence, while the management of the institution requires responsibility and accountability. Faculty members tend to be individualists, highly entrepreneurial lone rangers rather than the team players required for management. Faculty members tend to resist strong, visionary leadership and strongly defend their personal status quo. It is frequently difficult to get faculty commitment to—or even interest in—broad institutional goals that are not necessarily congruent with personal goals. Although faculty members decry the increased influence of administrative staff, it is their own academic culture, their abdication of institution loyalty, coupled with the complexity of the contemporary university, which has led to this situation.

There is yet another factor that mitigates against faculty governance. As we have seen, the fragmentation of the faculty into academic disciplines and professional schools,

coupled with the strong market pressures on faculty in many areas, has created an academic culture in which faculty loyalties are generally first to their scholarly discipline, then to their academic unit, and only last to their institution. Many faculty members move from institution to institution, swept along by market pressures and opportunities, unlike most nonacademic staff that remain with a single university throughout their careers. Although faculty members decry the increased influence of administrative staff, it is their own academic culture, their preference for disciplinary loyalty rather than institutional loyalty, coupled with the complexity of the contemporary university, that has led to this situation.

The academic practice of tenure also presents a challenge. Although intended in theory as a protection of academic freedom, in reality it has evolved into a mechanism for lifetime employment security, regardless of competence or effort. As such, it has also become a powerful force thwarting change and protecting the status quo.

It is ironic that many of those elected to faculty governance seem more interested in asserting power and influence on matters outside the traditional concerns of the faculty, e.g., reviewing budgets, overseeing athletic departments, and setting policies in peripheral areas like parking. Tragically it has been difficult to get faculty governance to focus on those areas clearly within their unique competence—curriculum, student learning, academic values and ethics.

Beyond the fact that it is frequently difficult to get faculty committed to—or even interested in—broad institutional goals that are not necessarily congruent with personal goals, there is an even more important element that prevents true faculty governance at the institution level. Responsibility and accountability should always accompany

authority: deans and presidents can be fired; trustees can be sued or forced off governing boards (at least in private universities). Yet the faculty, through important academic traditions such as academic freedom and tenure, are largely insulated from the consequences of their debates and recommendations. It would be difficult if not impossible, either legally or operationally, to ascribe to faculty bodies the requisite level of accountability that would necessarily accompany executive authority.

Little wonder that shared governance, as it exists today is largely dysfunctional, failing to serve either the institution or its stakeholders. The lines of authority and responsibility are intentionally blurred. Shared governance tends to protect the status quo—or perhaps even a nostalgic view of some idyllic past—thereby preventing a serious discussion of the future. Furthermore, to the extent that the increasing marketplace mobility of faculty erodes any sense of institutional loyalty, how can we expect faculty members to participate constructively in decisions that are in the best long-term interests of the institution rather than their personal situation? Little wonder that parking concerns dominate curriculum debates in the agenda of most faculty governance.

Many universities follow the spirit of shared governance by selecting their senior leadership, their deans, directors, and executive officers, from the faculty ranks. These academic administrators can be held accountable for their decisions and their actions, although, of course, even if they should be removed from their administrative assignments their positions on the faculty are still protected. Faculty in these positions often face harsh criticism from their own colleagues about their participation in university governance, and many of the criticisms of shared governance as an institution come from the faculty themselves. In a sense, faculty are governing more and enjoying it less, at

least if the reluctance of many faculty members to become involved in the tedious committees and commissions involved in shared governance is any measure.

Turf Problems: In theory, shared governance delegates academic decisions (e.g., student admissions, faculty hiring and promotion, curriculum development, awarding degrees) to the faculty and administrative decisions (e.g., acquiring resources and planning expenditures, designing, building, and operating facilities) to the administration, leaving the governing board to focus on public policy and accountability (e.g., compliance with federal, state, and local laws; fiduciary responsibilities; and selecting key leadership such as the president). Put another way, shared governance allocates public accountability and stewardship to the governing board, academic matters to the faculty, and the tasks of leading and managing the institution to the administration.

Yet turf problems abound. All too frequently governing boards become involved in management details, ranging from meddling with highly visible activities such as intercollegiate athletics to tampering with the academic process (e.g., challenging tenure at the University of Minnesota or specifying curriculum at SUNY). While faculty governance can work well in academic matters at the level of departments or schools, all too frequently faculty members attempt to extend their influence to broader issues far beyond their responsibility or expertise. Of particular concern here is the tendency of faculty governing bodies to focus on the “p” issues: parking, pay, and the plant department—but, of course, rarely productivity.

In contrast to the tendency of boards to trample on academic turf, or faculty governance to become preoccupied with administrative trivia, there remain a wide range

of important institutional issues that sometimes fall through the cracks. Examples include crisis management, long term strategic planning, and institutional transformation.

One of the key challenges to effective university governance is to make certain that all of the constituencies of shared governance—governing boards, administrations, and faculty—understand clearly their roles and responsibilities.

The Complex Relationship with State Government: The relationship between public universities and state government adds yet another complexity, though the precise relationship varies significantly from state to state. The most frequent cause of tension between the university and the state has to do with the multiple missions of the contemporary university. This diversity of missions corresponds to a complex array of constituencies—and engenders a particularly complex set of political considerations. For example, as universities strive to serve underrepresented segments of society, they encounter the political wars over affirmative action and “racial preference” currently raging across America. In their efforts to stimulate economic development, they run afoul of private-sector concerns about unfair competition from tax-exempt university activities, whether these are local commercial enterprises or equity interest in high-tech spin-offs. Those public institutions with selective admissions policies frequently face pressure from elected public officials responding on behalf of constituents who are disappointed when their children are not admitted.

A related issue in many states involves achieving an appropriate division of missions among state colleges and universities. Although most states have flagship state universities, they also have many other public colleges and universities that aspire to the full array of missions characterizing the comprehensive public research university.

Community colleges seek to become four-year institutions; undergraduate colleges seek to add graduate degree programs, and comprehensive universities seek to become research universities. Since all colleges and universities generally have regional political representation, if not statewide influence, they can frequently build strong political support for their ambitions to expand missions. Even in those states characterized by “master plans” such as California, there is evidence of politically driven mission creep, leading to unnecessary growth of institutions and wasteful overlap of programs.

The 1950s and 1960s were a time of extraordinary expansion of public higher education, as returning veterans, then baby boomers, and finally the growing research and service needs of our nation drove rapid growth. State leaders were neither prepared to deal with such dramatic growth nor were they able to sustain the claim that higher education was making on scarce state tax dollars. To assist in managing the growth of their public colleges and universities and to determine resource priorities, many states created statewide systems of higher education under a statewide governing or coordinating board. It was expected that professionals would staff these boards and commissions and that they would understand the needs and could make recommendations to the legislatures that would insure the most effective uses of the limited resources. Many states established policies for determining the role and scope for their colleges and universities. In most cases, the state’s flagship university was intended to remain at the top of the pyramid of the statewide higher education system, and state policies often made reference to the need for that institution to be more competitive with its counterparts in other states.

Unfortunately, but perhaps naturally, the results have not come close to meeting these grand expectations. The battleground for funds shifted from the halls of the legislature to the offices of the bureaucrats who came to staff the state coordinating bodies. Instead of attracting highly qualified individuals with an understanding of higher education and its peculiar ways, more often than not, the individuals who came were little more than administrative functionaries or state bureaucrats. Very often their response was to make the universities look more like state agencies than to make their differences understandable to the legislators. They created adversarial relationships and became immersed in the numbers game just as the legislators had done before them.

The most damaging result to the more prestigious institutions came through the homogenizing process that these boards and commissions occasionally established as the basis for funding recommendations—English was English in their view, and the cost of its instruction should be the same everywhere. The proposition seemed so logical that even universities that knew it was based on flawed logic seldom challenged it. Research universities are inherently more expensive. They perform all sorts of academic and scholarly activities that contribute to the enhanced quality of a course in English and those rich and liberating activities always cause their instructional activities to be more expensive. State bureaucracies simply cannot deal with judgments like these; they can defend numbers but not quality. As a result, many flagship universities have now been homogenized to such a degree that they have become little more than second- or third-tier state universities.

Further exacerbating the dilemma for the flagship university has been the deluge of rules and regulations spewing forth from state agencies and board staffs. These are

often made in response to single examples of misuse rather than to endemic, general problems and rarely take into consideration the cost to benefits ratio of the newly minted regulations. Entire administrative sections have been created at universities to respond to these. Such state agencies generally add no value, contributing only to bureaucracy, red-tape, and further expense.

By forcing these flagship institutions to become a part of a general standardized system of colleges and universities, despite the fact that public colleges and universities have vastly different missions and academic standards, the quality of many of the nation's leading public universities has been threatened. In many states, the public university system office is really nothing more than a state agency masquerading as an academic organization, and all too often the leadership of statewide systems is chosen much like the leadership of other state agencies, with more of a concern for political savvy or influence than solid academic credentials. As a result, flagship universities that have been welded onto such systems find themselves with the additional challenge of circumventing the inevitable tendency of the system office to ignore the unique nature of their graduate- and research-intensive programs and instead pull down their academic quality to the level of other institutions in the system in the name of equity.

Some Prescriptions for Change

As we have noted, the contemporary university is buffeted by powerful and frequently opposing forces. The marketplace demands cost-effective services. Governments and the public demand accountability for the expenditure of public funds. The faculty demands (or at least should demand) adherence to long-standing academic values and traditions such as academic freedom and rigorous inquiry. Yet the long-

standing tradition of shared governance, in which power is shared more or less equally among all potential decision makers, is cumbersome and awkward at best, and ineffective and indecisive at worst.

So, what to do? In the spirit of stimulating debate...and fully aware that we are likely tilting with windmills, let us offer several suggestions:

Some Fundamental Principles

First, it is useful to begin with several key principles. University leadership and governance, management and decision-making should always reflect the fundamental values of the academy, e.g., freedom of inquiry, an openness to new ideas, a commitment to rigorous study, and a love of learning. Yet, these processes should also be willing to consider and capable of implementing institutional change when necessary to respond to the changing needs of our society.

