Universities are singular institutions. They have common historical roots, yet are deeply embedded in their societies. Established in the medieval period to transmit knowledge and provide training for a few key professions, in the nineteenth century universities became creators of new knowledge through basic research. The contemporary university stands at the center of society. The most important institution in the complex process of knowledge creation and distribution, it not only serves as home to most of the basic sciences but also to the complex system of journals, books, and databases that communicate knowledge worldwide. Universities are key providers of training in an evergrowing number of specializations. Universities have also taken on a political function in society: they often serve as centers of political thought, and sometimes of action, and they train those who become members of the political elite. At the same time, academe is faced with unprecedented challenges, stemming in large part from a decline in resources made available to higher education. After almost a half century of dramatic expansion worldwide, universities in many countries are forced to cut back on expenditures, and in some cases to downsize. The unwritten pact between society and higher education that provided expanding resources in return for greater access for students as well as research and service to society has broken down, with significant implications for both higher education and society.

This chapter is concerned with the patterns of higher education development evi-
dent in the post–World War II period throughout the world—analyzing some of the reasons for these trends and pointing to likely directions for universities in the coming decades. Issues such as autonomy and accountability, the role of research and teaching, reform and the curriculum, and the implications of the massive expansion that has characterized universities in most countries are of primary concern here. Universities are simultaneously international institutions, with common historical roots and also embedded in national cultures and circumstances. It is worthwhile to examine the contemporary challenges to higher education in both a historical and comparative perspective.

A COMMON HERITAGE

There is only one common academic model worldwide. The basic European university model, which was established first in France in the thirteenth century, has been significantly modified but remains the universal pattern of higher education. The Paris model placed the professor at the center of the institution and enshrined autonomy as an important part of the academic ethos. It is significant that the major competing idea of the period, the student-dominated University of Bologna, in Italy, did not gain a major foothold in Europe, although it had some impact in Spain and later in Latin America. The university rapidly expanded to other parts of Europe—Oxford and Cambridge in England, Salamanca in Spain, Prague and Krakow in central Europe, and a variety of institutions in the German states were established in the following century.

Later, the European imperialist nations brought universities to their colonies, along with the other accoutrements of colonialism. The British, for example, exported academic models—first to the American colonies and later to India, Africa, and Southeast Asia. The French in Vietnam and West Africa, the Spanish and Portuguese throughout Latin America, the Dutch in Indonesia, the Americans in the Philippines, and other colonial powers also exported academic institutions. Colonial universities were patterned directly on institutions in the metropole, but often without the traditions of autonomy and academic freedom in the mother country.

The university was by no means a static institution. It changed and adapted to new circumstances. With the rise of nationalism and the Protestant Reformation in Europe, the universal language of higher education, Latin, was replaced by national languages. Academic institutions became less international and more local in their student bodies and orientations. Universities were affected by their national circumstances. Protestant Amsterdam differed from Catholic Salamanca. Fledgling Harvard, although patterned on British models, slowly developed its own traditions and orientations, reflecting the realities of colonial North America. Academic institutions have not always flourished. Oxford and Cambridge, strongly linked to the Church of England and the aristocracy, played only a minor role in the development of the industrial revolution and the tremendous scientific expansion of the late eighteenth and nineteenth centuries. In France, universities were abolished and reestablished and the Napoleonic Code was applied, temporarily losing the student-dominated University of Bologna, in Italy, did not gain a major foothold in Spain and later in Latin America. The university rapidly expanded to other parts of Europe—Oxford and Cambridge in England, Salamanca in Spain, Prague and Krakow in central Europe, and a variety of institutions in the German states were established in the following century.

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France, universities were abolished after the revolution in 1793. They were gradually reestablished and the Napoleonic model became a powerful force not only in France but also in Spain and Latin America. The German universities were severely damaged during the Nazi period by the destruction of autonomy and the departure of many professors, permanently losing their scientific preeminence. For the purposes of this chapter, two more recent modifications of the Western academic model are relevant. In the mid-nineteenth century, a newly united Germany harnessed the university for nation building. Under the leadership of Wilhelm von Humboldt, German higher education was given significant resources by the state, took on the responsibility for research aimed at national development and industrialization, and played a key role in defining the ideology of the new German nation. The reformed German universities also established graduate education and the doctoral degree as a major focus of the institution. For the first time, research became an integral function of the university. The university was reorganized as a hierarchy based on the newly emerging scientific disciplines. American reformers took these German innovations and further transformed higher education by stressing the relationship between the university and society through the concept of service and direct links with industry and agriculture. They also democratized the German chair system through the establishment of academic departments and the development of the "land-grant" concept for both high-level research and expanded access to higher education. Institutions that seem deeply embedded in national soil have in fact been influenced by international ideas and models.

