

**The United States Country Report:
Trends in Higher Education from Massification to Post-Massification**

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The rapid expansion of American higher education in the years following the Second World War is an often-told and well-documented story. In this report on the changing condition of higher education in the United States, we will be covering some familiar ground, as well as drawing on the framework established by Professor Arimoto in launching this seminar and extended by Professor Zemsky in his keynote. What makes this report different—and indeed what gives this seminar its importance—is Professor Arimoto’s proposition that national systems of higher education have evolved similarly, moving from massification to maturation and, now, to post-massification. We have organized our report on the evolution of the U.S. system according to this organizing framework.

THE ERA OF MASSIFICATION

Prior to World War II, only a small minority of the U.S. population—most of whom were male and white—continued schooling after high school. The initial expansion of American higher education came immediately following World War II, and again after the Korean War, when returning soldiers were offered financial assistance from the federal government under the GI Bill of Rights. Designed to ameliorate the labor market crunch that would otherwise have been created by the large number of returning soldiers, the GI Bill extended access to higher education to veterans and their families. The 1950s also saw an expansion of the middle class, increasing family wealth, and the rapid development of suburban areas. For these families, a college education became a ticket to social and economic mobility, and the children of the middle-class began enrolling in higher education in increasing numbers.

Building on the advances made in the 1950s, American higher education showed a period of unprecedented growth—often characterized by the term “massification”—during the decade of the 1960s and through the mid-1970s. Upward social and economic mobility and overall national economic growth continued, causing a general increase in demand for higher education. Social and political changes, such as the Civil Rights and Women’s Rights Movements and expanded federal financial aid, opened access to higher education for underrepresented populations—more women, more minorities, more part-time and intermittent learners, and more students well past the traditional ages of college attendance. Expansion in enrollment also led to a sharp increase in the number of institutions, as well as a fundamentally different mix of institutions, as the diverse needs of students became reflected in the programmatic and institutional structures of the system. Finally, the infusion of federal dollars to fund academic research (especially in the sciences and medicine) fostered an increase in the production of Ph.D.s, as well as a proliferation of the numbers and types of professional personnel who staffed on-campus research institutes and increasingly complex administrative services.

Let us turn now to examine trends in several dimensions of American higher education’s expansion—the evidence of massification: changes in enrollment, changing student demographics, and institutional shifts.

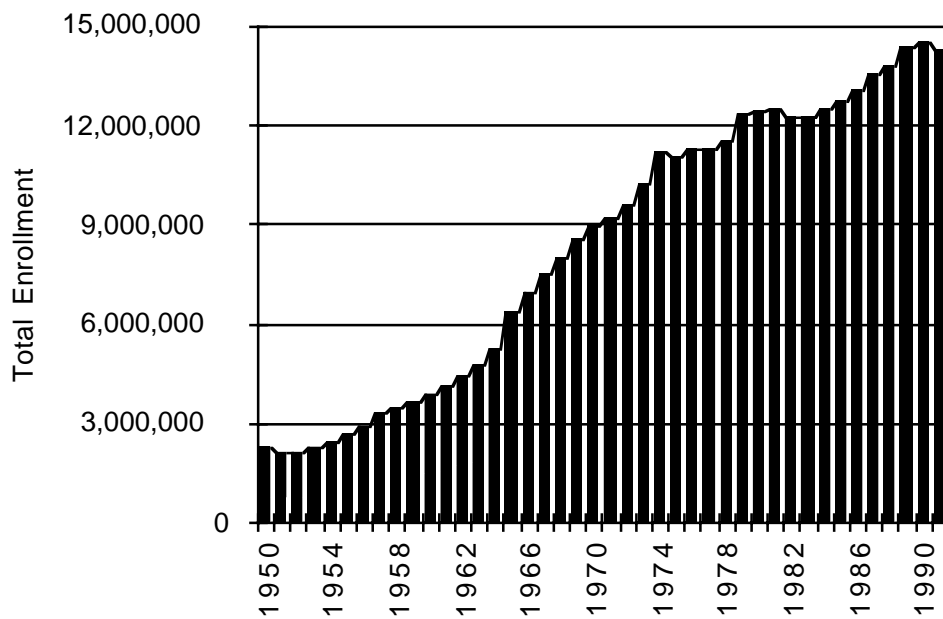
Increasing Demand and Expanding Enrollment

By 1961, the initial period of growth occasioned by the GI Bill and the developing American middle class had doubled the enrollment of full- and part-time undergraduates (Figure 1), although the actual number of higher education institutions had not yet increased dramatically. Instead, institutions began expanding their capacity and programs to meet the increased enrollment demand. Over the 1960s, enrollment doubled once again, and, by the mid-1970s, the college population had increased to five times its size in 1951. It is interesting to note that, between 1964 and 1965—and, again,

between 1973 and 1974—there was a sharp gain in college enrollments, indicating that young Americans matriculated as an alternative to economic employment or military service in the Vietnam War.

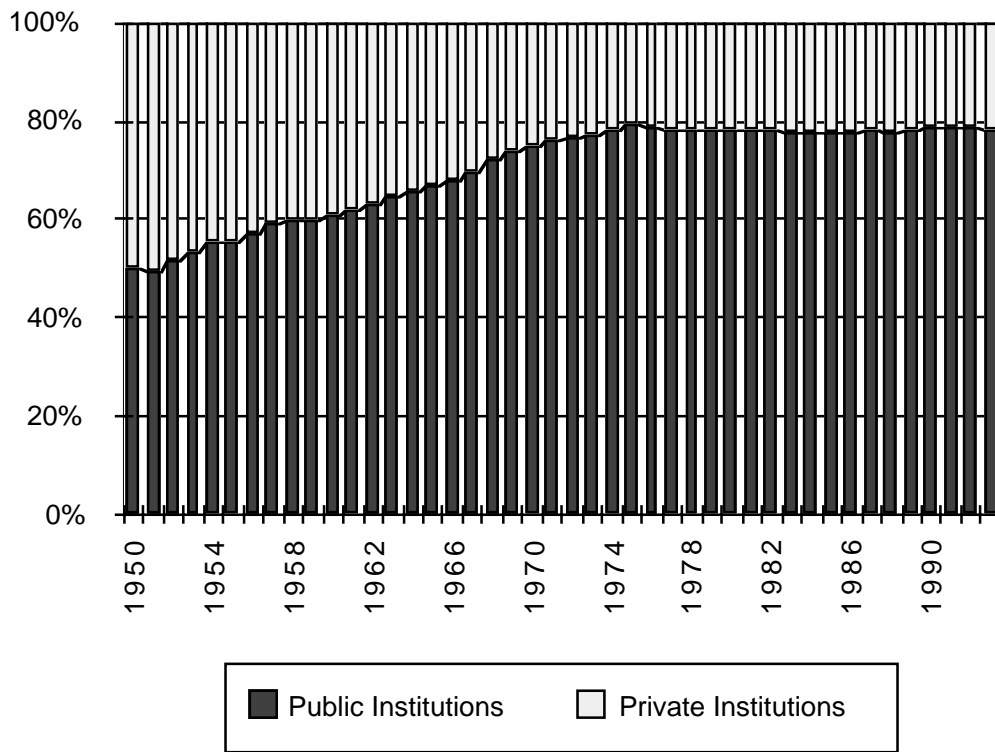
Although fewer in number than private institutions, public colleges and universities proved to have a greater capacity to meet the demands of these increasing enrollments. The often larger comprehensive and doctoral-granting research universities, as well as two-year community colleges, experienced the greatest gains in enrollment during this era of accelerated growth. From 1960 to 1975, the share of students enrolled in public colleges and universities grew by 20 percentage points (Figure 2).

Figure 1
Enrollment in Higher Education: 1950 to 1991



Source: U.S. Department of Commerce, Bureau of the Census, Current Population Survey.

Figure 2
Enrollment in Higher Education by Institutional Control:
1950 to 1993



Source: U.S. Department of Commerce, Bureau of the Census, Current Population Survey.

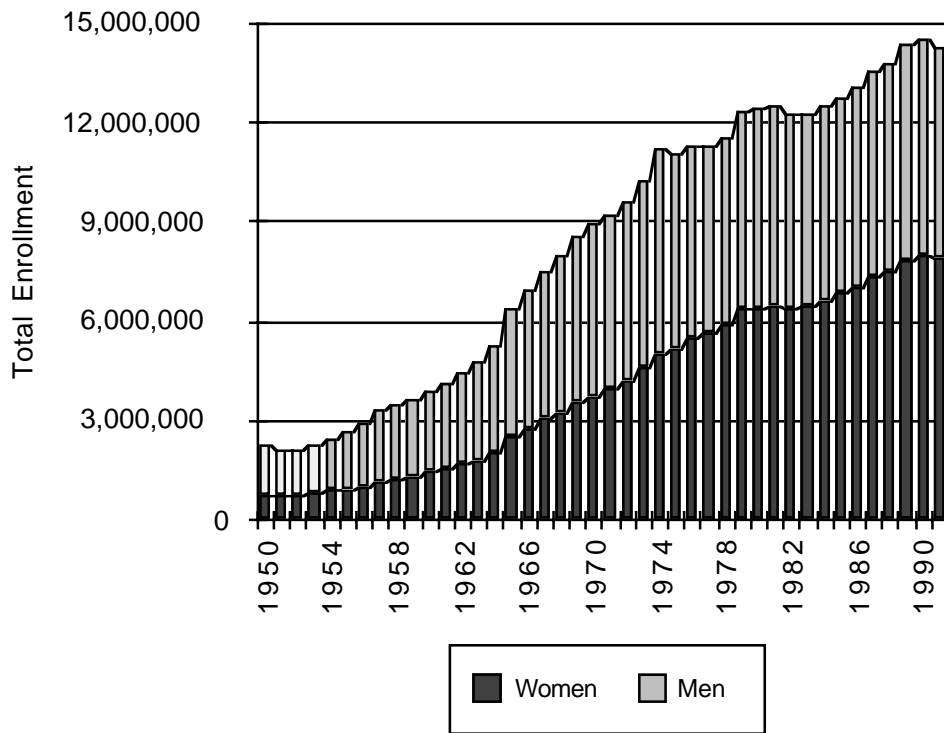
The New American Student

In the early days of the 1960s, the American postsecondary student was most often still white, male, and between the ages of 18 and 22. Over the course of the 1960s, however, the demographics of American higher education’s students would begin to change. Much of the increase in college enrollment and in the diversity of higher education’s students was fostered by historic changes in institutional and federal policies. Colleges and universities began expanding their own financial aid programs, and formerly “exclusive” institutions also began opening their doors to a wider range of student populations. For example, beginning in the 1960s and extending into the mid-1970s, many formerly all-male schools began to admit female students.