Luc Weber, former vice-chancellor at the University of Geneva suggests that higher education would do well to draw their attention to the economic theory of federalism that was developed to address the challenges faced by the European Economic Community.^{cxiii} First one should stress the importance of externality in all decisions, that is, that the benefits or costs of a decision accrue not only to the members of the community that makes it but also to the broader community it serves. In America we would recognize this as a “customer-oriented” strategy, focusing on those we serve. Second, a principle of subsidiarity should characterize governance in which all decisions ought to be made at the lowest possible level. Efforts to decentralize budget authority in an effort to provide strong incentives for cost containment and entrepreneurial behavior is a good example of this philosophy.

Finally, we should remember that the voluntary culture (some would say anarchy) of the university responds far better to a process of consultation, communication, and collaboration than to the command-control-communication process familiar from business and industry.

Traditional planning and decision-making processes are frequently found to be inadequate during times of rapid or even discontinuous change.^{cxiv} Tactical efforts such as total quality management, process reengineering, and planning techniques such as preparing mission and vision statements, while important for refining status quo operations, may actually distract an institution from more substantive issues during more volatile periods. Furthermore, incremental change based on traditional, well-understood paradigms may be the most dangerous course of all, because those paradigms may simply not be adequate to adapt to a future of change. If the status quo is no longer an option, if the existing paradigms are no longer viable, then more radical transformation becomes the wisest course. It is sometimes necessary to launch the actions associated with a preliminary strategy long before it is carefully thought through and completely developed. In such rapid decision-making, management can come under criticism for a “fire, ready, aim” style of leadership. It is a challenge to help others recognize that traditional planning and decision-making is simply ineffective during times of great change.^{cxv}

Structural Issues

The modern university functions as a loosely coupled adaptive system, evolving in a highly reactive fashion to its changing environment through the individual or small group efforts of faculty entrepreneurs. While this has allowed the university to adapt

quite successfully to its changing environment, it has also created an institution of growing size and complexity. The ever growing, myriad activities of the university can sometimes distract from or even conflict with its core mission of learning.

While it is certainly impolitic to be so blunt, the simple fact of life is that the contemporary university is a *public corporation* that must be governed, led, and managed with competence and accountability to benefit its stakeholders. It is our belief that the interests of its many stakeholders can only be served by a governing board that is comprised and functions as a true board of directors. Like the boards of directors of publicly-held corporations, the university's governing board should consist of members selected for their expertise and experience, as well as their loyalty to the institution. They should govern the university in ways that serve both the long term welfare of the institution as well as the interests of the various constituencies it serves. This, of course, means that the board should function with a structure and a process that reflect the best practices of corporate boards. And, like corporate boards, university governing members should be held accountable for their decisions and actions through legal and financial liability.

The academic tradition of extensive consultation, debate, and consensus building before any substantive decision can be made or action taken is yet another challenge, since this process is simply incapable of keeping pace with the profound changes facing effective governance of the public university. Not everything is improved by making it more democratic. A quick look at the remarkable pace of change required in the private sector—usually measured in months, not years—suggests that universities must develop more capacity to move rapidly. This will require a willingness by leaders throughout the

university to occasionally make difficult decisions and take strong action without the traditional consensus-building process.

Again, although it may be politically incorrect within the academy to say so, the leadership of the university must be provided with the authority commensurate with its responsibilities. The president and other executive officers should have the same degree of authority to take actions, to select leadership, to take risks and move with deliberate speed, that their counterparts in the corporate world enjoy. The challenges and pace of change faced by the modern university no longer allow the luxury of “consensus” leadership, at least to the degree that “building consensus” means seeking the approval of all concerned communities before action is taken. Nor do our times allow the reactive nature of special interest politics to rigidly moor the university to an obsolete status quo, thwarting efforts to provide strategic leadership and direction.

Yet a third controversial observation: While academic administrations generally can be drawn as conventional hierarchical trees, in reality the connecting lines of authority are extremely weak. In fact, one of the reasons for cost escalation is the presence of a deeply ingrained academic culture in which leaders are expected to “purchase the cooperation” of subordinates, to provide them with positive incentives to carry out decisions. For example, deans expect the provost to offer additional resources in order to gain their cooperation on various institution-wide efforts. Needless to say, this “bribery culture” is quite incompatible with the trend toward increasing decentralization of resources. As the central administration relinquishes greater control of resource and cost accountability to the units, it will lose the pool of resources that in the past was used

to provide incentives to deans, directors, and other leaders to cooperate and support university-wide goals.

Hence, it is logical to expect that both the leadership and management of universities will need increasingly to rely on lines of true authority just as their corporate counterparts. That is, presidents, executive officers, and deans will almost certainly have to become comfortable with issuing clear orders or directives, from time to time. So, too, throughout the organization, subordinates will need to recognize that failure to execute these directives will likely have significant consequences, including possible removal from their positions. Here we are not suggesting that universities adopt a top-down corporate model inconsistent with faculty responsibility for academic programs and academic freedom. While collegiality will continue to be valued and honored, the modern university simply must accept a more realistic balance between responsibility and authority.

Clearly an effort should be made to rebuild leadership strength at middle levels within the university, both by redesigning such positions to better balance authority and responsibility, and by providing leadership development programs. This may involve some degree of restructuring the organization of the university to better respond to its responsibilities, challenges, and opportunities. In this regard, there should be more effort made to identify “the administration” as a far broader body than simply the executive officers of the university, including deans, chairs, and directors. It is also critical to get this broader group to be perceived—and to perceive themselves—as spokespersons for university objectives.

Restructuring Governing Boards

Needless to say, such accountability starts at the top, at the level of the university's governing board. As long as the governing boards of public universities continue to be selected through political mechanisms and are allowed to pursue political or personal agendas without concern for the welfare of their institution or its service to broader society, it is unlikely that a new culture of responsiveness and accountability can take hold within the public university.

As the contemporary university becomes more complex and accountable, perhaps we should look more toward the model of corporate governance. Perhaps we should shift from lay boards, with their strongly political character, to true boards of directors similar to those in the private sector. Corporate board members are selected for their particular expertise. They are held accountable to the shareholders for the performance of the corporation. Their performance is reviewed at regular intervals, both within the board itself and through more external measures such as company financial performance. Clearly directors can be removed either through action of the board or shareholder vote. Furthermore, they can be held legally and financially liable for the quality of their decisions—a far cry from the limited accountability of the members of most governing boards for public universities.

It is our belief that university governing boards should function with a structure and a process that reflects the best practices of corporate boards. Board members should be held clearly accountable—indeed, liable—for their actions and decisions. Just as corporate boards must act in the interests of shareholders or risk litigation, governing board members should always act in the interests of the welfare of the university and the

stakeholders it serves, or be removed promptly from the board. There should be a clear process for removing a member from a board should the situation merit this step.

The Association of Governing Boards took an important first step toward addressing this issue in 1995 through a series of recommendations. First, they recommended that the size of public boards be increased to fifteen or more members to minimize the vulnerability of small boards to the behavior of maverick members. The boards should include a majority of carefully selected members who have demonstrated experience with large organizations, their financing, and their complex social and political contexts. Some experience with and interest in higher education was also considered a desirable criterion, of course.

As the AGB demonstrates in its report, there is little positive evidence to support the partisan election of governing boards. But since total reliance on gubernatorial appointment also has problems, the wisest course might be to use a variety of mechanisms to determine the composition of a given board. For example, one might imagine a board comprised of twenty-four members: eight members nominated by the governor and approved by the legislature, eight members elected at large on a nonpartisan basis, and eight representing certain constituencies such as alumni, students, business, and labor. With overlapping terms, such a board would be highly representative and yet stable against the dominance of any political or special-interest group.

While it is important to provide board members with sufficient tenure to develop an understanding of the university, it is also important to avoid excessively long tenures. It is probably wise to limit public university board service to a single term, since this would prevent members from “campaigning” during their tenure for future appointment

or election to additional terms. To this end, selection for a single eight- to ten-year term would be optimal.

Again drawing on the experience of corporate boards, let us make the more radical suggestion that university presidents in public universities should have some influence over the selection of board members, just as their colleagues in private universities and CEOs in the corporate sector. Here we are not proposing that university presidents actually nominate or select board members. But consideration should be given to their right to evaluate and possibly veto a proposed board member if the individual is perceived as unduly political, hostile, or just simply inexperienced or incompetent.

We also believe that all university governing boards, both public and private alike, would benefit greatly from the presence of either active or retired university presidents or senior administrators (e.g., provosts or chief financial officers) from other institutions among their membership. Since the experience of most lay board members is so far removed from the academy, it seems logical to suggest that boards would benefit from the experience such seasoned academic administrators might bring. After all, most corporate boards find it important to have CEOs and chief financial officers, either active or retired, among their membership. University boards might do the same.

An equally controversial variation on this theme would be to provide faculty with a stronger voice in true university governance by appointing faculty representatives as members of the governing board. This would be similar, in a sense, to the practice of some corporate boards in providing a seat for a representative from organized labor. However, there would need to be a clear sense of accountability and liability in such an

appointment, so that the faculty board members would not simply become advocates for the faculty position and instead be responsible to the entire institution.

Every effort should be made to convince leaders of state government that politics and patronage have no place in the selection of university governing boards or efforts to determine their administrative leadership. Quality universities require quality leadership. Of course there may be some states or public institutions in which either public statute or state constitution makes it simply impossible to avoid excessively political and inexperienced boards. In these cases, one might consider a holding company structure, in which a politically determined lay board responsible for the public aspects and policies of the university would be assisted by a number of interlocking appointed boards that would in turn handle various specialized functions of the university, such as the academic medical center, business and finance, fund-raising, and educational issues. In this way, the specialized boards could be comprised of individuals who bring both experience and expertise to these areas, while the public board could be more responsive to the body politic. Note that in this model, the formal governing board and the leadership of the institution would become a small, lean organization, responsible for broad policy development but kept rather distant from management and academic details.

Ironically, while public university governing boards have become increasingly political and hence sensitive to special interests, they have also become increasingly isolated from accountability with respect to their quality and effectiveness. Not only should all boards be subject to regular and public review, but also the quality and effectiveness of governing boards should be an important aspect of institutional accreditation.