The world's universities follow institutional patterns that are basically derivative of these Western models, with virtually no exceptions. One of the few remaining fully non-Western institutions, the Al-Azhar University in Cairo, focuses mainly on traditional Islamic law and theology. Significantly, its science faculties are now organized along European lines. There are many variations—including open universities in Britain, Thailand, India, and elsewhere, two-year vocationally oriented institutions in the United States and many other countries, teacher-training colleges, polytechnics and many others. While the functions of these institutions may differ from those of traditional universities, their basic organization, patterns of governance, and ethos remain remarkably close to the basic Western academic ideal.

NETWORKS OF KNOWLEDGE AND HIGHER EDUCATION

There are many explanations for the dominance of the Western academic model and the lack of alternatives in the modern world. The fact that the Western university institutionalized the study of science and later its production is a central element. The link between universities and the dominant world economic systems no doubt is a particularly important reason for Western hegemony. In many parts of the world, academic institutions were imposed by colonizers. There were few possibilities to develop independent alternatives. Traditional indigenous institutional forms were destroyed by the
colonizers, as in India when the British imposed European patterns in the nineteenth century and no longer recognized existing traditional institutions.15 None of the formerly colonized nations have shifted from their basically European academic models. The contemporary Indian university resembles its pre-Independence predecessor. Japan, never colonized, recognized after 1868 that it had to develop scientific and industrial capacity and jettisoned its traditional academic institutions in favor of Western university traditions. Japan imported ideas and models from Germany, the United States, and other countries in the development of its universities.16 Other noncolonized nations, such as China and Thailand, also imported Western models and adapted them to local needs and conditions.17

Western universities were seen to be successful in providing advanced education, fostering research and scientific development, and assisting their societies in the increasingly complex task of development. Universities in both the United States and Germany were active in fostering industrial and agricultural development in the nineteenth century. The harnessing of higher education to the broader needs of national economic and social development was perhaps the most important innovation of this era. The idea that higher education should be generously supported from public funds, that the university should participate in the creation as well as the transmission of knowledge, and that academic institutions should at the same time be permitted a degree of autonomy was behind much of the growth of universities in this century. Further, Western universities were at the center of a knowledge network that included research institutions, the means of knowledge dissemination such as journals and scientific publishers, and an “invisible college” of scientists. It is worth noting that the bulk of the world’s scientific literature now appears in the English language. Even scholars in such industrialized nations as Sweden and the Netherlands often find it necessary to communicate their research findings in English. The large Dutch multinational publishers, Elsevier and Kluwer, publish virtually all of their scholarly and scientific books and journals in English.

The circulation of scholars and students worldwide—and in a sense even the “brain drain”—is an element of the international knowledge system, helping to circulate ideas and also maintaining the impact of the major “host” countries and their research hegemony. More than one million students study outside their home countries. The large majority of these students are from Third World nations and the newly industrialized countries of the Pacific Rim. They are studying in the industrialized nations, with the United States, Britain, France, and Germany among the major host countries. Japan is both a major sending and receiving country.18 Students learn many things as a result of their sojourns abroad. They gain expertise in their studies. They also learn the norms and values of the academic system in which they are located, often returning home with a zeal to reform their universities in a Western direction. Frequently, foreign graduates have difficulty readjusting to their home countries, in part because the advanced training they acquired abroad may not be easily assimilated into less well-developed economies. Such frustrations, along with the blandishments of significantly better remuneration, lead to the brain drain.
However, in the contemporary world, brain drain is often not permanent. For one thing, members of the Third World scientific diaspora often maintain contact with their colleagues at home, contributing advanced knowledge and ideas. They frequently return home for periods of time and work with local academics. And increasingly, they return home permanently when academic—and sometimes political—conditions are favorable, bringing with them considerable expertise, often assuming leadership positions in the local scientific and academic communities. Without question, the massive circulation of highly educated personnel has a great influence on the transfer of knowledge.

With few exceptions, the knowledge and institutional patterns transferred are from the major industrialized nations to the Third World—or even to other more peripheral industrial countries—with very little traffic in the other direction. The knowledge network is complex and multifaceted; while its centers remain extraordinarily powerful, there is a movement toward greater equalization of research production and use. Japan, for example, already has a powerful and increasingly research-oriented university system, and some of the newly industrializing countries of East and Southeast Asia are building up research capacity in their universities. While hegemony may be slowly dissipating, inequality will remain endemic to the world knowledge system.