Perhaps the most significant change that fostered increasingly diverse student enrollment was the expansion of federal student financial aid programs throughout the 1960s and early 1970s. The federal government expanded access to higher education by offering direct grants to low-income students based on economic need; it also began dispensing grant funds directly to colleges and universities for redistribution to targeted populations of students in the form of financial aid. For example, a federal college work-study program enabled students to gain employment on their campuses; their wages were paid primarily by federal funds, although institutions did provide a small percentage of matching dollars. Finally, a low-interest loan program subsidized by the federal government made borrowing to finance a higher education attractive for many students—particularly since the “return” on a college education promised wages that far outweighed any debt incurred. The annual salaries of male college graduates rose steadily after 1950 and reached a peak at \$45,000 in 1970—after which they began to decline.

Supported by a growing Women’s Rights Movement and by changing notions of the role of women in society, female students began enrolling in higher education at an increasing rate during this period. An examination of enrollment by gender reveals that women began entering higher education at an accelerated rate beginning in the mid-1960s (Figure 3). By the close of the era of massification in the mid-1970s, the participation of female students in higher education equaled that of males.

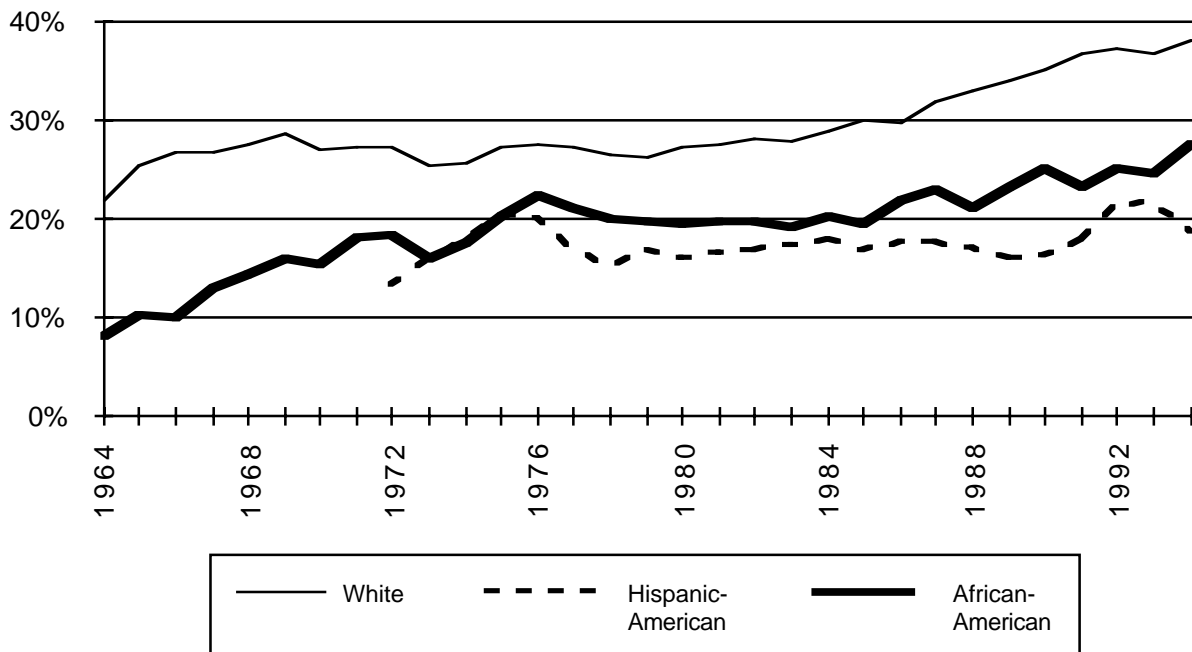
Figure 3
Enrollment in Higher Education by Gender:
1950 to 1991



Source: U.S. Department of Commerce, Bureau of the Census, Current Population Survey.

The Civil Rights Movement of the late 1960s marked a period in which racial and ethnic minorities—particularly African- and Hispanic-Americans—pressed for and gained access to institutions from which they were formerly excluded, either by law or by practice. The percentage of African-Americans aged 18 to 24 attending college more than doubled from under 10 to 20 percent between 1964 and 1972 (Figure 4). As the era of massification came to a close in 1976, just over 20 percent of the African-American population was enrolled in higher education. The participation of 18- to 24-year-old Hispanic-Americans also increased significantly. By 1975, almost 20 percent of this population was enrolled in higher education.

Figure 4
Enrollment of 18-to-24 Year Olds in Higher Education by Ethnic Group

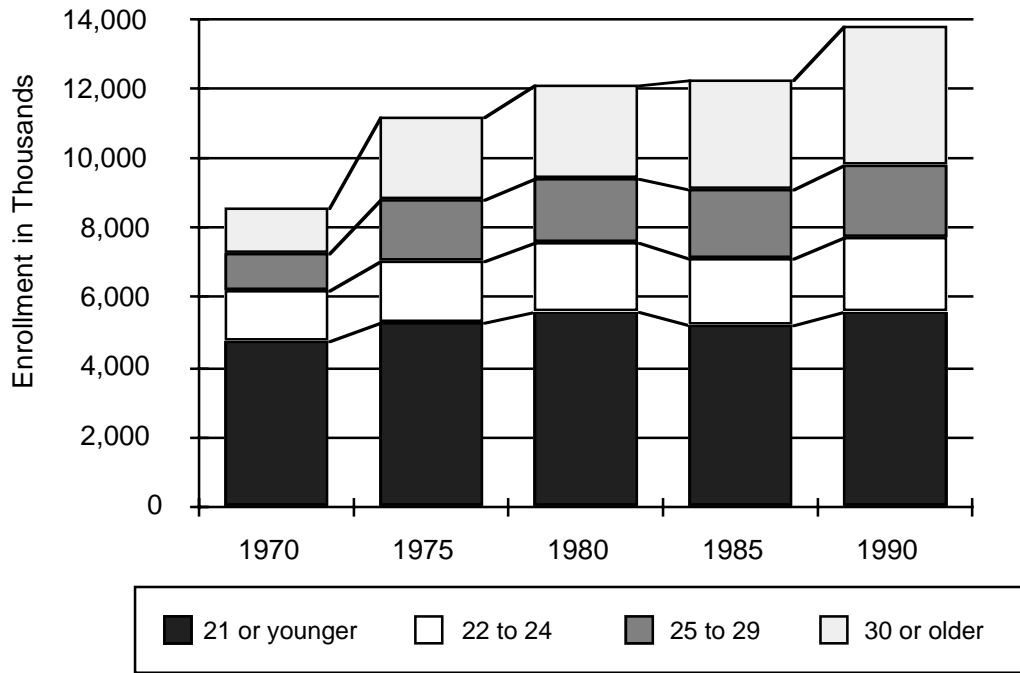


Source: U.S. Department of Commerce, Bureau of the Census, Current Population Survey.

Older students also began enrolling in increasing numbers, although, until 1975, the majority of the college-going population was still of traditional-age (Figure 5). Between 1970 and 1975, these older matriculants began to make gains, as the number of students aged 22 or older increased by more than 50 percent, while the number of traditional-age students remained relatively constant.

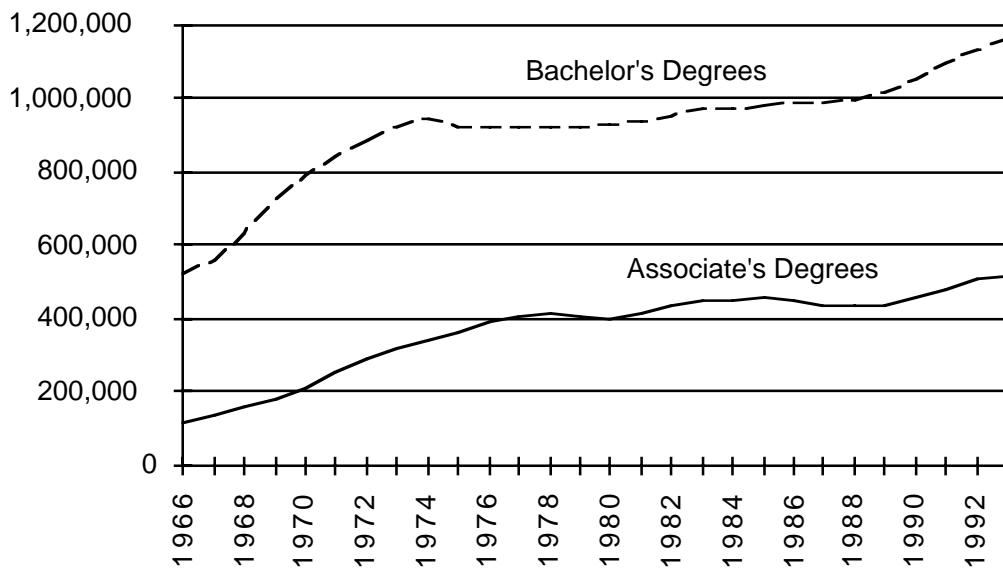
Corresponding to these enrollment shifts was an increase in the production of both associate's and bachelor's degrees. As noted in Figure 6, between 1966 and 1976, the number of associate's degrees awarded more than tripled, from 111,607 to 391,454. During the same time period, the number of bachelor's degrees conferred almost doubled, from 520,115 in 1966 to 925,746 in 1976.