Governing in the Public Interest

Many universities find that the most formidable forces controlling their destiny are political in nature—from governments, governing boards, or perhaps even public opinion. Unfortunately, these bodies are not only usually highly reactive in nature, but they frequently either constrain the institution or drive it away from strategic objectives that would better serve society as a whole. Many university presidents—particularly those associated with public universities—believe that the greatest barrier to change in their institutions lies in the manner in which their institutions are governed, both from within and from without. Universities have a style of governance that is more adept at protecting the past than preparing for the future.

The 1996 report of the National Commission on the Academic Presidency^{cxvi} reinforced these concerns when it concluded that the governance structure at most colleges and universities is inadequate. “At a time when higher education should be alert and nimble, it is slow and cautious instead, hindered by traditions and mechanisms of governing that do not allow the responsiveness and decisiveness the times require.” The Commission went on to note its belief that university presidents were currently unable to lead their institutions effectively, since they were forced to operate from “one of the most anemic power bases of any of the major institutions in American society.”

This view was also voiced in a study^{cxvii} performed by the RAND Corporation, which noted, “The main reason why institutions have not taken more effective action (to increase productivity) is their outmoded governance structure—i.e., the decision-making units, policies, and practices that control resource allocation have remained largely unchanged since the structure’s establishment in the 19th century. Designed for an era of

growth, the current structure is cumbersome and even dysfunctional in an environment of scarce resources.”

In this chapter we have raised many concerns about the administration, management, and governance of public universities. Governing boards have become overly politicized, focusing more on oversight and accountability than on protecting and enhancing the capacity of their university to serve the changing and growing educational needs of our society. Faculty governance—at least in its current shared form—is largely unworkable, in many cases even irrelevant, to either the nature or pace of the issues facing the contemporary university. University leadership, whether at the level of chairs, deans, or presidents, has insufficient authority to meet the considerable responsibilities engendered by powerful forces of change on higher education. And nowhere, either within the academy, at the level of governing boards, or in government policy, is there a serious discussion of the fundamental values so necessary to the nature and role of the public university.

It seems clear that the university of the twenty-first century will require new forms of governance and leadership capable of responding to the changing needs and emerging challenges of our society and its educational institutions. The contemporary university has many activities, many responsibilities, many constituencies, and many overlapping lines of authority. From this perspective, shared governance models still have much to recommend them: a tradition of public oversight and trusteeship, shared collegial internal governance of academic matters, and, experienced administrative leadership.

Yet shared governance is, in reality, an ever-changing balance of forces involving faculty, trustees, staff, and administration.^{exviii} The increasing politicization of public governing boards, the ability of faculty senates to use their powers to promote special interests, delay action, and prevent reforms; and weak, ineffectual, and usually short-term administrative leadership all pose risks to the university. Clearly it is time to take a fresh look at the governance of our institutions.

Governing board members should be selected for their expertise and commitment and then held accountable for their performance and the welfare of their institutions. Governing boards should be challenged to focus more on policy development rather than management issues. Their role is to provide the strategic, supportive, and critical stewardship for their institution. Faculty governance should become a true participant in the academic decision process rather than simply watchdogs on the administration or defenders of the status quo. Faculty governance should focus on those issues of most direct concern to academic programs, and faculty members should be held accountable for their decisions. Faculties also need to accept and acknowledge that strong leadership, whether from chairs, deans, or presidents, is important if their institution is to flourish during a time of significant change. Our institutions must not only develop a tolerance for strong leadership, they should demand it.

In conclusion, it is simply unrealistic to expect that the governance mechanisms developed decades or even centuries ago can serve well either the contemporary public university or the society it serves. To assign the fate of these important institutions to inexperienced, political lay governing boards isolated from accountability is simply not in the public interest. Furthermore, during such times of dramatic change, we simply must

find ways to break through the Gordian knot of shared governance, of indecision and inaction, to allow our public universities to better serve our society. To blind ourselves to these realities is to perpetuate a disservice to those whom we serve, both present and future generations.

Chapter 9

University Transformation

A rapidly evolving world has demanded profound and permanent change in most, if not all, social institutions. Corporations have undergone restructuring and reengineering. Governments and other public bodies are being overhauled, streamlined, and made more responsive. Even the relevance of the nation-state is being questioned and re-examined. Certainly most of our colleges and universities also are attempting to respond to the challenges and opportunities presented by a changing world. They are evolving to serve a new age. But most are evolving within the traditional paradigms, according to the time-honored processes of considered reflection and consensus that have long characterized the academy. Change in the university has proceeded in slow, linear, incremental steps--improving, expanding, contracting, and reforming without altering its fundamental institutional mission, approach, or structure.

While most colleges and universities have grappled with change at the pragmatic level, few have contemplated the more fundamental transformations in mission and character that may be required by our changing world. Most institutions continue to approach change by reacting to the necessities and opportunities of the moment rather than adopting a more strategic approach to their future.

Furthermore change in the university is rarely driven from within. After all, one of the missions of the university is to preserve time-honored values and traditions. So too, tenured faculty appointments tend to protect the status quo, and the process of shared governance provides the faculty with a mechanism to slow or even block change. Most campus administrators tend to be cautious, rarely rocking the boat in the stormy seas

driven by politics either on campus or beyond. Governing boards are all too frequently distracted from strategic issues in favor of personal interests or political agendas.

Although the university as a social institution has survived largely intact for over a millennium, it has done so in part because of its extraordinary ability to change and adapt to serve society. The remarkable diversity we see today among institutions--from small liberal arts colleges to gigantic university systems, from storefront proprietary colleges to global “cyberspace” universities--demonstrates both the survival and evolution of the species and how rapidly change can occur.

Earlier examples of change in American higher education, such as the evolution of the land-grant university, the growth of higher education following World War II, and the evolution of the research university, all represented reactions to major forces and policies at the national level. The examples of major institutional transformation driven by internal strategic decisions and plans from within are relatively rare. Change is a particular challenge to the public university, surrounded as it is by powerful political forces and public pressures that tend to be conservative and reactionary.

Yet if we are even to maintain our traditional public mission, the university must continue to ask two questions: “Whom do we serve?” and “How can we serve better?” What will our students need in the 21st Century? What will citizens of our new world require? How can we forge new missions to serve a changing society even as we hold firmly to the deep and common values that have guided the American university over two centuries of evolution? Once we recognize that higher education has a public purpose and a public obligation, we realize that the status quo no longer remains an option. Evolution, change, and transformation become our paths to the future.

Transformation

The capacity for change, for renewal, has become an important objective in other sectors of our society. We frequently hear about companies “restructuring” or “re-engineering” themselves to respond to rapidly changing markets. Government is also challenged to transform itself to be more responsive and accountable to the society that supports it. Yet transformation for the university is necessarily more challenging, since our various missions and our diverse array of constituencies give us a complexity far beyond that encountered in business or government.

So, how might we approach the transformation of an institution as complex as the modern public university? Historically, universities have accomplished change by using a variety of mechanisms. In earlier times of growing budgets, they were able to buy change with additional resources. When the pace of change was slower, they sometimes had the time to build the consensus necessary for grassroots support. Occasionally a key personnel change was necessary to bring in new leadership. Of course, sometimes universities did not have the luxury of additional resources or even adequate time to effect change and would resort to less direct methods such as disguising or finessing change, or even accomplishing change by stealth. In fact, sometimes the pace of change required leaders to take a “Just do it!” approach, making top-down decisions followed by rapid execution.

As we have argued, these past approaches may not be adequate to address the major paradigm shifts that will likely take place in higher education in the years ahead. From the experience of other organizations in both the private and public sector, we can identify several features of the transformation processes that are applicable as well to the

university. First it is essential to recognize that the real challenge lies in transforming the culture of an institution. Financial or political difficulties can be overcome if the organization can let go of rigid habits of thought, organization, and practices that are incapable of responding rapidly or radically enough. To this end, those most directly involved in the core activities of the university, teaching and research, must be involved in the design and implementation of the transformation process. Clearly, in the case of a university, this means that the faculty must play a key role.

But sometimes to drive change, one needs assistance from outside. In the past, government policies and programs have served as the impetus for change. Today, however, many believe that the pressures from the marketplace will play this role. Beyond this, it is usually necessary to involve external groups both to provide credibility to the process and assist in putting controversial issues on the table (such as tenure reform, for instance).

Traditional planning exercises tend to focus on the development of an institutional vision. But transformation requires something beyond this, the development of a *strategic intent*. A strategic intent for an organization provides a "stretch vision" that cannot be achieved with current capabilities and resources.^{cxix} It forces an organization to be inventive and to make the best use of all available resources if it is to move toward this goal. The traditional view of strategy focuses on the fit between existing resources and current opportunities; strategic intent creates an extreme misfit between resources and ambitions. In this way, we are able to challenge the institution to close the gap by building new capabilities.

Finally, experience in other sectors has shown the critical importance of leadership. Major institutional transformation does not occur by sitting far from the front lines and issuing orders. Rather, university leaders must pick up the flag and lead the institution into battle. Granted, this usually entails risk.

Of course, transforming an institution as complex as the university is neither linear nor predictable. Transformation is an iterative process, since as an institution proceeds, experience leads to learning that can modify the transformation process.^{cxx} Furthermore a university must generally launch a broad array of initiatives in a variety of areas such as institutional culture, mission, finance, organization and governance, academic programs, and external relations, all of which interact with one another. It is instructive to consider some of the issues that arise in each of these areas.^{cxxi}

Mission

The most fundamental transformation issues involve the changing character and mission of the university. To understand better the issues involved in this transformation of mission, we might begin by asking why our institutions have been so successful in the past. What has been our unique role, our mission? What has been the key to our longevity?

In this context, then, it is clear that the role of public universities is to serve the societies that have created, supported, and depended upon them--in a sense, to implement the Jeffersonian model of an educational institution created by the people to serve the people. The institutional mission to provide education, and later research and service, to far broader elements of our society has always been a key to our character. Opportunity

through access and service to society continue to be our operative phrases. This has been achieved through the traditional triad mission of teaching, research, and service.