Postsecondary education has expanded since World War II. Expansion has taken place in virtually every country in the world to differing extents. The growth of postsecondary education has, in proportional terms, been more dramatic than that of primary and secondary education. Writing in 1975, Martin Trow spoke of the transition from elite to mass and then to universal higher education in the context of the industrialized nations. While the United States enrolled some 30 percent of the relevant age cohort in higher education in the immediate postwar period, European nations generally maintained an elite higher education system with fewer than 5 percent attending postsecondary institutions; by the 1960s, many European nations educated 15 percent or more of the age group—Sweden for example, enrolled 24 percent in 1970, with France at 17 percent. At the same time, the United States increased its proportion to around 50 percent, approaching universal access. By the 1990s, most European countries enrolled more than 30 percent of the relevant age group, and the United States increased by a few percentage points. While American patterns of access have stabilized, Europe continues to expand, as do many new industrialized countries.

In the Third World, expansion has been similarly dramatic. Building on tiny and extraordinarily elitist universities, Third World higher education expanded rapidly in the immediate postindependence period. In India, enrollments grew from approximately 100,000 at the time of Independence in 1947 to over 4 million in the 1990s. Expansion in Africa has also been rapid, with the postsecondary student population growing from 21,000 in 1960 to 437,000 in 1983, but with growth stagnating in the
1990s as a result of the economic and political difficulties experienced by many sub-Saharan African countries. Recent economic difficulties in much of sub-Saharan Africa have meant that per student expenditure has dropped, contributing to a marked deterioration in academic standards. Enrollment growth has also slowed.

Similar trends can be seen elsewhere in the non-Western countries. In a few instances, such as the Philippines, where more than one-third of the age cohort enters postsecondary education. Third World enrollment ratios have reached the levels of many of the industrialized nations, although in general the Third World lags far behind in terms of proportions of the population attending higher education institutions. For example, despite China's student population of more than 2 million, only about 1 percent of the age cohort attends postsecondary institutions—about 4 percent of those graduating from secondary school. Expansion in the Third World has, in general, exceeded that in the industrialized nations at least in proportion terms. It should be noted that there are significant variations among Third World nations—some countries maintain small and relatively elitist university systems while others have expanded more rapidly. Among those with the highest rates of expansion, and now of participation, are the Asian newly industrialized countries such as South Korea and Taiwan.

Regardless of political system, level of economic development, or educational ideology, the expansion of higher education has been the single, most important trend. Worldwide, about 7 percent of the relevant age cohort (20 to 24 years) attend postsecondary educational institutions—a statistic that has shown an increase each decade since World War II. Higher education expanded dramatically—first in the United States, then in Europe. Currently, the main focus of expansion is in the Third World and the newly industrialized countries. There are, of course, significant variations in enrollment statistics and ratios. Women, in general, attend less frequently than men, although the former now constitute approximately 40 percent of university enrollments—with considerable variation by country. The industrialized nations, with a few exceptions, have a higher proportion of the age cohort in postsecondary education than Third World countries. Generalized statistics concerning enrollments in postsecondary education mask many key differences. For example, many industrialized nations have a higher proportion of students in technological and scientific fields as opposed to the traditional liberal arts, which tend to predominate in the developing nations, although even here there are some exceptions, such as China.