Figure 5
Total Enrollment in Higher Education by Age:
1970 to 1990



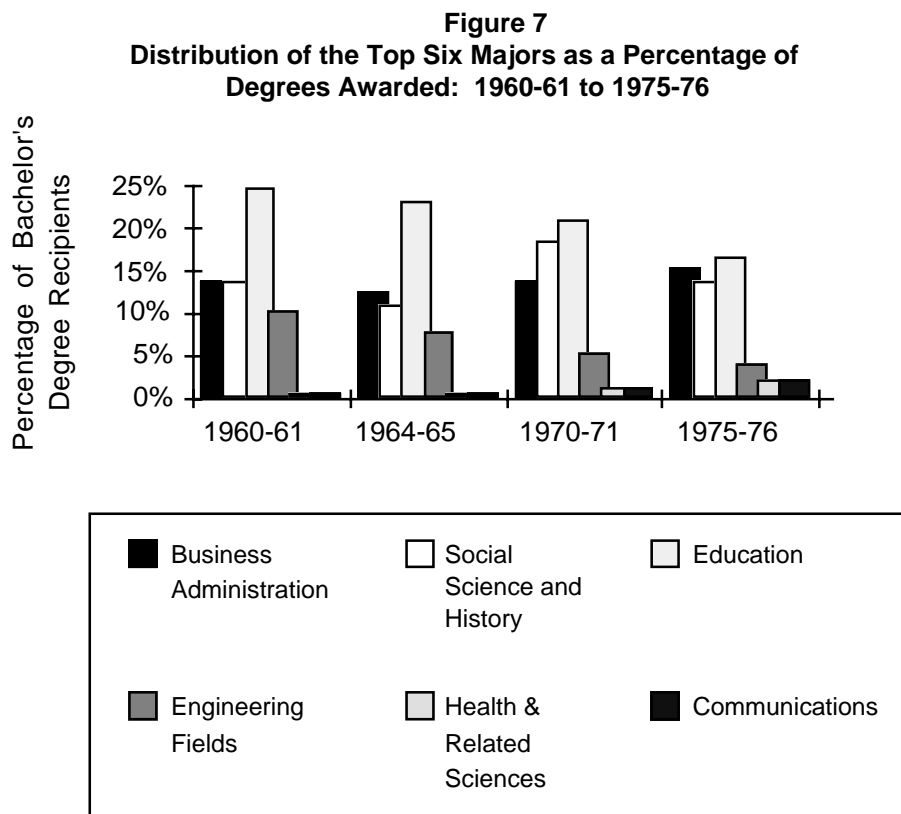
Source: U.S. Department of Commerce, Bureau of the Census, Current Population Survey.

Figure 6
Number of Two-Year and Four-Year Degrees Awarded



Source: U.S. Department of Education, National Center for Education Statistics, Earned Degrees Conferred; Projections of Education Statistics to 2005; and Integrated Postsecondary Education Data System (IPEDS), Completions Surveys.

It is also during this era that students' choices regarding their fields of study begin to shift—serving as early signs of what would later become the “professionalization” of higher education that is evident in the current post-massification stage. Figure 7 shows how from 1960-61 to 1975-76 the percentage of undergraduate degrees granted in business administration, health and related sciences, and communications degrees began to grow. It is interesting to note that, at the same time, education degrees declined as a percentage of all bachelor's degrees awarded.

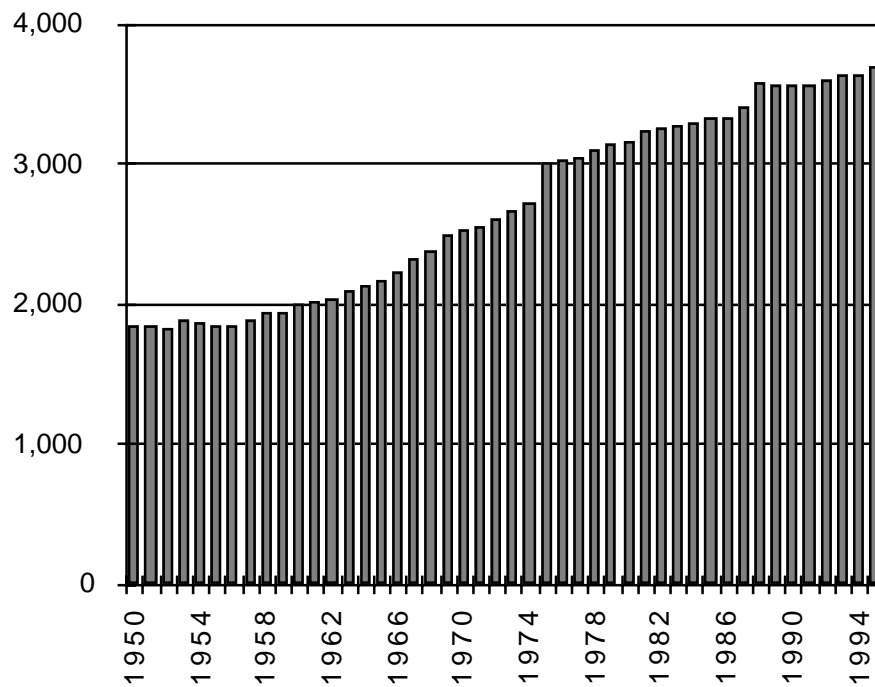


Source: U.S. Department of Education, National Center for Education Statistics, “Degrees and Other Formal Awards Conferred” surveys, and Integrated Postsecondary Education Data System (IPEDS), “Completions” surveys.

The Expanding Number, Size, and Types of Institutions

The expansion of capacity on already-established campuses was insufficient to meet the requirements of increasing demand, and the number of higher education institutions began to rise dramatically during this era. The largest period of growth occurred between 1960 and 1970, when 521 new institutions were founded (Figure 8). By the mid-1970s—the end of the era of massification—the total number of colleges and universities had grown by more than 50 percent.

Figure 8
Number of Colleges and Universities: 1950 to 1995*

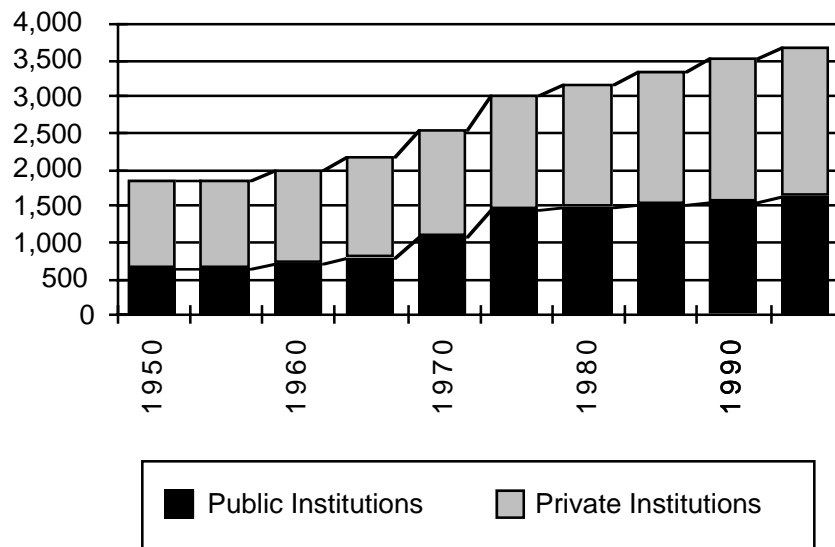


*Beginning in 1975, count includes branch campuses.

Source: U.S. Department of Education, National Center for Education Statistics, Education Directory, Colleges and Universities; “Fall Enrollment in Higher Education” and “Institutional Characteristics of Colleges and Universities” surveys; and Integrated Postsecondary Education Data System (IPEDS), “Institutional Characteristics” surveys.

With a larger share of the increase in enrollment, public institutions (Figure 9) and two-year institutions (Figure 10) experienced the greatest growth in number during this era. From 1960 to 1975, the number of two-year institutions more than doubled. Primarily community colleges or locally supported colleges, these institutions were able to serve the needs of the changing college-going population, particularly of commuting students who began to attend school part-time and of students who sought special training and certification, associate’s degrees, or the first two years of courses in preparation for the bachelor’s degree. More affordable and less selective regarding access, these institutions also offered more flexible schedules and provided remedial education.

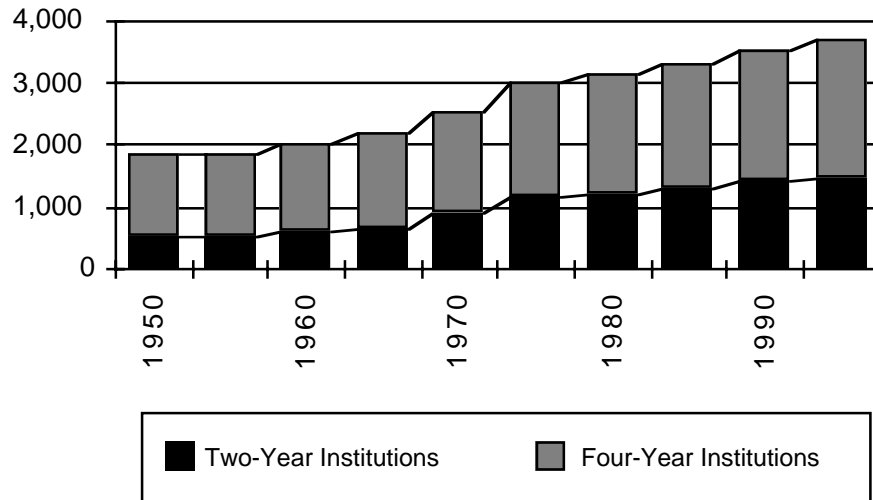
Figure 9
Number of Higher Education Institutions by Control:
1950 to 1995*



*Beginning in 1975, counts include branch campuses

Source: U.S. Department of Education, National Center for Education Statistics, Education Directory, Colleges and Universities; “Fall Enrollment in Higher Education” and “Institutional Characteristics of Colleges and Universities” surveys; and Integrated Postsecondary Education Data System (IPEDS), “Institutional Characteristics” surveys.