The Kellogg Commission on the Future of the Land-Grant University proposes a new agenda for the public university that better addresses the needs of a changing society: learning, discovery, and engagement. Learning characterizes a far more active paradigm of education in which the university becomes a learning community of students, faculty, and staff. Discovery similarly extends the concept of research to encompass the process of adding to the knowledge base of scholarship. Engagement is defined by the Commission as a redesign of the various activities of the university to become even more sympathetically and productively involved with their communities.

In the past, the capacity of the public universities to play these roles was provided through strong public investment. But, as state support has become a declining component of the resource base, the traditional role of these institutions to serve primarily their state has also changed. In many ways, many of our state universities have evolved, effectively, into national or even global universities.

There is a certain dilemma here. Many, including most state political leaders, the media, and numerous private citizens, still see the state university's primary mission as providing low-cost and, if possible as well, quality education and service to the state itself. Yet today it is clear that there are now many institutions capable of providing low-cost education of moderate quality. Few, however, can provide the high-quality, high-reputation education, research, and service characterizing the flagship state research universities. And, judging from the marketplace and particularly those constituents that

provide an increasing share of university resources, this latter role, which emphasizes quality rather than cost, is the mission most appropriate for many public universities.

Resources

The issues involved in the financial restructuring of the university go beyond the traditional revenue and expenditure considerations, which typically dominate university concerns. In the past, most universities have relied on “incremental budgeting,” in which they accept the continuation of the status quo, and concentrate on small perturbations from this--primarily through small increases allocated on a selective basis. Clearly more sophisticated and flexible budgeting and resource allocation schemes need to be implemented

One of the most critical issues facing the university involves the level of funding needed for investing in new opportunities. Clearly, universities will need significant resources to fuel the transformation process, probably at the level of five percent to ten percent of the total university budget. During a period of limited new funding, it will take considerable creativity (and courage) to generate these resources. As we noted earlier in our consideration of financial issues, the only sources of funding at the levels required for such major transformation are tuition, private support, and auxiliary activity revenues. Universities must recapture some capacity to generate such “venture capital” funds, even if this requires substantial internal reallocation.

Beyond resource allocation, there are many other issues that must be addressed in any financial restructuring plan. For example, to address near-term budgetary needs, most universities have very limited options for generating additional revenue. They can raise prices, that is, increase tuition, albeit with possible market or political implications. And

they can sometimes generate additional resources from auxiliary activities such as health care or licensing. Of course, over the longer term, there are other opportunities, such as increasing private giving, endowment growth, new types of “profit-generating” academic programs such as distance education, intellectual property licensing, and equity positions in spin-off companies. But these require a dedicated effort for many years before generating substantial and reliable resource streams.

It is also important to consider other resource allocation and control mechanisms. Perhaps public universities should wean from state appropriation those units capable of generating sufficient alternative resources (e.g., schools of business, medicine, and law) to enable them to better focus these limited resources on undergraduate education and core support services, such as central libraries. Clearly, universities need to provide units with longer-range financial control and planning capability, even if it means that commitments of central resources are necessarily more conservative. For example, the administration might require rolling five-year financial plans for each unit.

As universities move toward providing units with more control of resources, they should consider some “recentralization” of other controls. For example, they may need to institute faculty position or billet control similar to many private institutions so that they can maintain institutional balance and control growth. Universities need to develop alternative funding models and policies for degree-granting academic programs (in which faculty tenure resides) and for interdisciplinary centers and institutes. While the premise is usually that academic programs will be sustained unless there is sufficient cause for discontinuance, sunset provisions should probably be placed on many centers and institutes.

Characteristics

We have noted that achieving institutional goals requires a careful optimization of the interrelated features of quality, size, and comprehensiveness. It also requires excellence and innovation in selected areas. A university's unique combination of these characteristics is both determined by and evolved from past circumstances, which can constrain and, to some degree, determine future options. For example, the size of many comprehensive universities demands certain organizational structures that will rule out many of the transformation options taken by smaller private institutions. On the other hand, the richness and diversity provided by larger scale will also better position the university to take risks that might be unacceptable for smaller institutions.

There are many issues associated with transforming the characteristics of a university. Campus size is an important issue. While major enrollment changes are difficult for many reasons--tuition revenue and political reaction, for example--it is also important to reassess the optimum size of an institution and its various units from a variety of perspectives, including available resources and academic vitality.

Much of the emphasis of institutional planning during the 1980s and 1990s has been on focusing resources, on becoming smaller but better. But in an age of knowledge in which educated people and ideas have become the wealth of nations, higher education is, in fact, a strong growth enterprise. Hence, it seems clear that the university should explore a broader range of options, including possible growth in selected areas.

Universities should develop the capacity to consider, more strategically, differential growth among units, including the creation and disappearance of academic programs.

This effort should include a consideration of new market strategies. Perhaps higher education needs to stress new kinds of degrees such as graduate certificates. For example, universities could distinguish among on-campus residential instruction, commuter instruction, and distance learning, since these are quite different educational experiences (“products”) and probably should have quite different pricing. Many academic units are already heavily into non-degree education such as the executive management education programs run by business schools.

Organization and Governance

The current organization of the university into departments, schools and colleges, and various administrative units is largely historical rather than strategic in nature. To some degree, it represents a byproduct of an incremental style of resource allocation, in which the presumption is made that units and activities continue indefinitely. Rarely does it result from a conscious strategy or intellectual objectives. As universities approach a period in which major, rapid transformation will be the order of the day, this must assess whether such existing organizational structures are capable of such transformations. Most evidence suggests that while traditional academic units are capable of modest internal change, they are generally threatened by broader institutional change and will strongly resist it.

Of particular concern is the present strong department structure of the university, which organizes schools and colleges along disciplinary lines. While such department structures serve important roles in meeting instructional loads and maintaining broadly accepted standards, they also pose a major impediment to change. They maintain a disciplinary focus that is increasingly orthogonal to the rapid pace of intellectual change

and proves particularly frustrating to faculty, students, and sponsors. They also perpetuate practices of selecting, evaluating, and rewarding people that hinder the development of a more cohesive university community capable of serving a rapidly changing world. Finally, they make strategic resource allocation very difficult, as evidenced by the cumbersome, frustrating nature of efforts to reduce or eliminate academic programs.

Clearly, we need to develop a greater ability to reorganize and restructure academic units. Program discontinuance policies are frequently so cumbersome as to be essentially unworkable. We need to make more use of novel organizational structures such as interdisciplinary centers and institutes that reach across disciplinary boundaries and are intentionally designed with sunset provisions. However, we need to go further than this. We might well consider building alternative “virtual” structures that draw together students, faculty, and staff. So, too, we might try to establish affinity clusters that draw together basic disciplines and key professional schools--for instance, a cluster of biological and clinical sciences.

A number of important organizational issues should be addressed in discussions of university-wide transformation. Most large organizations continue to be based upon a command-communication-control hierarchy, largely inherited from military organizations of past centuries, in which layer upon layer of middle-management is used to channel and control information flow from the top to the bottom--or vice-versa--in the organization. Such hierarchical organizations, however, are largely obsolete in an information-rich environment that is facilitated by modern information technology that enables direct, robust communication among all points in the organization.

The structures of many academic units are sustained by external constituencies, such as accrediting bodies. For example, many of the proliferating department structures in medicine and engineering are driven by professional licensing requirements. So, too, certain schools such as pharmacy, public health, education, and social work exist as separate entities, largely because of accreditation pressures. Universities need to understand better just how restrictive these accreditation requirements are, and, if found to be too constraining, work with peer institutions to modify them.

It seems clear that many university personnel policies and practices are antiquated and make it difficult to reorganize rapidly and reduce unnecessary bureaucracy. Beyond restructuring policies, universities might learn some lessons in human resource management from the corporate sector. For example, they might strongly encourage administrative staff to be rotated to new positions at regular intervals --particularly at senior levels--as a part of their career development. This action would not only loosen up the organization a bit, but it would also provide a mechanism to deal with the casualties of the Peter Principle (where employees rise through the ranks until they are finally trapped in positions where they can no longer succeed and advance).

Intellectual Change

Many of the most important--and also most difficult--transformations will concern intellectual areas such as teaching and scholarship. These issues range from the structure of undergraduate and graduate programs to the organization of research and even as broadly as the merit of degree programs generally.

It has become more and more apparent that undergraduate education is likely to change significantly in the years ahead. While many universities have launched major

efforts to improve the quality of the undergraduate experience, most of these are within the traditional paradigm of four-year degree programs in specialized majors designed for high-school graduates and approached through solitary (and, all too frequently, passive) pedagogical methods. Yet society is demanding far more radical changes.

For example, as we discussed in Chapter 3, our graduates now enter a world where they will be required to change careers many times during their lives. Thus a highly specialized undergraduate education may be inappropriate. Instead, more emphasis should be placed on breadth of knowledge and the acquisition of skills for further learning--that is, on a truly liberal education. In a sense, an undergraduate education should prepare a student for a lifetime of further learning. Are we ready to face up to the fact that we have far too many majors and offer far too many courses? Can we create a truly coherent undergraduate learning experience as long as we allow the disciplines to dominate the academic undergraduate curriculum? How do we address the fact that most of our graduates are “quantitatively illiterate,” with a totally inadequate preparation in intellectual disciplines that will shape their lives such as science, mathematics, and technology? Of course, the same could be said for their broader knowledge of our history and culture.

Perhaps it is time that universities attempted to develop a rigorous undergraduate degree program that would prepare outstanding students for the full range of further educational opportunities, from professions such as medicine, law, business, engineering, and teaching, to further graduate studies across a broad range of disciplines from English to mathematics. Far from being a renaissance degree, such a “Bachelor of Liberal Learning” would be more akin to the type of education universities once tried to provide

decades ago, before the deification of academic disciplines and of specialized scholarship and teaching which took over our institutions and our curricula.

Much of the research university's instructional activity is at the advanced level, in graduate and professional programs. In general, most professional degree programs have been quite responsive to the changes in our society and have adapted quite well.

Examples include the new practice-focused curricula introduced in many schools of medicine and business administration. In contrast, despite great efforts to shorten the time-to-degree, Ph.D. programs remain largely mired in the past, all too frequently attempting to clone graduate students in the mold of their faculty mentors. As doctorate programs have become more specialized and the time-to-degree has lengthened, these programs have become less and less attractive to the most outstanding undergraduates. In contrast to professional degrees such as law and business, which are viewed as creating further opportunities for graduates, the Ph.D. is viewed today as a highly specialized degree that actually narrows one's options. Perhaps the degree itself is obsolete, and what is needed is a "liberal-learning" advanced degree that would prepare graduates for broader roles than simply specialized academic scholarship.