There are many reasons for the expansion of higher education. A central cause has been the increasing complexity of modern societies and economies, which have demanded a more highly trained work force. Almost without exception, postsecondary institutions have been called on to provide the required training. Indeed, training in many fields that had once been imparted on the job has become formalized in institutions of higher education. Whole new fields, such as computer science, have come into existence and rely on universities as a key source of research and training. Nations now developing scientific and industrial capacity, such as Korea and Taiwan, have depended on academic institutions to provide high-level training as well as research expertise to a greater extent than was the case during the first industrial revolution in Europe.
... Not only do academic institutions provide training, they also test and provide certification for many roles and occupations in contemporary society. These roles have been central to universities from their origins in the medieval period but have been vastly expanded in recent years. A university degree is a prerequisite for an increasing number of occupations in most societies. Indeed, it is fair to say that academic certification is necessary for most positions of power, authority, and prestige in modern societies. This places immense power in the hands of universities. Tests to gain admission to higher education are rites of passage in many societies and are important determinants of future success. Competition within academe varies from country to country, but in most cases much stress is also placed on high academic performance and tests in the universities. There are often further examinations to permit entry into specific professions. The role of the university as an examining body has grown for a number of reasons. As expansion has taken place, it has been necessary to provide ever more competitive sorting mechanisms to control access to high-prestige occupations. The universities are also seen as meritocratic institutions that can be trusted to provide fair and impartial tests to measure accomplishment honestly and, therefore, determine access. When such mechanisms break down—as they did in China during the Cultural Revolution—or where they are perceived to be subject to corrupt influences—as in India—the universities are significantly weakened. The older, more informal, and often more ascriptive means of controlling access to prestigious occupations are no longer able to provide the controls needed nor are they perceived as fair. Entirely new fields have developed where no sorting mechanisms existed, and academic institutions have frequently been called upon to provide not only training but also examination and certification. Expansion has also occurred because the growing segments of the population of modern societies demand it. The middle classes, seeing that academic qualifications are necessary for success, demand access to higher education. Governments generally respond by increasing enrollment. When governments do not move quickly enough, private initiatives frequently establish academic institutions in order to meet this demand. In countries like India, the Philippines, and Bangladesh, a majority of the students are educated in private colleges and universities. At present, there are powerful worldwide trends toward imposing user fees in the form of higher tuition charges, increasing the stress on private higher education, and in general considering higher education as a "private good" in economic terms. These changes are intended to reduce the cost of postsecondary education for governments while maintaining access—although the long-term implications for the quality of, access to, and control over higher education remain unclear. In most societies, higher education is heavily subsidized by the government, and most, if not all, academic institutions are in the public sector. While there is a growing trend toward private initiative and management sharing responsibility with public institutions, governments will likely continue to be the main source of funding for postsecondary education. The dramatic expansion of academic institutions in the postwar
period has proved very expensive for governments. Nonetheless, the demand for access has been an extraordinarily powerful one.

There have been significant variations in higher education expansion. For example, many analysts writing in the 1960s assumed that the world, and particularly the Western industrialized nations, would move from elite to mass and finally to universal access to higher education, generally following the American pattern. The path to universal access has proved to be circuitous. For a period in the 1970s, expansion slowed, only picking up again in the late 1980s. The nations of the European Union are in general moving toward U.S. levels of access. The causes for the slowdowns were in part economic, with problems in the Western economies following the “oil shocks” of the 1970s; in part demographic, resulting from a significant drop in the birth rate and a smaller cohort of young people; and in part philosophical, as countries were less sympathetic to further growth of public institutions, including universities. Generally, the proportion of the age cohort going on to higher education in Western Europe stabilized at under 20 percent in the 1970s, and began to increase again in the late 1980s, with continuing expansion. This expansion has taken place in a context of steady population trends and has been impelled by changes in the European economies, which have moved to the postindustrial stage.

In sharp contrast to Western industrialized countries, Third World universities have, in general, continued to expand without interruption. The exception is Africa, where enrollment and access have slowed recently. While with only a very few exceptions, such as the Philippines, Third World enrollment ratios remain significantly lower than those in the industrialized nations, there continues to be a strong commitment to continued expansion and access. This is the case even in countries like India, which has experienced severe unemployment of graduates and a brain drain of university graduates abroad. In sub-Saharan Africa, there has been a slowing of expansion, not so much because demand for higher education has decreased, but because of severe economic problems that have limited the ability of governments to pay the costs of continued growth. In many Third World countries, it remains impossible for local universities to absorb all of those qualified to attend, thus creating an exodus of students abroad. This is the case in Malaysia, where about half of the country’s enrollments are abroad. As in the industrialized nations, there is a notable trend toward shifting the burden of funding for higher education from the state to the individual.

It is necessary to analyze the prospects for continued expansion of higher education from several perspectives. While common worldwide trends exist, such as the increasingly important role of technology, there are also important differences among countries and parts of the world. The Third World presents a specific set of circumstances. While it is likely that the pace in some Third World countries will slow in the coming decade, expansion will continue to be a key factor in higher education. Regional variations will be important, with economic factors dominating. Universities will very likely grow more slowly in less successful economies. Rapidly expanding economies, such as those of the newly industrializing countries in East Asia, will have the resources to expand higher education and at the same time maintain a demand for graduates.
Taiwan and South Korea, for example, can generally absorb university graduates as well as the expenditures needed for large and better-equipped universities, especially since a majority of students study in private universities. Yet, even where evidence exists that higher educational growth should slow or even stop, it is unlikely that this will take place since popular demand for postsecondary education remains high, and political authorities will find it easier to provide access than to limit it. What has happened is that the cost of postsecondary education has increasingly been shifted to individuals and families.

The situation in Western industrialized nations is more difficult to predict. A variety of factors argue for a resumption of growth, although probably not at the levels of the 1960s. Modest upturns in population in some age categories are in evidence in some Western nations, although demographers predict that this will be relatively short lived. The large numbers of graduates trained in the 1960s and now occupying positions in schools and universities as well as in government and industrial enterprises will soon be retiring, triggering a significant demand for university-trained personnel. It is also recognized that university-based research is an important ingredient for scientific and technological strength in an increasingly competitive world economy. Much, however, will depend on broader economic trends.