Figure 10
Number of Two-Year and Four-Year Higher Education
Institutions: 1950 to 1995*

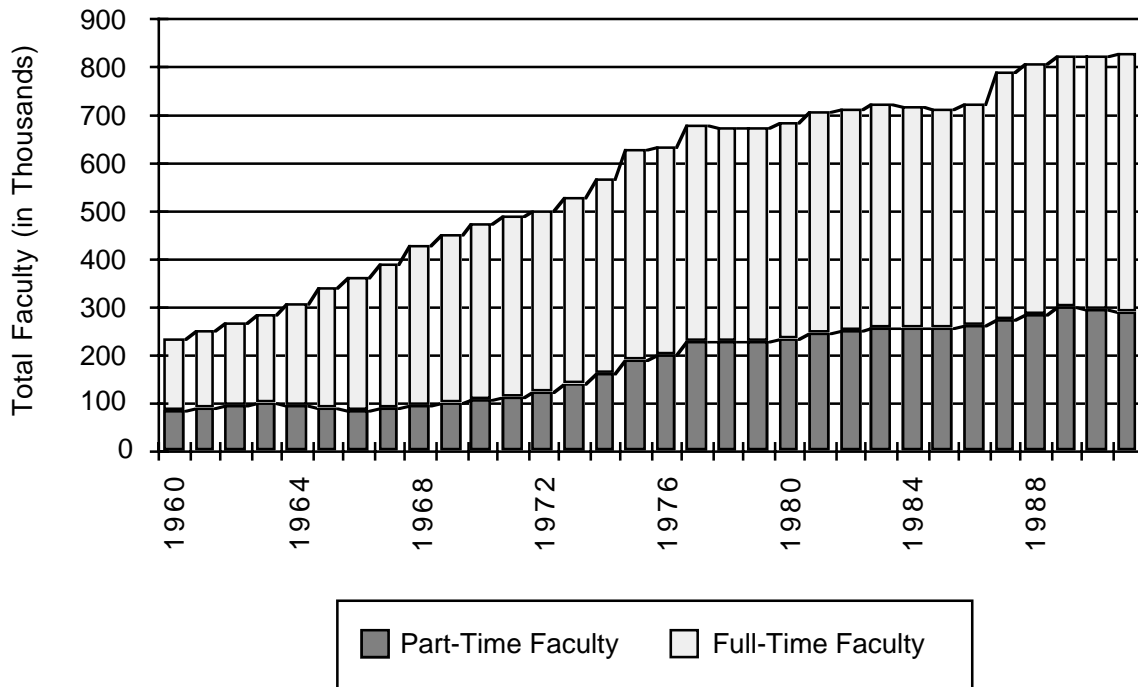


*Beginning in 1975, count includes branch campuses.

Source: U.S. Department of Education, National Center for Education Statistics, Education Directory, Colleges and Universities; "Fall Enrollment in Higher Education" and "Institutional Characteristics of Colleges and Universities" surveys; and Integrated Postsecondary Education Data System (IPEDS), "Institutional Characteristics" surveys.

As the numbers of institutions increased, so did the demand for faculty. In only 15 years, the total number of full- and part-time faculty employed in American colleges and universities almost tripled from 236,000 in 1960 to 628,000 in 1975 (Figure 11). Institutions also began employing an increasing number of faculty on a part-time basis. The growth is steepest between 1970 and 1977, which marks the end of the era of massification, and the beginning of American higher education's "maturation" stage.

Figure 11
Number of Faculty in Higher Education by Full-Time and
Part-Time Status: 1960 -1991



Source: U.S. Department of Education, National Center for Education Statistics, Employees in Institutions of Higher Education, various years; Projections of Education Statistics to 2000; Integrated Postsecondary Education Data System (IPEDS), "Staff" survey; and U.S. Equal Employment

Driven by increasing enrollments of students with diverse needs, it was during this period that the shape of institutions began to change dramatically. In fact, for the first time in American higher education's history, it was necessary to construct a taxonomy that described the varying range of emerging institutional types. In 1970, the Carnegie Foundation began tracking these institutions according to its newly developed classification system. Figure 12 demonstrates how, between 1970 and 1976, the types of institutions were expanded to reflect this increasing diversity. Master's-granting institutions, associates of arts colleges, as well as professional schools and specialized institutions saw the largest increases during this period, while traditional, baccalaureate-granting institutions actually decreased in number.

Figure 12
Number of Institutions by Carnegie Classification 1970 vs. 1976

SCHOOL TYPE (CARNEGIE CLASSIFICATION)	1970	1976
Doctoral-Granting Institution	173	184
Research University I	52	51
Research University II	40	47
Doctoral University I	53	56
Doctoral University II	28	30
Master's-Granting Institution	456	594
Master's (Comprehensive) Universities and Colleges I	323	381
Master's (Comprehensive) Universities and Colleges II	133	213
Baccalaureate-Granting Institution	721	583
Baccalaureate (Liberal Arts) Colleges I	146	123
Baccalaureate (Liberal Arts) Colleges II	575	460
Associate of Arts Colleges	1063	1146
Professional Schools & Specialized Institutions	424	559
Tribal Colleges	n/a	n/a
Total (All Categories):	2837	3066

Source: "A Classification of Institutions of Higher Education." Carnegie Foundation for the Advancement of Teaching, 1987.

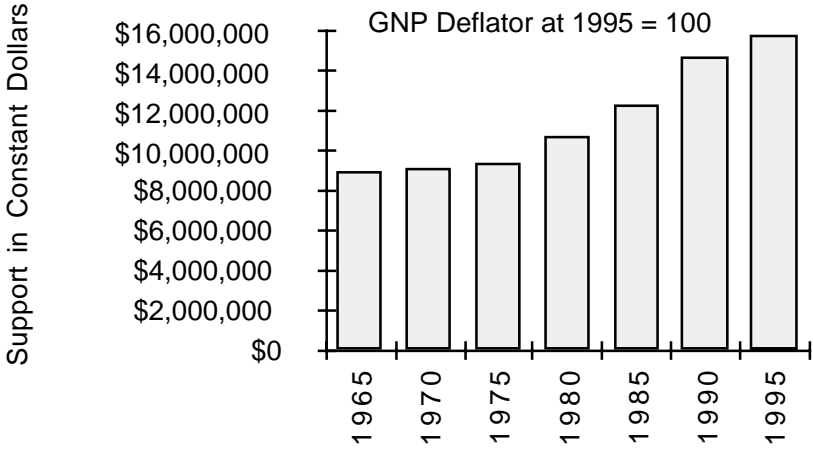
Not surprisingly, at the same time, this increase prompted the expansion of more formalized structures for statewide coordination of higher education, an arrangement into which institutions voluntarily entered in an effort to discuss planning and resource allocation at the state level. For example, states such as California began to develop elaborate public education structures that included flagship research universities, comprehensive institutions, and two-year community colleges. The California master plan—a remarkably coherent vision of higher education—was enacted in 1960 to provide both increased access and quality. As originally conceived, there were to be three distinct layers of public institutions—community colleges, state colleges, and university campuses—each stratum with a specific mission in programs and degrees offered and service to a particular academic segment of the college-going population. An integral part of the Master Plan was its generous scholarship program to assist

residents choosing to enroll in a private institution within the state. To ensure full access, the cost to the student was kept purposefully low.

Federal Research Support

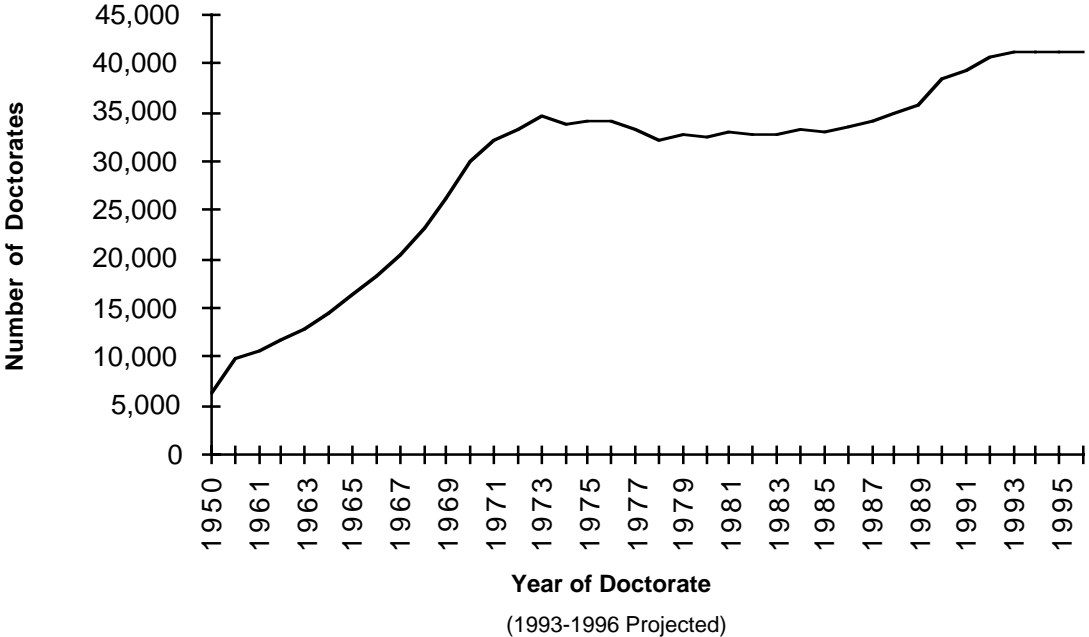
Expanded federal research support in the 1960s and early 1970s to meet the needs of the Cold War and to pursue a competitive space exploration program prompted the rapid growth of graduate enrollments, Ph.D. production, and an expanded resource base for the research university. Figure 13 tracks the steady growth in federal research support, in constant dollars, to higher education institutions from 1965 to 1975. Universities were becoming major performers of federal research, and these funds were used to support the preparation of doctoral students who would later populate growing faculty ranks throughout the 1960s and 1970s. Figure 14 demonstrates the dramatic increase in Ph.D. production from 1950 to 1973—a more than five-fold increase from approximately 6,000 to just over 34,000 conferred doctoral degrees. The availability of these funds also enabled universities to expand their services, implement new academic programs, fund research institutes, and expand the facilities and physical plant of campuses.