One might go beyond our undergraduate and graduate degree programs and ask the more provocative question of whether degrees even make sense in a society that requires a lifetime commitment to learning. More and more faculty effort is directed towards non-degree learning through programs such as continuing education activities in our professional schools, short courses, and special seminars. Perhaps universities should consider in a more strategic fashion the provision of the "just-in-time" learning

opportunities sought people when they actually need the knowledge, rather than requiring them to go through the rigors of a formal degree program while they are young.

Cultural Issues

As we noted at the outset, the most important and most difficult transformations of all will be those required in the culture of the university. Actually, there are many cultures characterizing the contemporary university: academic, student, administrative, athletic, social, and so forth. While one generally thinks first of changing the faculty culture--and, to be sure, this will be one of the greatest challenge to the university--there will also be major changes required in the multiple cultures of staff and students.

Clearly the culture that determines how faculty members are selected, promoted, tenured, and rewarded must change as the responsibilities of the university change. Today, we have a rather one-dimensional reward system in which achievement is usually measured narrowly and simplistically in terms of the quantity of scholarship and rewarded through salary and promotion. It does not reflect the great diversity in faculty roles or the ways in which these roles change during a faculty member's career.

One of the most critical issues facing the modern university is the limited degree to which faculty members accept responsibility and accountability for their obligations to society. After all, society expects a great deal in return for providing faculty members with the perquisites of academic life--tenure, academic freedom, generous compensation, and prestige. So, too, faculty members have significant responsibilities to the university, although all too often these are regarded secondary to responsibilities to their discipline or profession.

There is a great diversity--and inequity--in the effort expected of the faculty across the university. In some areas, faculty members are not only expected to be actively engaged in teaching and research, but they also must be actively involved in delivering professional services (e.g., clinical care in medicine or consulting services in engineering). Many faculty members are also expected to be entrepreneurs, attracting the resources necessary for their activities through competitive grants or clinical income. While this diversity in faculty roles and effort has long been an important characteristic of research universities, it is frequently not understood by either those inside of or external to our institutions.

In many ways, the traditional mechanisms used for evaluating faculty performance, for making promotion and tenure decisions, tend to discourage risk-taking and venturesome activities. Young faculty members who tackle challenging problems or devote considerable effort to developing new pedagogy put themselves at risk. Somehow, universities must create more of a “fault-tolerant” culture in which their most talented people are encouraged to take on big challenges. They must keep in mind the old saying that if one do not fail on occasion, it is probably because goals are not being set high enough!

Perhaps universities should approach the challenge of changing the faculty culture as an effort to “free the faculty” from the traditional arrangements and mindsets which discourage creativity and innovation. They should encourage faculty members to broaden their activities and become citizens of the university rather than simply members of a department or a school.

Key players in any transformation process will be department chairs and unit managers. The current management culture of the university makes achieving major change at this lowest level of academic or administrative leadership very difficult and encourages conservative leadership and resistance to efforts to change from higher levels of management. Somehow, universities must change this culture by providing strong incentives for department chairs and managers to participate in the institution-wide transformation process--and strong disincentives to stonewalling decisions. Here, the use of change agents among faculty and staff will be critical if universities are to break through the bureaucracy and stimulate grassroots pressures for change.

Some Further Observations

For change to occur, a delicate balance needs to be achieved between the forces that make change inevitable (whether they be threats or opportunities) and a certain sense of confidence and stability that allow people to take risks. For example, how do universities establish sufficient confidence in the long-term support and vitality of the institution, even as they make a compelling case for the importance of the transformation process?

Large organizations will resist change. They will try to wear change agents down or wait them out. Leaders throughout the institution should be given every opportunity to consider carefully the issues compelling change with strong encouragement to climb on board the transformation train. But if they are unable or unwilling to support it, then personnel changes may be necessary.

One of the objectives of a university transformation process is to empower the best among the faculty and staff to exert the influence on the intellectual directions of the

university that will sustain its leadership. However, here universities must address two difficulties. First, there is the more obvious challenge that large, complex hierarchically-organized institutions become extremely bureaucratic and conservative and tend to discourage risk-taking and stifle innovation and creativity. Second, the faculty has so encumbered itself with rules and regulations, committees and academic units, and ineffective faculty governance that the best faculty are frequently disenfranchised, outshouted by their less productive colleagues who have the time and inclination to play the game of campus politics. It will require determination and resourcefulness to break this stranglehold of process and free our very best minds.

From a more abstract viewpoint, major change involves taking a system from one stable state to another. The transition itself, however, involves first forcing the system into instability, which will present certain risks. It is important to minimize the duration of such instability, since the longer it lasts, the more likely the system will move off in an unintended direction, or sustain permanent damage.

While many will resist change, many others will relish it and support bold initiatives if a convincing case can be made. An institution must develop an effective internal marketing strategy for themes of transformation, conveying a sense of confidence that it has have the will and the capacity to follow through, and that in the end the university will emerge stronger than ever.

The Capacity for Change and Adaptation

Although both public and private colleges and universities face the challenge of change, there is a significant difference in their capacity to adapt and serve a changing world. Private universities are generally more nimble, both because of their smaller size

and the limited number of constituencies they have to consult--and convince--before change can occur. Whether driven by market pressures, resource constraints, or intellectual opportunity, private universities usually need to convince only trustees, campus communities (faculty, students, and staff) and perhaps alumni before moving ahead with a change agenda. Of course, this can be a formidable task, but it is a far cry from the broader political constituencies associated with public universities.

The public university must always function in an intensely political environment. Their governing boards are generally political in nature, frequently viewing their primary responsibilities as being to various political constituencies rather than to the university itself. Any changes that might threaten these constituencies are generally resisted, even if they might enable the institution to better serve broader society. The public university also must operate within a complex array of government regulations and relationships at the local, state, and federal level, most of which tend to be highly reactive and supportive of the status quo. Furthermore, the press itself is generally far more intrusive in the affairs of public universities, viewing itself as the guardian of the public interest and using powerful tools such as sunshine laws to hold public universities accountable.

As a result, actions that would be straightforward for private universities, such as enrollment adjustments, tuition increases, or program reductions can be formidable for public institutions. For example, the actions taken by many public universities to adjust to eroding state support through tuition increases or program restructuring have triggered major political upheavals that threaten to constrain further efforts to balance activities with resources.^{cxxii} Sometimes the reactive nature of the political forces swirling about and within the institution is not apparent until an action is taken. Many a public

university administration has been undermined by an about-face by their governing board, when political pressure forces board members to switch from support to opposition on a controversial issue.

Little wonder that administrators sometimes conclude that the only way to get anything accomplished within the political environment of the public university is by heeding the old adage: “It is simpler to ask forgiveness than to seek permission!” Yet even this hazardous approach may not be effective for the long term. It could well be that public universities will simply not be able to respond adequately during periods of great change in our society.

The public research university faces a particular set of challenges. Recall that only a relatively small number of public universities--roughly 60 out of 2,200--are classified as research and graduate intensive. Yet these institutions serve as a primary source of basic research for the nation and the source of the next generation of scholars and professionals. The changing market forces and social policies reshaping the broader higher education enterprise raise a number of important questions concerning the future of the public research university: What will be the impact on these institutions of the profound restructuring now underway in the broader postsecondary learning marketplace? Will they be able to maintain their traditional roles of research, graduate education, and professional training? Will they be able to protect their important academic traditions and values? Will they continue to play a leadership role in our society?

Throughout most of history of higher education in America, our public research universities have been leaders for the broader college and university enterprise. They

have provided the faculty, the pedagogy, the textbooks and scholarly materials, and the standards for all of higher education. They have maintained a strong relationship and relevance to the rest of the enterprise, even though they were set apart in role and mission. While the unique roles, the prestige, and the prosperity of the public research university may allow it to defend the status quo for a time, this too will pose certain dangers. As the rest of the enterprise changes, there is a risk that if the public research university becomes too reactionary and tenacious in its defense of the status quo, it could well find itself increasingly withdrawn and perhaps even irrelevant to the rest of higher education in America and throughout the world.

It is within this context of recognizing the unique mission and value of the public research university even as we seek to preserve its relevance to the rest of higher education that we should examine several possibilities. Some elite private research universities may adopt a strategy of relying on their prestige and their prosperity to isolate themselves from change, to continue to do just what they have done in the past, and to be comfortable with their roles as niche players in the higher education enterprise. But for public universities, the activities of graduate education and basic research are simply too expensive to sustain without some attention to the marketplace. Besides, their public charter mandates a far broader mission.

Perhaps a more constructive approach would be to apply the extraordinary intellectual resources of the public research university to assist the broader higher education enterprise in its evolution into forms better capable of serving the changing educational needs of a knowledge-driven society. For example, although research- and graduate-intensive universities may not be the most appropriate for direct involvement in

mass or universal education, they certainly are capable of providing the templates, the paradigms, that others could use. They have done this before in other areas such as health care, national defense, and the Internet. To play this role, the public university must be prepared to participate in experiments in creating possible futures for higher education.

Extending this role somewhat, flagship public research universities might enter into alliances with other types of educational institutions, regional universities, liberal arts colleges, community colleges, or even newly emerging forms such as for-profit or cyberspace universities. This would allow them to respond to the changing needs of societies while remaining focused on their unique missions as research universities. One could also imagine forming alliances with organizations outside of higher education, e.g., information technology, telecommunications, entertainment companies, information services providers, and government agencies.

Some Lessons Learned

Values

It is important to begin any transformation process with the basics, to launch a careful reconsideration of the key roles and values that should be protected and preserved during a period of transformation. For example, how would an institution prioritize among roles such as educating the young (e.g., undergraduate education), preserving and transmitting our culture (e.g., libraries, visual and performing arts), basic research and scholarship, and serving as a responsible critic of society? Similarly, what are the most important values to protect? Clearly academic freedom, an openness to new ideas, a commitment to rigorous study, and an aspiration to the achievement of excellence would

be on the list for most institutions. But what about values and practices such as shared governance and tenure? Should these be preserved? At what expense?