It is also difficult to predict whether resistance to governmental spending in general and for education in particular will continue to be an important political factor in many Western countries. The 1990s have brought a renewed growth in access to postsecondary education, although this has been combined with significant financial problems.

CHANGE AND REFORM: THE LEGACY OF THE SIXTIES

The demands placed on institutions of higher education to accommodate larger numbers of students and to serve expanding functions resulted in reforms in higher education in many countries. Much debate has taken place concerning higher education reform in the 1960s—and a significant amount of change did take place. It is possible to identify several important factors that contributed both to the debate and to the changes. Without question, the unprecedented student unrest of the period contributed to a sense of disarray in higher education. The unrest was in part precipitated by deteriorating academic conditions that were the result of the rapid expansion. In a few instances, students demanded far-reaching reforms in higher education, although they did not propose specific changes. Students frequently demanded an end to the rigidly hierarchical organization of the traditional European university, and major reforms were made in this respect. The “chair” system was modified or eliminated and the responsibility for academic decision making, formerly a monopoly of full professors, was expanded—in some countries to include students. At the same time, the walls of the traditional academic disciplines were broken down by various plans for interdisciplinary teaching and research.

Reform was greatest in several very traditional Western European academic sys-
tems. Sweden’s universities were completely transformed in the most far-reaching of the reform movements. Among changes in Sweden were a democratizing of decision making, decentralizing the universities, expanding higher education to previously underserved parts of the country, providing for interdisciplinary teaching and research, and vocationalizing the curriculum. Reforms also took place in France and in the Netherlands. Reformers in both countries stressed interdisciplinary studies and democratizing academic decision making. In Germany, the universities in the states dominated by the Social Democratic Party were also reformed, with the traditional structures of the university giving way to more democratic governance patterns.

In the 1990s, the major trend in restructuring European universities has been improving the administrative efficiency and accountability of the universities. Many of the reforms of the 1960s were modified or even eliminated. Students, for example, have less power now. In the Netherlands, a national restructuring has increased the power of administrators. Students have little authority in the new arrangements. Similar trends can be seen in Germany, Sweden, and other countries.

In many industrialized nations, structural change was modest. In the United States, for example, despite considerable debate during the 1960s, there was very limited change in the structure or governance of higher education. Japan, which saw unrest that disrupted higher education and spawned a large number of reports on university reform, experienced virtually no basic change in its higher education system, although several “new model” interdisciplinary institutions were established—such as the science-oriented Tsukuba University near Tokyo. Britain, less affected by student protest and with an established plan for expansion in operation, also experienced few reforms during the 1960s. Some of the changes implemented in the 1960s were criticized or abandoned. In Germany, reforms in governance that gave students and junior staff a dominant position in some university functions were ruled unconstitutional by the German courts.

Many of the structural reforms of the 1960s were abandoned after a decade of experimentation, or were replaced by administrative arrangements that emphasized accountability and efficiency. Outside authorities, including government but also in some cases business, industry or labor organizations, have come to play a more important role in academic governance. The curricular innovations of the 1960s, as well as later decades, have proved more durable. Interdisciplinary programs and initiatives and the introduction of new fields such as gender studies have characterized changes in many countries.

Vocationalization has been an important trend in higher education change in the past two decades. Throughout the world, there is a conviction that the university curriculum must provide relevant training for a variety of increasingly complex jobs. The traditional notion that higher education should consist of liberal nonvocational studies for elites or provide a broad but unfocused curriculum has been widely criticized for lacking “relevance” to the needs of contemporary students. Students, worried about obtaining remunerative employment, have pressed the universities to be more focused. Employers have also demanded that the curriculum become more directly relevant to their need at least in the industrialized nations.

Curricular vocationalism: the increasingly close relationship between higher education and industry relationships for formal linkages and research in which they are institutions of industry have been important. In the United States, universities and major corporations are now sometimes with the assistance of industry in new industrial relations. Technical arrangements, and other fiscal measures, have been made out that the nature of research in industry is being increasingly industrial. University-based research, may be increasingly formal or industrial as well. University-industry relationships have seen a trend toward stronger ties between research and the corporate world, with biotechnology, where broad industry organizations have been established. Specific funds are provided for higher education in industrially relevant fields. This trend also has implications for the labor market, where broad changes in the labor market have been noted. Universities have also seen an increase in industry relationships as industrial research, may be increasing. Specific funds are also provided for university-industry research, which is increasingly seen as important for the economy. universities have traditionally been insular from the economy. The traditional idea of academic autonomy has been limited, and new administration of universities has been focused on the appropriate relationships with industry and the traditional relationships concerning the appropriate relationships with the economy.