Figure 13
Federal Research Support in Constant Dollars:
1965 to 1995



Source: U.S. Department of Education, National Center for Education Statistics, "Financial Statistics of Institutions of Higher Education" surveys; and Integrated Postsecondary Education Data System (IPEDS), Finance surveys.

Figure 14
Doctoral Degrees Conferred: 1950 to 1996



Source: U.S. Department of Education, National Center for Education Statistics, "Earned Degrees Conferred: Projections of Education Statistics to 2004" surveys; and Integrated Postsecondary Education Data System (IPEDS), "Completions" surveys.

To summarize, in the United States, the era of massification in higher education was essentially a process of replacing private purchase with widespread public opportunity—massification both resulted in and was the product of the “publicization” of the higher education system itself. In other words, it represented a movement away from the notion of education for an “elite” group of American youth to education for the masses, providing for the near-universal access that has earned American higher education this reputation. It was during this period that higher education began to be defined as a “public good” worthy of public support. As doors were opened to a more diverse student population, the demand for higher education increased dramatically. Unprecedented enrollment numbers not only fostered the growth in the number of institutions, but also created massive universities, particularly complex public systems. At the same time, enrollment increases were accompanied by an unprecedented rate of acceleration in resource acquisition (the infusion of federal financial aid and research funds), in output (degree production), and increasingly complex organizational structures.

THE ERA OF MATURATION

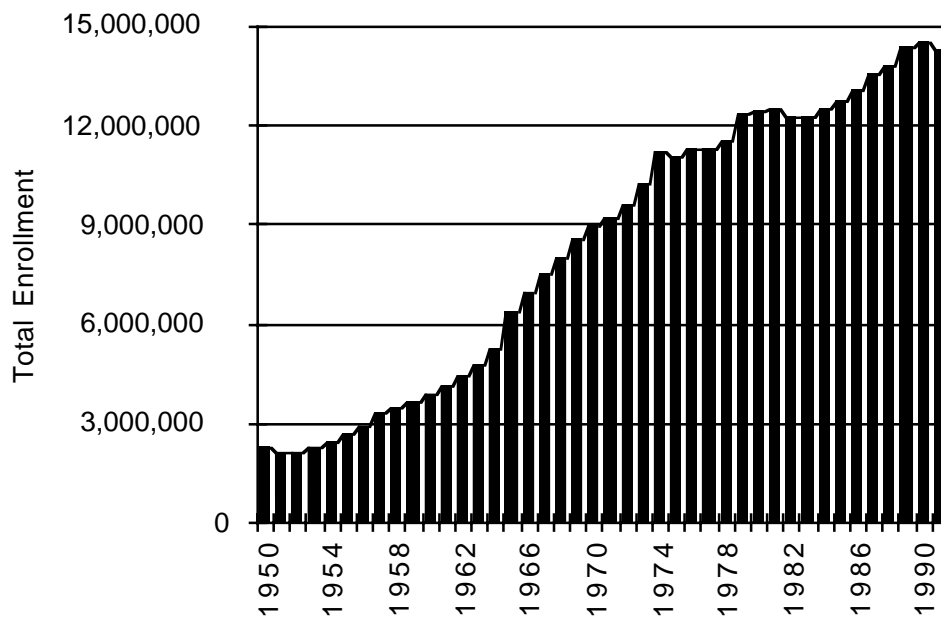
The rapid expansion of the American system of higher education in the 1960s and early 1970s was followed by a period of entrenchment—or “maturation”—of the gains made during this massification era. During the era of maturation, approximately 1975 to the late 1980s, higher education was still perceived as a “public good.” With the momentum of preceding decades propelling its expansion, the system and many of its constituent parts would experience continuing growth, but did so at a less rapid rate. The most significant shifts during the maturation era would occur in the diversity of the student body, in the rates of part-time enrollment, and in the cost of college

tuition—setting the stage for the trends that appear in the current, post-massification era.

Enrollment Shifts: Higher Education’s New Majority

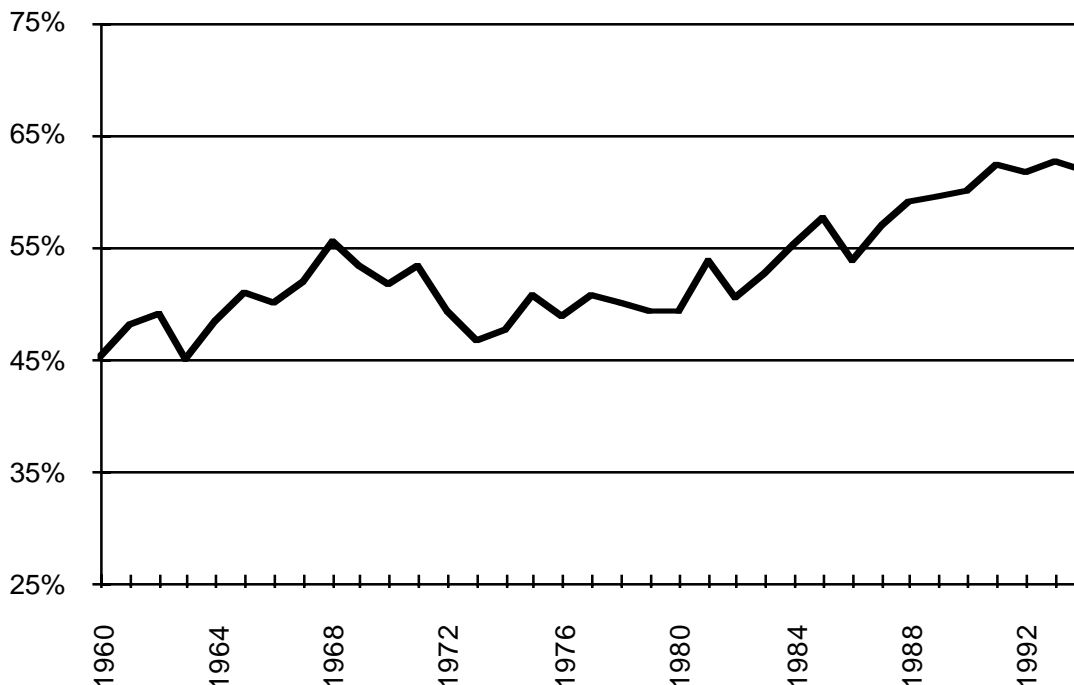
Throughout this period, students would continue to enroll in increasing numbers, as federal financial aid programs—especially new loan programs—facilitated expanded access. From 1975 to 1990, enrollment increased by almost 3,000,000 students; however, as shown in Figure 15, the rate of these enrollment gains began to flatten, particularly in 1989. In addition, the proportion of the nation’s high school graduates attending college also rose steadily from approximately 50 to 60 percent (Figure 16).

Figure 15
Enrollment in Higher Education: 1950 to 1991



Source: U.S. Department of Commerce, Bureau of the Census, Current Population Survey.

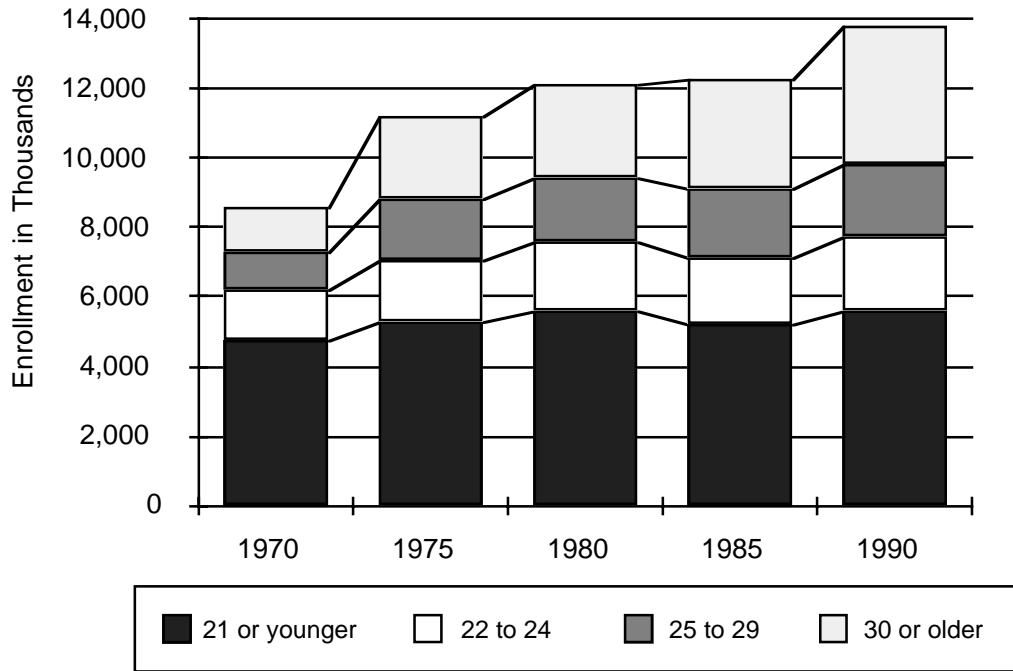
Figure 16
Rate of College Attendance Among High School Graduates:
1960 to 1994



Source: U.S. Department of Commerce, Bureau of the Census, Current Population Survey.