More generally, there are deeper values that define what the university stands for, what it professes. The Kellogg Commission on the Future of the Land Grant University^{cxixiii} suggests that these values correspond to fundamental commitments that define the character of the public university: to access, diversity, and the global nature of the university; to expanding the boundaries of knowledge through basic and applied research that is useful in people's lives; to academic excellence and rigorous standards; to honest inquiry, the discovery of truth, and academic freedom; and to service to family, community, the nation, and the world.

Engaging the Stakeholders

Next, as a social institution, the public university should endeavor to listen carefully to society, learning about and understanding its varied and ever-changing needs, expectations, and perceptions of higher education. Not that responding to all of these would be desirable or even appropriate for the public university. But it is important to focus more attention on those whom we were created to serve.

But of course, we also must engage internal stakeholders. After all, the university is first and foremost its people, acting as a learning community. Although our most important constituency must always be our students, the most significant to institutional quality and progress is the faculty. But here the goal is to empower the best among our faculty and staff and enable them to exert the influence on the intellectual directions of the university that will sustain its leadership. However, here universities must address two difficulties. First, there is the more obvious challenge that large, complex

hierarchically-organized institutions become extremely bureaucratic and conservative and tend to discourage risk-taking and stifle innovation and creativity. Second, the faculty has so encumbered itself with rules and regulations, committees and academic units, and ineffective faculty governance that the best faculty are frequently disenfranchised, outshouted by their less productive colleagues who have the time and inclination to play the game of campus politics. It will require determination and resourcefulness to break this stranglehold of process and free the very best minds.

Removing Constraints

It is particularly important to prepare the academy for change and competition. Unnecessary constraints should be relaxed or removed. There should be more effort to link accountability with privilege on our campuses, perhaps by redefining tenure as the protection of academic freedom rather than lifetime employment security or better balancing authority and responsibility in the roles of academic administrators. It is also important to begin the task of transforming the academy by considering a radical restructuring of the graduate programs that will produce the faculties of the future.

Alliances

Public universities should place far greater emphasis on building alliances with other institutions that will allow them to focus on core competencies while relying on alliances to address the broader and diverse needs of society. For example, flagship public universities in some states will be under great pressure to expand enrollments to address the expanding populations of college age students, possibly at the expense of their research and service missions. It might be far more constructive for these

institutions to form close alliances with regional universities and community colleges to meet these growing demands for educational opportunity.

Here alliances should be considered not only among institutions of higher education (e.g., partnering research universities with liberal arts colleges and community colleges) but also between higher education and the private sector (e.g., information technology and entertainment companies). Differentiation among institutions should be encouraged, while relying upon market forces rather than regulations to discourage duplication.

Experimentation

It is important to recognize the profound nature of the rapidly changing world faced by higher education. Many of the forces driving change are disruptive in nature, leading to quite unpredictable futures. This requires a somewhat different approach to the transformation effort.

A personal example here: during the 1990s we led an effort at the University of Michigan to transform the institution, to re-invent it so that it better served a rapidly changing world. We created a campus culture in which both excellence and innovation were our highest priorities. We restructured our finances so that Michigan became, in effect, a privately supported public university. We dramatically increased the diversity of our campus community. We launched major efforts to build a modern environment for teaching and research using the powerful tools of information technology.

Yet with each transformation step we took, with every project we launched, with each objective we achieved, we became increasingly uneasy. The forces driving change in our society and its institution were far stronger and more profound than we had first

thought. Change was occurring far more rapidly than we had anticipated. The future was becoming less certain as the range of possibilities expanded to include more radical options. We came to the conclusion that in a world of such rapid and profound change, as we faced a future of such uncertainty, the most realistic near-term approach was to explore possible futures of the university through experimentation and discovery. That is, rather than continue to contemplate possibilities for the future through abstract study and debate, it seemed a more productive course to build several prototypes of future learning institutions as working experiments. In this way we could actively explore possible paths to the future.

For example, we explored the possible future of becoming a privately supported but publicly committed university by completely restructuring our financing, raising over \$1.4 billion in a major campaign, increasing tuition levels to market levels, and dramatically increasing sponsored research support (to the point, in fact, where the university led the nation in research expenditures). Ironically, the more state support declined as a component of our revenue base (dropping to less than 10%), the higher our Wall Street credit rating, finally achieving the highest AAA rating in 1997 (along with the University of Texas, the first for a public university).

Through a major strategic effort known as the Michigan Mandate, described in Chapter 3, we altered very significantly the racial diversity of our students and faculty, doubling the population of underrepresented minority students and faculty over a decade, thereby providing a laboratory for exploring the themes of the “diverse university.”

We established campuses in Europe, Asia, and Latin America, linking them with robust information technology, to understand better the implications of becoming a

“world university.” We played leadership roles first in the building and management of the Internet and now Internet2 to explore the “cyberspace university” theme.

But, of course, not all of our experiments were successful. Some crashed in flames, in some cases spectacularly. For example, we proposed to spin off our academic health center, merging it with a large hospital system in Michigan to form an independent health care system. But our regents resisted this, concerned that we would be giving away a valuable asset (even though we would have netted well over \$1 billion in the transaction and avoided projected \$100 million annual operating losses as managed care sweeps across Michigan).

Although we were successful eventually in getting a Supreme Court ruling that provided relief from the intrusive nature of the state’s sunshine laws, efforts to improve state policies for selecting governing boards were largely ineffective. (Michigan remains one of the on three states where the governing boards of its flagship state universities are determined by popular election and partisan politics.)

And we attempted to confront our own version of Tyrannosaurus Rex by challenging our Department of Athletics to better align their athletic activities with academic priorities, e.g. recruiting real students, reshaping competitive schedules, throttling back commercialism...and even appointing a real educator, a former dean, as athletic director. Yet today we are posed to spend \$100 million on skyboxes for Michigan Stadium after expanding stadium capacity two years ago to over 110,000.

Nevertheless, in most of these cases, at least we learned something (if only our ineffectiveness in dealing with cosmic forces such as college sports). More specifically, all of these efforts were driven by the grass-roots interests, abilities, and enthusiasm of

faculty and students. While such an exploratory approach was disconcerting to some and frustrating to others, fortunately there were many on our campus and beyond who viewed this phase as an exciting adventure. And all of these initiatives were important in understanding better the possible futures facing our university. All have had influence on the evolution of our university.

Our approach as leaders of the institution was to encourage strongly a “let every flower bloom” philosophy, to respond to faculty and student proposals with “Wow! That sounds great! Let’s see if we can work together to make it happen! And don’t worry about the risk. If you don’t fail from time to time, it is because you aren’t aiming high enough!” We tried to ban the word “NO” from the vocabulary of our administrators.

Turning Threats into Opportunities

It is important for university leaders to approach issues and decisions concerning transformation not as threats but rather as opportunities. True, the status quo is no longer an option. However, once change is accepted as inevitable, it can be used as a strategic opportunity to control the destiny of our universities, while preserving the most important of our values and our traditions. Creative, visionary leaders can tap the energy created by threats such as the emerging for-profit marketplace and technology to engage their campuses to lead their institutions in new directions that will reinforce and enhance their most important roles and values.

Some Final Observations Concerning Transformation

Of course, any effort at institutional transformation will be highly influenced by the unique circumstances, challenges, and opportunities facing a university. But we can offer some general guidelines--in a sense, a recipe for institutional change.

In business, management approaches change in a highly strategic fashion, launching a comprehensive process of planning and transformation. In political circles, sometimes a strong leader with a big idea can captivate the electorate, building a movement for change. Change occurs in the university through a more tenuous, sometimes tedious, process. Ideas are first floated as trial balloons, all the better if they can be perceived to have originated at the grassroots level. After what often seems like years of endless debate, challenging basic assumptions and hypotheses, decisions are made and the first small steps are taken. For change to affect the highly entrepreneurial culture of the faculty, it must address the core issues of incentives and rewards.

Of course, the efforts to achieve change following the time-honored traditions of collegiality and consensus can sometimes be self-defeating, since the process can lead all too frequently right back to the status quo. As one of our exasperated presidential colleagues once noted, the university faculty may be the last constituency on Earth that believes the status quo is still an option. To some degree, this strong resistance to change is both understandable and appropriate. After all, the university is one of the longest enduring social institutions of our civilization in part because its ancient traditions and values have been protected and sustained.

It is particularly important to prepare the academy for change and competition. Unnecessary constraints should be relaxed or removed. There should be more effort to link accountability with privilege on our campuses, perhaps by redefining tenure as the protection of academic freedom rather than lifetime employment security or better balancing authority and responsibility in the roles of academic administrators. It is also

important to begin the task of transforming the academy by considering a radical restructuring of the graduate programs that will produce the faculties of the future.

Clearly there is a need to consider the restructuring of university governance, particularly the character of lay governing boards and the process of shared governance among boards, faculties, and administrations, so that our universities are better able to respond to the changing needs of society rather than defending and perpetuating an obsolete past.

Clearly any serious transformation effort must involve financial issues. But these should occur within a broader national debate concerning the nature of public support for higher education. For example, what is the appropriate mix between public support (i.e., appropriations from tax revenues for higher education as a “public good”) and private support (i.e., revenues from the marketplace reflecting higher education as a personal benefit)? Considerations of public support should include both direct mechanisms such as appropriations, research grants, and student financial aid as well as indirect public subsidy through “tax expenditures” reflecting the favorable tax treatment of charitable gifts and endowment earnings. Other important policy issues include: I) The appropriate burdens borne by each generation in the support of higher education as determined, for example, by the mix of grants versus loans in federal financial aid programs; ii) the degree to which public investment should be used to help shape powerful emerging market forces to protect the public purpose of higher education; and iii) new methods for internal resource allocation and management that enhance productivity.

We noted earlier in this chapter the importance of encouraging experimentation within the university, to explore different models of teaching and scholarship, as well as

different institutional policies and practices. During a time of change and uncertainty, such experimentation and risk-taking may be the best approach to identifying both future possibilities and developing paths to these futures.