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directly relevant to their needs. Enrollments in the social sciences and humanities, at
least in the industrialized nations, have declined because these fields are not consid-
ered vocationally relevant.
Curricular vocationalism is linked to another key worldwide trend in higher educa-
tion: the increasingly close relationship between universities and industry.41 Industrial
firms have sought to ensure that the skills they need are incorporated into the curricu-
um. This trend also has implications for academic research, since many university-
industry relationships are focused largely on research. Industries have established
formal linkages and research partnerships with universities in order to obtain help with
research in which they are interested. In some countries, such as Sweden, representa-
tives of industry have been added to the governing councils of higher education insti-
tutions. In the United States, formal contractual arrangements have been made between
universities and major corporations to share research results. In many industrialized
nations, corporations are providing focused educational programs for their employees,
sometimes with the assistance of universities.
University-industry relations have become crucial for higher education in many
countries. Technical arrangements with regard to patents, confidentiality of research
findings, and other fiscal matters have assumed importance. Critics also have point-
ed out that the nature of research in higher education may be altered by these new
relationships as industrial firms are not generally interested in basic research.
University-based research, which has traditionally been oriented toward basic
research, may be increasingly skewed to applied and profit-making topics. There has
also been some discussion of the orientation of research—for example, in fields like
biotechnology, where broader public policy matters may conflict with the needs of
corporations. Specific funding arrangements have also been questioned. Pressure to
serve the immediate needs of society and particularly the training and research
requirements of industry is currently a key concern for universities, one that has
implications for the organization of the curriculum, the nature and scope of research,
and the traditional relationship between the university and society.42 Debates con-
cerning the appropriate relationship between higher education and industry are like-
ly to continue, as universities come under even stronger pressure to provide direct
service to the economy.
Universities have traditionally claimed significant autonomy for themselves. The
traditional idea of academic governance stresses autonomy, and universities have tried
to insulate themselves from direct control by external agencies. However, as universi-
ties expanded and become more expensive, there has been immense pressure by those
providing funds for higher education—mainly governments—to expect accountability
from universities. The conflict between autonomy and accountability has been one of
the flashpoints of controversy in recent years. Without exception autonomy has been
limited, and new administrative structures have been put into place in such countries as
Britain and the Netherlands, to ensure greater accountability.43 The issue takes on dif-
ferent implications in different parts of the world. In the Third World, traditions of
autonomy have not been strong and demands for accountability, which include both
political and economic elements, are especially troublesome. In the industrialized nations, accountability pressures are more fiscal in nature.

Despite the varied pressures on higher educational institutions for change and the significant reforms that have taken place in the past two decades, there have been few structural alterations in universities. One of the few places where this has occurred is in Sweden, as part of the dramatic reforms that have been undertaken there. Elsewhere, curricula have been altered, expansion has taken place, and there have been continuing debates concerning accountability and autonomy, but universities as institutions have not changed significantly. As Edward Shils has argued, the "academic ethos" has been under strain, and while in some ways it has been weakened, it has survived.

THE MILLENNIUM

The university in modern society is a durable institution. It has maintained key elements of the historical models from which it evolved over many centuries. At the same time, it has successfully evolved to serve the needs of societies during a period of tremendous social change. There has been a convergence of both ideas and institutional patterns and practices in world higher education. This has been due in part to the implantation of European-style universities in the developing areas both during and after the colonial era—and in part to—the fact universities have been crucial in the development and internationalization of science and scholarship.

Despite remarkable institutional stability over time, universities have changed and have been subjected to immense pressures in the post-World War II period. Many of the changes chronicled here are the result of great external pressure and were instituted despite opposition from within the institution. Some have argued that the university has lost its soul. Others have claimed that the university is irresponsible because it uses public funds and does not always conform to the direct needs of industry and government. Pressure from governmental authorities, militant students, or external constituencies have all placed great strains on academic institutions.

The period since World War II has been one of unprecedented growth—in which higher education has assumed an increasing central role in virtually all modern societies. While growth may continue, the dramatic expansion of recent decades is at an end. It is unlikely that the position of the university as the most important institution for training in virtually all of the top-level occupations in modern society will be weakened, although other institutions have become involved in training in some fields. The university's research role is more problematical because of the fiscal pressures of recent years. There is no other institution that can undertake basic research, but at the same time the consensus that has supported university-based basic research has weakened.