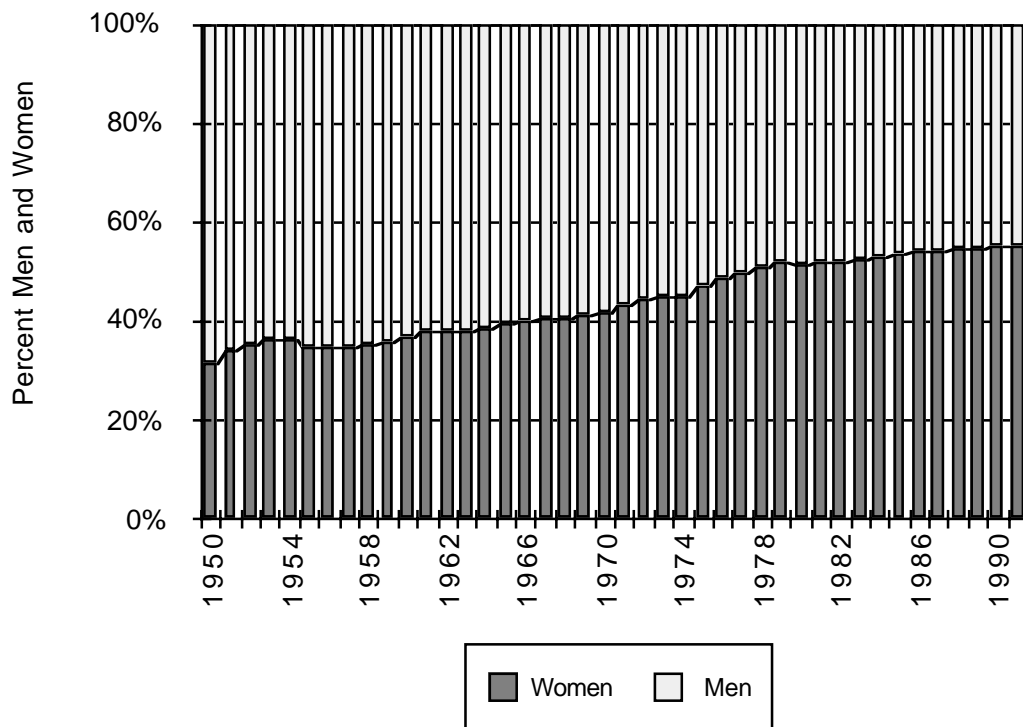
The predominant change in enrollment during this period was not in the number of students attending college, but in their age. From 1975 to 1980, the largest increase in enrollment occurred among students over 30 years of age (Figure 17). By 1990, the majority of higher education’s students—its “new majority”—would be 22 years of age or older. No longer did white, traditional-aged males comprise the largest proportion of students in higher education’s classrooms. The new majority was not only older, it was increasingly diverse. With regard to gender, the number of women enrolled increased ten-fold, from 750,000 in 1950 to more than 7.5 million in 1991—eclipsing the enrollment of male students and becoming the majority of matriculants in American higher education (Figure 18). Racial and ethnic minorities continued to make gains in participation during this period (Figure 19).

Figure 17
Total Enrollment in Higher Education by Age:
1970 to 1990



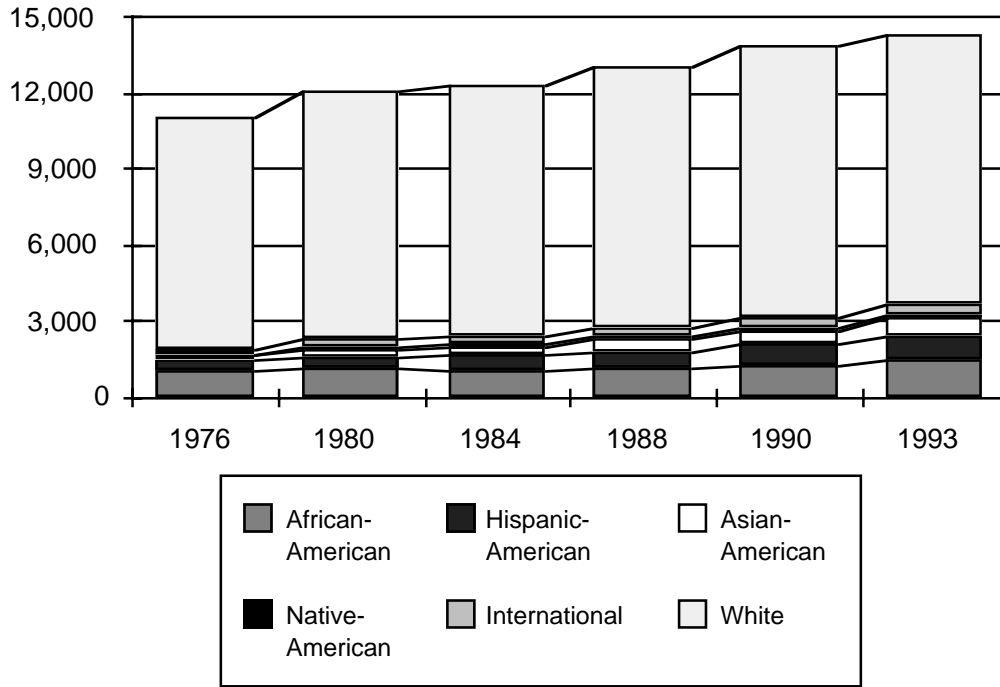
Source: U.S. Department of Commerce, Bureau of the Census, Current Population Survey.

Figure 18
Change in Enrollment in Higher Education, Percentage
by Gender: 1950 -1991



Source: U.S. Department of Commerce, Bureau of the Census, Current Population Survey.

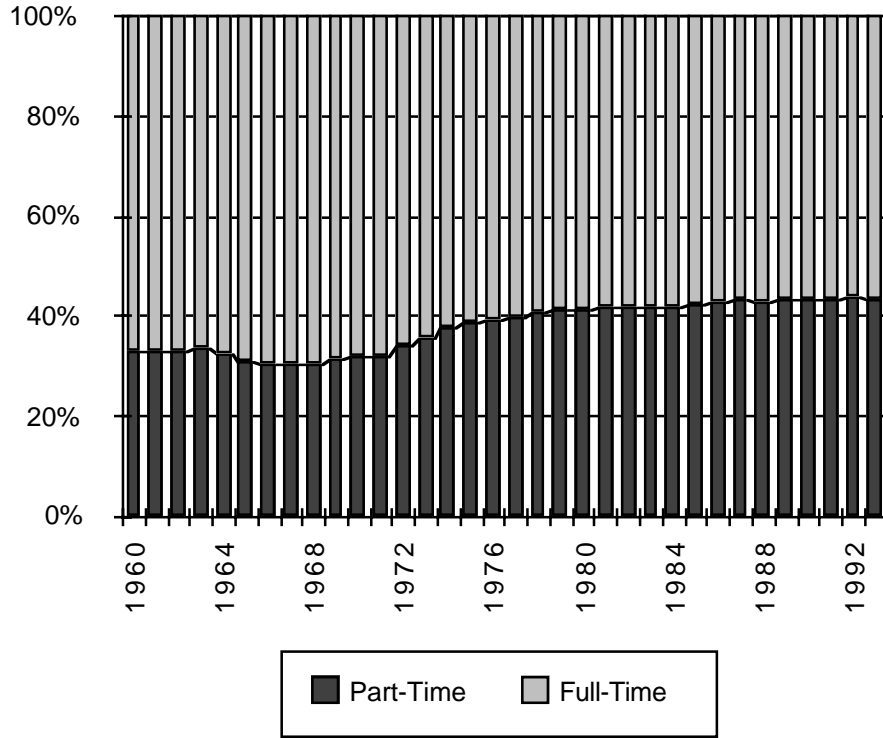
Figure 19
Numbers of Students Enrolled in Higher Education by Racial and Ethnic Group: 1976-1993



Source: U.S. Department of Commerce, Bureau of the Census, Current Population Survey.