It All Comes Back to Values

In this book we have joined with many others in considering the significant shifts in national and state policies concerning public higher education that have occurred over the past half century. The history of the public university in America is one of a social institution, created and shaped by public needs, public policy, and public investment to serve a growing nation.

Yet today, policy development seems largely an aftermath of image-driven politics.^{cxxiv} The current political environment is dominated by media-driven strategies, fund-raising, and image building. Such policy as exists is largely devoid of values or social priorities, but rather shaped in sound bites to achieve short-term political objectives. Perhaps as a consequence if not as a cause, our society appears to have lost confidence both in government policies and programs it once used to serve its needs. Instead it has placed its faith in the marketplace, depending on market competition to drive and fund the evolution of social institutions such as the university.

Those of us in higher education must share much of the blame for today's public policy vacuum. After all, for much of the last century the college curriculum has been largely devoid of any consideration of values. While some might date this abdication to the trauma of the volatile 1960s, in truth it extends over much of the twentieth century, as scholarship became increasing professionalized and specialized, fragmenting any coherent sense of the purposes and principles of a university. Values such as tolerance,

civility, and personal and social responsibility have been largely absent from the academic curriculum.

Little wonder that the future of public higher education has largely been left to the valueless dynamics of the marketplace. Most of our undergraduates experience little discussion of values in their studies. Our graduate schools focus almost entirely on research training, with little attention given to professional ethics or even preparation for teaching careers, for that matter. Our faculties prefer to debate parking over principles just as our governing boards prefer politics over policy. And, in this climate, our university leaders keep their heads low, their values hidden, and prepare their resume for their next institution.

The remarkable resilience of institutions of higher education, the capacity to adapt to change in the past, has occurred because in many ways they are intensely entrepreneurial, transactional cultures. We have provided our faculty the freedom, the encouragement, and the incentives to move toward their personal goals in highly flexible ways, and they have done so through good times and bad. Our challenge is to tap the great source of creativity and energy associated with entrepreneurial activity in a way that preserves our fundamental mission, our fundamental values. In one sense, we need to continue to encourage our tradition of evolution and adaptation, which has been so successful in responding to a changing world.

Yet we must do so within the context of an exciting and compelling vision for the future of our institutions. We need to guide this process in such a way as to preserve our core missions, characteristics, and values. We must work hard to develop university communities where uncertainty is an exhilarating opportunity for learning. The future

belongs to those who face it squarely, to those who have the courage to transform themselves to serve a new society.

A key element will be efforts to provide universities with the capacity to transform themselves into entirely new paradigms that are better able to serve a rapidly changing society and a profoundly changed world. We must seek to remove the constraints which prevent our institutions from responding to the needs of their social environments, to remove unnecessary processes and administrative structures, to question existing premises and arrangements, and to challenge, excite, and embolden the members of our university communities to embark on this great adventure. Our challenge is to work together to provide an environment in which such change is regarded not as threatening but rather as an exhilarating opportunity to engage in the primary activity of a university, learning, in all its many forms, to serve our world as best we can.

Those institutions that can step up to this process of change will thrive. Those that bury their heads in the sand, that rigidly defend the status quo or, even worse, some idyllic vision of a past which never even existed, are at very great risk. Those institutions that are micromanaged, either from within by faculty politics or governing boards or from without by government or public opinion, stand little chance of flourishing during a time of great change.

Chapter 10

A New Century

Many regard the public university as among our nation's most significant social institutions. It is through our public colleges and universities that the educational, intellectual, and service resources of higher education have been democratized and extended to all of our citizens. The missions of these institutions reflect some of society's most cherished goals: opportunity through education, progress through research, and cultural enrichment. Our public colleges and universities are bound closely to society, responsible to and shaped by the communities that founded them. These institutions have grown up with our nation. They have responded to the changing needs and aspirations of its people as America expanded to the frontier. They played key roles in the agricultural development of our nation and then our transition to an industrial society. Public universities were important partners in national defense during two world wars and continue to be important contributors of human and intellectual resources critical to national security. They have expanded and diversified to serve an ever-changing population and its evolving needs.

Today America's public colleges and universities enroll over 75 percent of all college students, currently numbering some 11.6 million. Nearly two-thirds of all bachelor's degrees, 75% of all doctoral degrees, and 70% of the nation's engineering and technical degrees are awarded by public universities.^{cxxv} Public universities conduct the majority of the nation's campus-based research. They produce most of our doctors, lawyers, engineers, teachers, and other professionals and public leaders. They provide

critical services such as agricultural and industrial technology, health care, and economic development. They enable social mobility, providing generations of students with the steppingstones to more rewarding careers and more meaningful lives.

As we enter a new century, Americans can take pride in having built the finest system of higher education in the world, both in terms of the quality of its colleges and universities and the breadth of our society served by these institutions. American universities lead the world in the quality of their academic programs, as evidenced both by their dominance of international awards such as the Nobel Prize and by their status as the institutions of choice for students throughout the world. Beyond the quality of our leading institutions, our colleges and universities have responded to the needs of our nation by providing educational opportunities on an unprecedented scale, with two-thirds of today's high school graduates seeking some level of college education. Our universities' contributions to the scientific and technological strength of our economy and to our culture, especially in addressing social priorities from health care to urban infrastructure to international competitiveness, have been formidable indeed. The American university is more deeply engaged in society than ever before, playing an increasingly critical role in shaping our economy, our culture, and our well being.

Yet this is a time of change, for our society and its institutions. The forces driving change in higher education today are many and varied: the intensifying, lifelong educational needs of citizens in a knowledge-driven, global economy; the increasing diversity of our population and the growing needs of under-served communities; the globalization of commerce, culture, and education; the impact of rapidly evolving technologies such as the computer and telecommunications; and the exponential growth

in both the magnitude and commercial value of the new knowledge created on our campuses.

Today, an array of powerful social, economic, and technological forces are driving change in the educational needs of our society and the institutions created and evolving to respond to these needs. We live in an "audit" society, in which accountability and performance matter. Concerns about the cost of a college education appear to have replaced earlier concerns about access and opportunity. Furthermore, as our society places ever more confidence in the economic forces of the marketplace rather than the policy and programs developed by governments, there is a sense that the evolution of higher education in the twenty-first century will be fueled by private dollars and that the influence of public policy will be replaced increasingly by market pressures. There are increasing signs that our current paradigms for higher education, the nature of our academic programs, the organization of our colleges and universities, and the way that we finance, conduct, and distribute the services of higher education, may not be able to adapt to the demands and realities of our times.

While all of higher education faces the challenge of change as we enter a new century, these challenges are particularly intense for public universities. The complex political and social environments in which these institutions must function; the rapidly changing character of their financing; their public responsibilities and accountability; the political nature of their governance; these and many other characteristics make change not only a great challenge but also a compelling necessity for the public university.

Beyond the Crossroads

This book is based upon the belief that we have already moved far beyond the crossroads of considered reflection and contemplative debate about whether change is necessary in the public university. Already the pace of change in public higher education is relentless and accelerating, just as it is in the rest of our society. Our universities have already traveled far down the roads toward a dramatically different future that we have experienced or known, and there is no turning back. Rather our challenge today is to develop effective strategies to shape the evolution of our public universities so that they will play key, albeit different roles in responding to the needs of a changing world.

Hence this book has been written not as an analysis of the various forces driving change in today's public university, but rather as a consideration of various strategies for shaping the public university of the future. We seek to assist public higher education in shifting from its current tendencies to simply react to the challenges and opportunities of the moment to developing proactive strategies that will allow them to control their own destinies. For example, how should one restructure the academic programs of our universities to better serve an ever more diverse student cohort, not only in terms of socio-economic background but as well in age, employment and family responsibilities, and even physical presence (e.g., on campus or in cyberspace)? How do we finance our public universities, enhancing quality and constraining costs at a time when traditional sources of public support are likely to be restrained or declining? How do we prepare universities for the digital age, a world characterized by increasingly powerful information and communications technologies? How should we govern, lead, and manage our institutions, particularly during a period that will likely require very substantial university transformation? How do we view the need for change not as a

threat but rather as an opportunity, managing and shaping it to enable our institutions to better serve our society?

Clearly, public universities need to address the rapidly changing character of students, with respect to socioeconomic background, age, family, and employment situations. Both the different learning styles of the plug-and-play generation as well as the lifetime learning demands of the high performance workplace will likely drive a shift from “just-in-case” education, based on degree-based programs early in one’s life, to “just-in-time” education, where knowledge and skills are obtained during a career, to “just-for-you” educational services, customized to the needs of the student. Similarly as learning needs become more pervasive in a knowledge-driven economy, national priorities will shift from selectivity and exclusivity (e.g., focusing most resources on educating the “best and brightest”) to the universal education of the workforce. The increasing commercial value of the intellectual property produced by campus research and instructional activities, coupled with the tightly coupled and highly nonlinear process of technology transfer from the campus laboratory to the commercial marketplace are driving changes in the faculty culture. Public universities need new policies to assist them in balancing their traditional responsibilities for teaching, research, and service with the new needs and demands of a knowledge-driven society.

Universities face a particular challenge in adapting to the extraordinarily rapid evolution of information and communications technology. Modern digital technologies such as computers, telecommunications, and networks are reshaping both our society and our social institutions. Of course, our nation has been through other periods of dramatic change driven by technology, but never before have we experienced a technology that has

evolved so rapidly, increasing in power by a hundred-fold every decade, obliterating the constraints of space and time, and reshaping the way we communicate, think, and learn. Digital technology will not only transform the activities of the university—our teaching, research, outreach—but as well it will transform how we are organized, financed, managed—even whom we regard as students and faculty. The development and execution of effective strategies for addressing the challenges and opportunities presented by digital technology is a particularly critical task for public universities, long committed to broad access and to reaching beyond the campus to serve society, and yet also constrained by public support and accountability to operate in a cost-effective manner with limited resources.

The market pressures of a knowledge-driven economy are attracting new for-profit providers of educational services and challenging the traditional monopolies of colleges and universities. Although perhaps alien to many sectors of the academy, market competition will demand different strategies for public universities, in which concepts such as core competence and strategic intent along with business practices such as mergers, acquisitions, and restructuring will become increasingly important.