The challenges facing universities are, nonetheless, significant. The following issues are among those that will be of concern in the coming decade and beyond.
Access and Adaptation

Although in a few countries, access to postsecondary education has been provided to virtually all segments of the population, in most countries a continuing unmet demand exists for higher education. Progress toward broadening the social class base of higher education has slowed and, in many industrialized countries, stopped in the 1970s. With the arrival of democratic governments in Eastern Europe, the reemergence of demand in Western Europe, and continuing pressure for expansion in the Third World, demand for access and the consequent expansion of enrollments continue in many countries. Limited funds and a desire for "efficient" allocation of scarce postsecondary resources will come into direct conflict with demands for access. Demands for access by previously disenfranchised groups will continue to place great pressure on higher education. In many countries, racial, ethnic, or religious minorities play a role in shaping higher education policy. Issues of access will be among the most controversial in debates concerning higher education.

Administration, Accountability, and Governance

As academic institutions become larger and more complex, there is increasing pressure for a greater degree of professional administration. At the same time, the traditional forms of academic governance are increasingly criticized—not only because they are unwieldy but also because, in large and bureaucratic institutions, they are inefficient. The administration of higher education will increasingly become a profession, much as it is in the United States. This means that an "administrative estate" will be established in many countries where it does not now exist. Demands for accountability are growing and will cause academic institutions considerable difficulty. As academic budgets expand, there are inevitable demands to monitor and control expenditures. At present, no general agreement exists concerning the appropriate level of governmental involvement in higher education. The challenge will be to ensure that the traditional—and valuable—patterns of faculty control over governance and the basic academic decisions in universities are maintained in a complex and bureaucratic environment.

Knowledge Creation and Dissemination

Research is a central part of the mission of many universities and of the academic system generally. Key decisions concerning the control and funding of research, the relationship of research to the broader curriculum and teaching, the uses made of university-based research, and related issues will be in contention. Further, the system of knowledge dissemination, including journals and books and the new computer-based data systems, is rapidly changing. Who should control the new data networks? How will traditional means of communication, such as journals, survive in this new climate? How will the scientific system avoid being overwhelmed by the...
proliferation of data? Who will pay for the costs of knowledge dissemination? The
needs of peripheral scientific systems, including both the Third World and smaller
academic systems in the industrialized world, have been largely ignored, but are
nonetheless important.

While the technological means for rapid knowledge dissemination are available,
issues of control and ownership, the appropriate use of databases, problems of main­
taining quality standards in databases, and related questions are very important. It is
possible that the new technologies will lead to increased centralization rather than
wider access. It is also possible that libraries and other users of knowledge will be over­
whelmed both by the cost of obtaining new material and by the flow of knowledge. At
present, academic institutions in the United States and other English-speaking nations,
along with publishers and the owners of the communications networks, stand to gain.
The major Western knowledge producers currently constitute a kind of cartel of infor­
mation, dominating not only the creation of knowledge but also most of the major
channels of distribution. Simply increasing the amount of research and creating new
databases will not ensure a more equal and accessible knowledge system. Academic
institutions are at the center, but publishers, copyright authorities, funders of research,
and others are also necessarily involved.

The Academic Profession

In most countries, the professoriate has found itself under great pressure in recent
years. Demands for accountability, increased bureaucratization of institutions, fiscal
constraints in many countries, and an increasingly diverse student body have all chal­
 lenged the professoriate. In most industrialized nations, a combination of fiscal prob­
lems and demographic factors led to a stagnant profession. Now, demographic
factors and a modest upturn in enrollments are beginning to turn surpluses into short­
ages. In the newly industrializing countries (NICs), the professoriate has significant­
ly improved its status, remuneration, and working conditions in recent years. In the
poorer nations, however, the situation has, if anything, become more difficult with
decreasing resources and ever-increasing enrollments. Overall, the professoriate will
face severe problems as academic institutions change in the coming period.

Maintaining autonomy, academic freedom, and a commitment to the traditional goals
of the university will be difficult. In the West, it will be hard to lure the “best and brightest” into academe in a period
when positions are again relatively plentiful, for in many fields, academic salaries have
not kept pace with the private sector and the traditional academic lifestyle has deterio­
rated. The pressure on the professorate not only to teach and do research but also to
attract external grants, do consulting, and the like is great. In Britain and Australia, for
example, universities have become “cost centers,” and accountability has been pushed
to its logical extreme. British academics who entered the profession after 1989 no
longer have tenure, and will be periodically evaluated. In the NICs, the challenge will
be to create a fully autonomous academic profession in a context in which traditions
of research and academic the poorer Third World,
Diversification and Stratification

Private Resources and Public Responsibility

Knowledge dissemination? The Third World and smaller largely ignored, but are important at the core of academic institutions. Problems and solutions are very important. It is not a question of whether knowledge will improve the flow of knowledge. At English-speaking nations, networks, stand to gain.