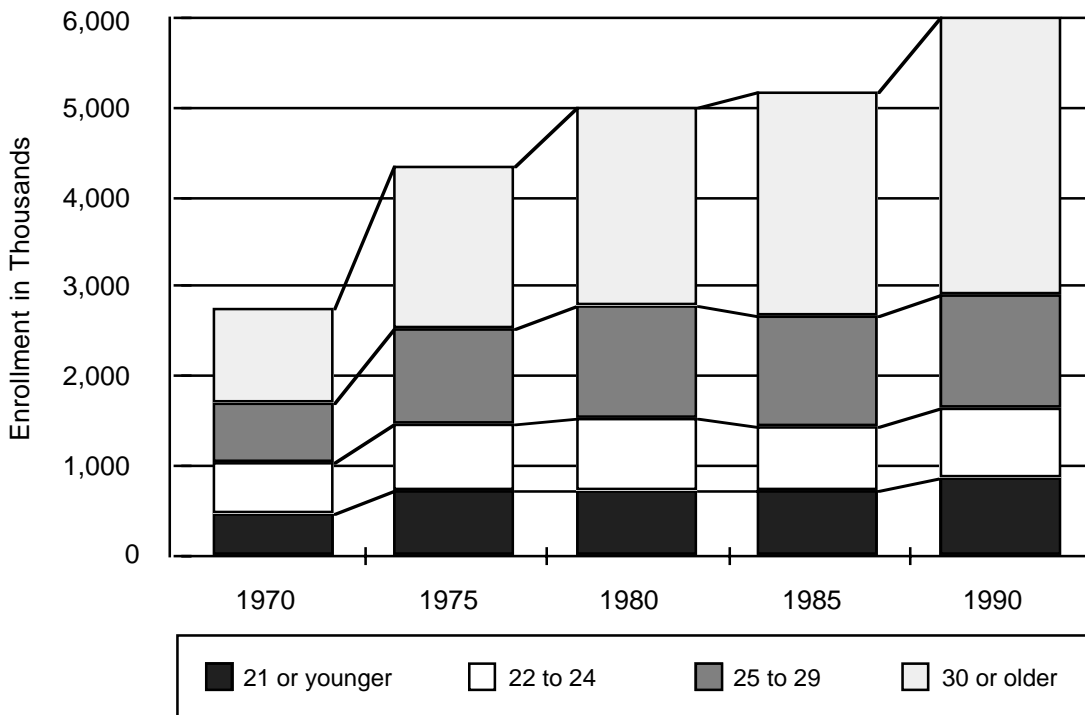
With the influx of higher education’s new majority—older, and often working, students—also came a shift in attendance patterns. By 1990, more than 40 percent of American students were attending a college or university on a part-time basis (Figure 20), and most of these students belonged to higher education’s new majority. Figure 21 shows how, since 1970, the greatest share of part-time students have been over the age of 22. The most dramatic growth in the number of part-time students occurred for those over age 30, with a more than 40 percent increase between 1980 and 1990. In fact, that age group accounts for nearly all of the growth in part-time attendance.

Figure 20
Full-Time and Part-Time Enrollment in Higher Education: 1960 to 1993



Source: U.S. Department of Commerce, Bureau of the Census, Current Population Survey.

Figure 21
Part-Time Enrollment in Higher Education by Age: 1970 to 1990

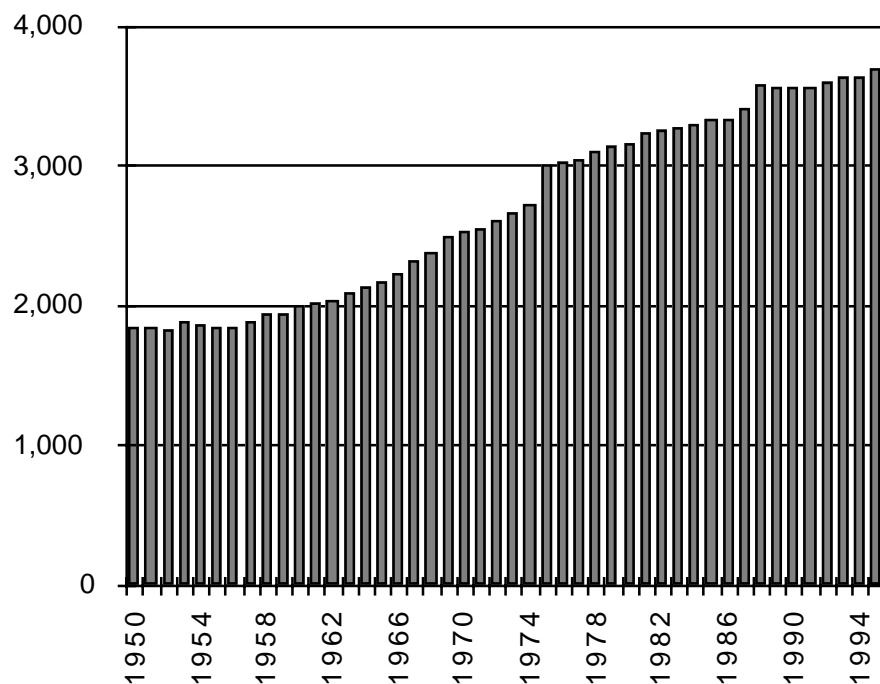


Source: U.S. Department of Commerce, Bureau of the Census, Current Population Survey.

The Slowing Growth of Traditional Institutions

Although the number of institutions continued to increase during the era of maturation, the rate of increase in the number of institutions—like that of enrollment—began to flatten (Figure 22). There is a sharp spike in the number of institutions between 1974 and 1975, when branch campuses are included in the total count of colleges and universities, which reflects an artifact of data collection, not an increase in the number of branch campuses themselves. Another spike occurs between 1986 and 1987, after which the number of institutions remained relatively constant. The proliferation of traditional higher education institutions also began to slow during this period, although non-traditional colleges—such as two-year associate’s-granting schools and professional and specialized schools—experienced a significant jump in number between 1976 and 1987 (Figure 23).

Figure 22
Number of Colleges and Universities: 1950 to 1995*



*Beginning in 1975, count includes branch campuses.

Source: U.S. Department of Education, National Center for Education Statistics, Education Directory, Colleges and Universities; "Fall Enrollment in Higher Education" and "Institutional Characteristics of Colleges and Universities" surveys; and Integrated Postsecondary Education Data System (IPEDS), "Institutional Characteristics" surveys.

Figure 23
Number of Institutions by Carnegie Classification 1976 vs. 1987

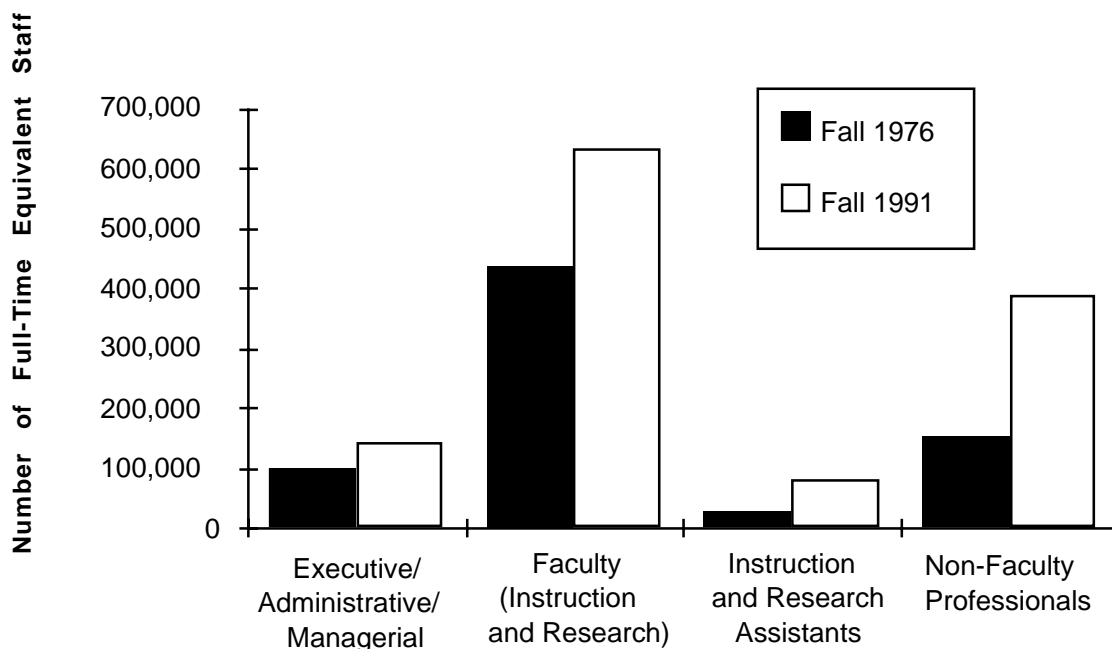
SCHOOL TYPE (CARNEGIE CLASSIFICATION)	1976	1987
Doctoral-Granting Institution	184	213
Research University I	51	70
Research University II	47	34
Doctoral University I	56	51
Doctoral University II	30	58
Master's-Granting Institution	594	595
Master's (Comprehensive) Universities and Colleges I	381	424
Master's (Comprehensive) Universities and Colleges II	213	171
Baccalaureate-Granting Institution	583	572
Baccalaureate (Liberal Arts) Colleges I	123	142
Baccalaureate (Liberal Arts) Colleges II	460	430
Associate of Arts Colleges	1146	1367
Professional Schools & Specialized Institutions	559	642
Tribal Colleges	n/a	n/a
Total (All Categories):	3066	3389

Source: "A Classification of Institutions of Higher Education." Carnegie Foundation for the Advancement of Teaching, 1987.

Increased Organizational Complexity

What continued to expand was the sheer size of institutions—in terms of their administrative staffs—as they added programs, student services, research institutes, and administrative units in an era of continued expansion. Figure 24 demonstrates how the number of non-faculty professionals, as well as instruction and research assistants, employed at colleges and universities more than doubled between 1976 and 1991.

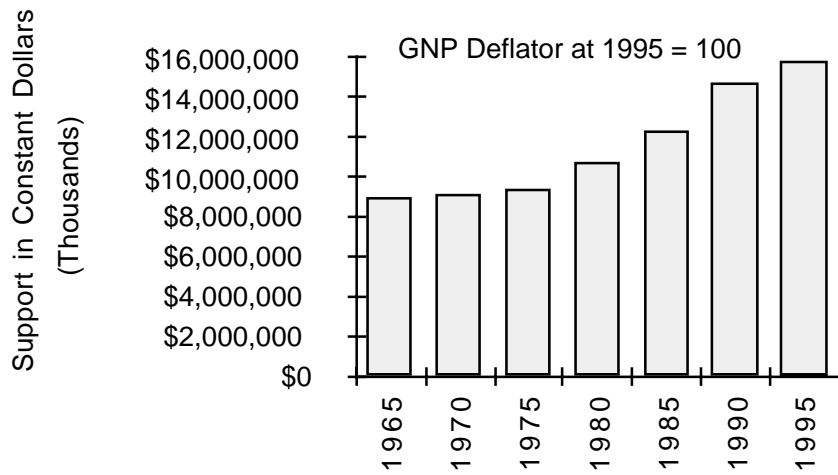
Figure 24
Growth of Professional Staff at Colleges and Universities:
1976 vs. 1991



Source: U.S. Department of Education, National Center for Education Statistics, Employees in institutions of Higher Education, various years; Projections of Education Statistics to 2000; Integrated Postsecondary Education Data System (IPEDS), "Staff" survey; and U.S. Equal Employment Opportunity Commission, Higher Education Staff Information Report File, 1977, 1981, and 1983.