Closely related will be the need for new business models capable of adequately financing the complex array of university missions at a time when public support is becoming more limited. It is important to consider strategies such as diversifying the revenue base of the university, building substantial reserves (including endowment), and changing dramatically the current practices of resource allocation, financial management, and financial accountability. As we will discuss later, there will be motivation for some

public universities to consider privatizing their financial operations, becoming, in effect, privately funded but publicly committed universities.^{cxvii}

The leadership and management of the public university is challenging enough during the most quiescent of times because of the complexity of these institutions and the political and social environment in which they must function. But the period of rapid change that will characterize most institutions in the decade ahead may quickly obsolete many of the traditional approaches to university leadership and demand a serious reconsideration of the process for decision-making and management. In a similar fashion, the traditional mechanisms of university governance, such as the use of lay governing boards determined through political means or shared governance with elected faculty bodies may simply be incapable of dealing effectively with either the pace or nature of the changing higher education enterprise. It is important to consider not only new forms but moreover entirely new principles for the leadership and governance of the public university.

Most public colleges and universities will find themselves facing a period of institutional transformation, proceeding at both a pace and to an extent far beyond either institutional experience or the capacity of traditional mechanisms. While universities have changed quite dramatically in the past, they have generally done so over time periods of decades or longer, compatible with the time-scales dictated by tenure the the length of faculty careers. Yet today our public institutions will face the need to transform themselves on time scales of years or shorter in key areas such as finance, technology, and academic programs. This requires entirely new strategies for institutional transformation.

We believe that as institutions, states, and as a nation, we need to think far more broadly about the future of the public university. We seriously question whether many of the current practices and stereotypes of the public university will remain relevant to our future. Perhaps entirely new concepts such as learning ecologies or ubiquitous learning will replace our current national educational infrastructure of schools, colleges, universities and policies and practices.^{cxxvii} Although speculation about the future can be hazardous, since it is frequently wrong, it is nevertheless useful to provide a context of possibilities for current decisions.

Finally, it is important in all of these considerations to remember that the history of the public university in America is one of a social institution, created and shaped by public needs, public policy, and public investment to serve a growing nation. In the past the policies and programs concerning public higher education have been driven by important social values and needs: the importance of extending educational opportunity to the working class and serving a growing industrial nation as evidenced in the land-grant acts; the commitment to make higher education accessible to all Americans, regardless of socio-economic background; the recognition of the importance of universities in creating the knowledge essential to national security, quality health care, economic competitiveness, and an array of other national and regional priorities. These policies and programs provided both the guiding principles for the evolution of the public university and the commitment of public resources necessary to enable it to serve our nation. It remains an open question today whether new social needs and priorities will drive the public policy and investment that defines the public university of the 21st

Century, or whether market forces will instead reshape these institutions, perhaps in ways no longer responsive to the public interest.

The Changing Social Contract

Service to society and civic responsibility are among the most unique and important themes of higher education in America. The bonds between the university and society are particularly strong in this country. The public university provides an important model of how social institutions, created by public policy and supported through public tax dollars, evolve in response to changing social needs. Our public colleges and universities were publicly created, publicly supported, and governed by public bodies for public purposes. They exist to serve the public interest. As the needs and aspirations of our society have changed, so too have changed our public universities. In a very real sense, these institutions have grown up with our nation as each generation has established a social contract with its public universities, redefining the relationship between these institutions and the society they serve.^{cxxviii}

The historical rationale for public higher education, its *raison d'être*, is that since education benefits all of society, it is deserving of support from public tax dollars.^{cxxix} The Carnegie Commission on Higher Education of the 1960s and 1970s framed this idea best when it first posed the classic formulation of the questions that shape public policy in higher education, “What societal purposes does higher education fulfill? Who pays? Who benefits? Who should pay?” It answered by stating its belief that higher education benefits not just the individual but society as a whole. The return on this societal investment is not just an educated citizenry, but a more vital and productive workforce.^{cxxx}

This leads to a public principle: the public university is established by public action and supported through general taxation for the benefit of all of society. The basic premise is that public higher education is a public good. Society gains benefits both directly from the services of public institutions as well as from the contributions (including future tax payments) made by educated citizens. Because of societal support, the services provided by universities should be available to all that are qualified, without respect to academically irrelevant criteria such as gender, race, religion, or socioeconomic status. Since it is supported by society, the public university is obligated both to be responsible to the needs of society and to be publicly accountable for the use of tax funds.

For most of the history of public higher education, the key themes of its evolution have been opportunity through access and service to society enabled by strong public investment of tax dollars. Each generation has attempted to provide the benefits of higher education to a broader segment of the American population by launching a new array of public institutions: the state universities and the land-grant colleges of the nineteenth century, the technical and normal schools of the early twentieth century, the community colleges and statewide university systems in the post-war years, and the virtual and cyberspace universities of today. The federal government has played a major role in the evolution of public higher education through important legislation such as the land-grant acts, the GI Bill, an array of federally funded student financial aid programs, and the direct support of campus-based activities such as research and health care. The primary support for the public university came from the states and local government, sometimes

guided by major policy efforts such as the Wisconsin Idea^{cxxxii} or the California Master Plan.^{cxxxii}

Despite the great impact of the public university on our nation, important elements of the social contract between society and the public university are changing rapidly. Public resistance to taxes has limited the availability of tax revenue at the local, state, and federal level. Higher education has become less effective in competing with other social priorities such as health care, K-12 education, and crime prevention and incarceration. Perhaps most significant of all, there has been a subtle shift of public policy away from the public principle. Higher education has increasingly become viewed as an individual benefit rather than a societal right. The concept of publicly supported colleges and universities providing free education of high quality to a broad segment of our population, that is, access through opportunity, has certainly eroded if not disappeared entirely.

As we begin a new century, there is an increasing sense that the social contract between the public university and American society may need to be reconsidered and perhaps even renegotiated once again.^{cxxxiii} The university's multiple stakeholders have expanded and diversified in both number and interest, drifting apart without adequate means to communicate and reach agreement on priorities. Public higher education must compete with an increasingly complex and compelling array of other social priorities for limited public funding. Both the public and its elected leaders today view the market as a more effective determinant of social investment than government policy. Perhaps most significant of all, the educational needs of our increasingly knowledge-intensive society

are both changing and intensifying rapidly, and this will require a rethinking of appropriate character and role of higher education in the 21st Century.

Perhaps it is understandable that as a key economic, political, social, and cultural institutions, universities have become both more visible and more vulnerable. The American university has become, in the minds of many, just another arena for the exercise of political power, an arena susceptible to the pull of special interests and open to much negative media attention and even exploitation. It is also understandable that public sympathy toward the university was greater in decades past, when the role of the university was primarily centered around undergraduate education, and when only a small fraction of our population had the opportunity for a college education. Part of today's challenge arises from the multiplicity and complexity of the roles that contemporary society has asked the university to assume. Many of our critics may be asking us to return to our earlier and far narrower roles, easily understood and non-threatening.

Yet it is also increasingly clear that the public university cannot return to its earlier forms. It long ago passed the point where its earlier, simpler roles and character would be adequate to serve our nation. Our knowledge-intensive world has become far too dependent upon the modern university. If the public university were to retreat from social engagement and return to a more restricted role of simply educating the young, society would simply have to invent new social institutions to play our more expanded roles.

A Time for Leadership

History suggests that the public university as a social institution must change and adapt in part to preserve its traditional roles. For centuries this extraordinary social institution has not only served as a custodian and conveyor of knowledge, wisdom, and values, but it has transformed the very society it serves, even as social forces have transformed it in turn. It is true that many, both within and outside the academy, believe that significant change must occur not simply in the higher education enterprise but in each and every one of our institutions. Yet, even most of these see change as an evolutionary, incremental, long-term process, compatible with the values, cultures, and structure of the contemporary university.

The past decade has been a time of significant change in higher education, as our public universities have attempted to adapt to the changing resources and to respond to new public concerns. Undergraduate education has been significantly improved. Costs have been cut, and administrations streamlined. Campuses are far more diverse today with respect to race, ethnicity and gender. Faculties are focusing their research efforts on key national priorities. Public universities have streamlined their operations and restructured their organizations in efforts to contain the rising cost of a college education.

Yet, these changes in the public university, while important, have been largely reactive rather than strategic. Most colleges and universities have yet to understand, much less address, the profound institutional transformation that may be necessary to serve the educational and intellectual needs of our radically changing society. The rapidly changing nature of our economy, our society, and our world demand profound changes in all social institutions, the university among them.

Today, however, the public university no longer has the luxury of continuing at this leisurely pace, nor can it confine the scope of changes under way. We are witnessing a significant paradigm shift in the very nature of the learning and scholarship—indeed, in the creation, transmission, and application of knowledge itself—both in America and worldwide, which will demand substantial rethinking and reworking on the part of our institutions. As public higher education enters a new century, the powerful forces of a changing world have pushed our universities far beyond the crossroads of leisurely choice and decision making and instead down roads toward a future that we can only dimly perceive and must work hard to understand.

For the most part, our public universities still have not grappled with the extraordinary implications of an age of knowledge; a society of learning that will likely be our future. Academic structures are too rigid to accommodate the realities of our rapidly expanding and interconnected base of knowledge and practice. Higher education as a whole has been divided and internally competitive at times when it needs to speak with a single unequivocal voice. Entrenched interests block the path to innovation and creativity. Perhaps most dismaying, it has yet to come forth with a convincing case for ourselves, a vision for our future, and an effective strategy for achieving it.

Public higher education in America has a responsibility to help show the way to change, not simply to react to and follow it. Its voice must be loud, clear, and unified in the public forum. At the same time, it must engage in vigorous debate and experimentation, putting aside narrow self-interest, and accepting without fear the challenges posed by this extraordinary time in our history.

ⁱ Almanac Issue, 2001-2002, *Chronicle of Higher Education*, Vol. XLVII, No. 1 (August 31, 2001).

ⁱⁱ Frank H. T. Rhodes, *The Creation of the Future: The Role of the American University* (Cornell University Press, Ithaca, 2001) 265 pp.

ⁱⁱⁱ John Seely Brown, *The Social Life of Information* (Harvard Business School Press, Cambridge, 2000).

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