A kind of cartel of information also most of the major search and creating new knowledge. Academic salaries, funders of research, pressure in recent years, fiscal surpluses into shortfalls has significant.

In recent years, the academic lifestyle has deteriorated. Research but also to retain and Australia, for the psychology has been pushed. After 1989 no CO2, the challenge will be in which traditions of research and academic freedom are only now developing. The difficulties faced by the poorer Third World countries are perhaps the greatest—to maintain a viable academic culture under deteriorating conditions.

Private Resources and Public Responsibility

In almost every country, there has been a growing emphasis on increasing the role of the private sector in higher education. One of the most direct manifestations of this trend is the role of the private sector in funding and directing university research. In many countries, private academic institutions have expanded, or new ones have been established. Students are paying an increasing share of the cost of their education as a result of tuition and fee increases and through loan programs. Governments try to limit their expenditures on postsecondary education while at the same time recognizing that the functions of universities are important. Privatization has been the means of achieving this broad policy goal. Inevitably, decisions concerning academic developments will move increasingly to the private sector, with the possibility that broader public goals may be ignored. Whether private interests will support the traditional functions of universities, including academic freedom, basic research, and a pattern of governance that leaves the professoriate in control, is unclear. Some of the most interesting developments in private higher education can be found in such countries as Vietnam, China, and Hungary, where private institutions have recently been established. Private initiatives in higher education will bring a change in values and orientations. It is not clear that these values will be in the long-term best interests of the university.

Diversification and Stratification

While diversification—the establishing of new postsecondary institutions to meet diverse needs—is by no means an entirely unprecedented phenomenon, it is a trend that has been of primary importance and will continue to reshape the academic system. In recent years, the establishment of research institutions, community colleges, polytechnics, and other academic institutions designed to meet specialized needs and serve specific populations has been a primary characteristic of growth. At the same time, the academic system has become more stratified—individuals within one sector of the system, find it difficult to move to a different sector. There is often a high correlation between social class (and other variables) and selection to a particular sector of the system. To some extent, the reluctance of the traditional universities to change is responsible for some of the diversification. Perhaps more important has been the belief that it is efficient and probably less expensive to establish new limited-function institutions. An element of diversification is the inclusion of larger numbers of women and other previously disenfranchised segments of the population. Women now constitute 40 percent of the student population worldwide and more than 50 percent in 15 countries. In many countries, students from lower socioeconomic groups, and racial and ethnic minorities are entering postsecondary institu-
tions in significant numbers. This diversification will also be a challenge for the coming decades.

Economic Disparities

There are substantial inequalities among the world’s universities—and these inequalities will likely grow. The major universities in the industrialized nations generally have the resources to play a leading role in scientific research—in a context in which it is increasingly expensive to keep up with the expansion of knowledge. At the same time, universities in much of the Third World simply cannot cope with the continuing pressure for increased enrollments, combined with budgetary constraints and, in some cases, fiscal disasters. For example, universities in much of sub-Saharan Africa have experienced dramatic budget cuts and find it difficult to function, not to mention to improve quality and compete in the international knowledge system. In the middle are academic institutions in the Asian NICs, where significant academic progress has taken place and where universities will continue to improve. Thus, the economic prospects for postsecondary education worldwide are mixed.

CONCLUSION

Universities share a common culture and reality. In many basic ways, there is a convergence of institutional models and norms. At the same time, there are significant national differences that will continue to affect the development of academic systems and institutions. It is unlikely that the basic structures of academic institutions will change dramatically. The “Humboldtian” academic model will survive, although administrative structures grow stronger, and the traditional power of the faculty has diminished/Open universities and other distance education institutions have emerged, and may provide new institutional arrangements. Efforts to save money may yield further organizational changes as well. Unanticipated change is also possible. For example, while conditions for the emergence of significant student movements, at least in the industrialized nations, do not seem likely at the present time, circumstances may change. The circumstances facing universities in the first part of twenty-first century are not, in general, favorable. The realities of higher education as a “mature industry” with stable rather than growing resources in the industrialized countries will affect not only the funds available for postsecondary education but also practices within academic institutions. Accountability, the impact of technologies, and the other forces discussed in this chapter will all affect colleges and universities. Patterns will, of course, vary worldwide. Some academic systems, especially those in the newly industrializing countries, will continue to grow. In parts of the world affected by significant political and economic change, the coming decades will be ones of reconstruction. Worldwide, the coming period is one of major challenge for higher education.