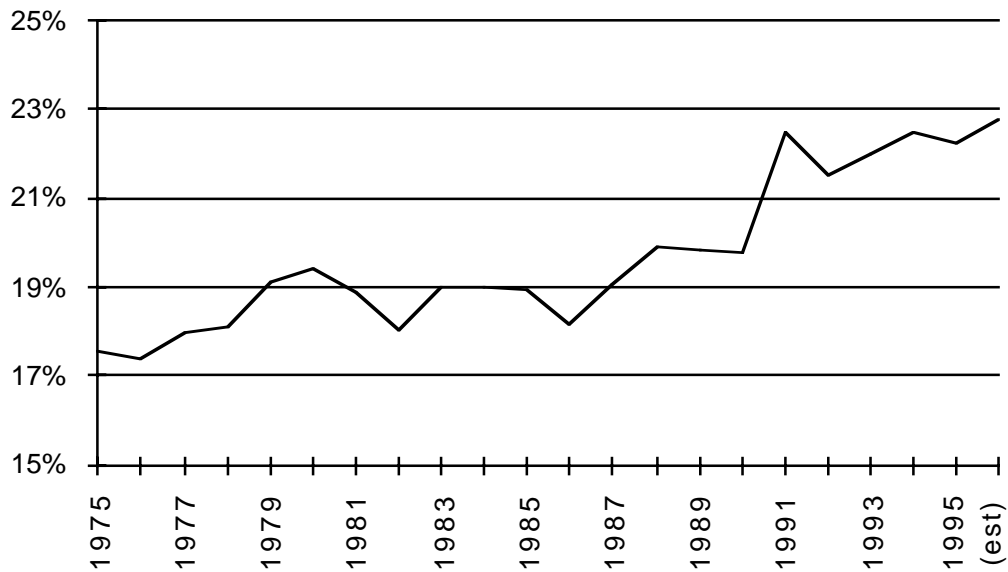
A contributing factor to this administrative expansion was the dramatic increase in federal research support for American research universities between 1975 and 1995 (Figure 25). Federal research dollars during this period would jump by almost 50 percent, further supporting the augmentation of existing institutions' programs and functions, particularly at research universities. More dramatic is the growth in higher education's percentage of all distributed federal research and development funds from 1975 to 1991 (Figure 26), from slightly over 17 to nearly 23 percent.

Figure 25
Federal Research Support in Constant Dollars:
1965 to 1995



Source: U.S. Department of Education, National Center for Education Statistics, "Financial Statistics of Institutions of Higher Education" surveys; and Integrated Postsecondary Education Data System (IPEDS), Finance surveys.

Figure 26
Percentage of Total Federal Research and Development
Obligations Administered by Colleges and Universities



Source: U.S. Department of Education, National Center for Education Statistics, "Financial Statistics of Institutions of Higher Education" surveys; and Integrated Postsecondary Education Data System (IPEDS), Finance surveys.

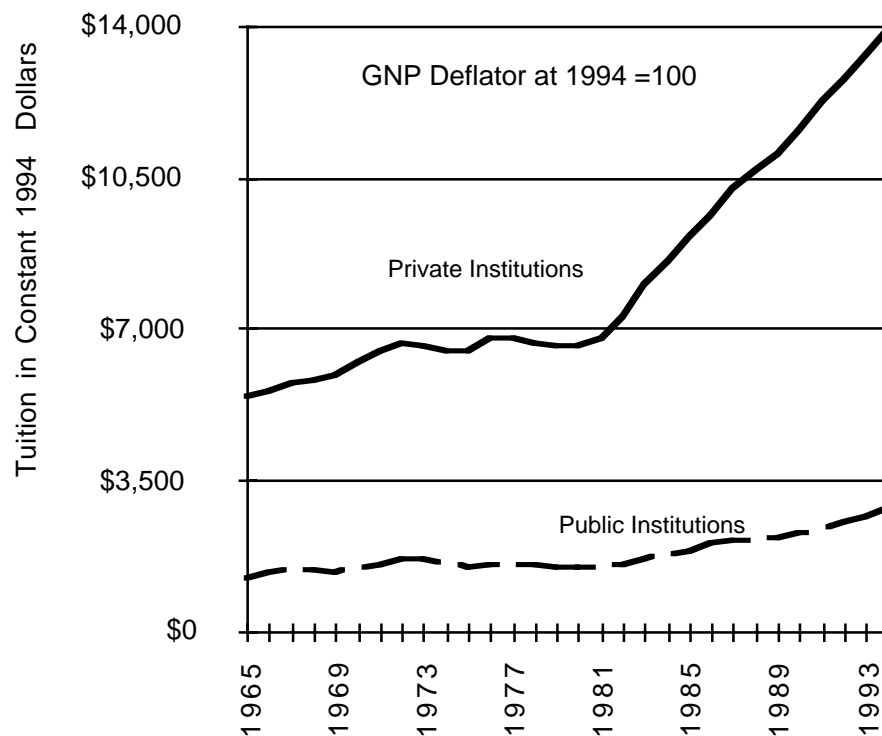
Harbingers of Change

Two trends appearing at the end of higher education's era of maturation would set the stage for its next phase of evolution, post-massification. First, the growth of part-time enrollment and the emergence of a new majority spawned a shift in student attitudes regarding the educational experience—which came to be less a rite-of-passage and more a consumer relationship. A study of new majority students at Indiana University in the early 1990s illustrates this point. Older and enrolled part-time, these individuals did not identify as “students,” nor did they feel a strong attachment to their postsecondary institutions. They considered themselves to be “workers” or “homemakers” first—and students second or third. This shift in attitude demonstrates the departure from the identities of traditional-age students, who characterize themselves primarily as “students,” even if they work while in school. It also contributed to the development of higher education's outlet market, as students have become shoppers who “buy” their higher education one course at a time, perhaps from a variety of institutions.

Second, the close of the maturation era also saw the beginning of an enduring—what would soon become a troubling—trend: the escalation of tuition rates at private institutions and the resulting reliance on the discounting of tuitions through student financial aid. As private institutions expanded—adding new programs, research functions, and administrative units—and as the economy began to experience rising inflation, tuitions at these colleges and universities began to reflect the enormous cost of their operations. As shown in Figure 27, in the early days of expansion in 1965, the average tuition in constant dollars for a private university was \$1,297 (\$5,442 in constant 1994 dollars). Although private tuitions rose moderately throughout the 1960s and 1970s, they began to outpace inflation beginning in 1978. After 1982, a sharp tuition escalation is more than evident. By 1994, the average price would rise to reach \$13,874; while the value of the dollar tripled from 1965 to 1994, tuitions rose ten-fold in private

universities. Although tuition in public universities grew at a more even pace, they too began to increase rapidly in the late 1980s. By 1994, public tuitions had achieved the same ratio of increase as private institutions, becoming ten-fold the stated price in 1965, which was \$298.

Figure 27
Tuition at Four-Year Public and Private
Universities In Constant Dollars: 1965-1994



Source: U.S. Department of Education, National Center for Education Statistics, "Institutional Characteristics of Colleges and Universities" and Fall Enrollment in Institutions of Higher Education surveys; Integrated Postsecondary Education Data System (IPEDS), "Fall Enrollment" and Institutional Characteristics surveys.

THE ERA OF POST-MASSIFICATION

The enormous, expensive, and elaborate systems of higher education that developed and matured from 1960 to the late-1980s were predicated on an ever-expanding resource base and little regulation from the public sphere. During the eras of massification and maturation, it was possible for colleges and universities to look inward and define the challenges confronting them in their own terms, but beginning in the late 1980s, the system's expansion became undercut by a growing set of external pressures.

Beginning in the late 1980s, there were visible signs of an erosion of support for American higher education, as it increasingly has become perceived as more of an individual good, rather than a public good. Students and parents have begun to question the value of higher education's expensive credentials, particularly as the return on—though not the necessity of—a college degree has eroded in the American job market. Economic retrenchment, the rise of market forces, and increased competition for declining public appropriations have also eroded the foundation upon which higher education has flourished in the decades after World War II. As a result, colleges and universities have begun to rethink the size, shape, mission, and financing of their enterprises. In a sense, just as massification signaled the “publicization” of American higher education, the process of post-massification may be signaling the “privatization” of the system. This shift is accompanied by increasingly vocal concerns over the viability of particular kinds of institutions and over the continued feasibility of access for all.

Data have yet to be collected that reveal the abrupt halt in American higher education's march toward expansion and the shattering of taken-for granted premises. However, a series of emerging crises indicate that the system is moving in the direction characterized by Professor Arimoto's postulates—in essence, a shift toward post-massification. This shift is indicated by increased public scrutiny and calls for

accountability, the withdrawal of public support, price resistance and discounting, rising market pressures and competition, a shift toward vocationalism, and persistence problems related to the elongation of time-to-degree.

Increased Public Scrutiny and Calls for Accountability

Postsecondary education's lowered place in the queue for public funds may derive from a sense that the enterprise's costs are out of control and from a feeling that public institutions, like their private counterparts, have become not just expensive but wasteful in pursuit of their own, as opposed to the public's, agenda. A number of postsecondary education's political critics have come to assert that reduced public funding will not only make public universities more efficient (almost by definition), but more accountable for delivering access and quality education. While American colleges and universities still claim societal purpose, legislative critics in particular are concerned that, if left to their own devices, these institutions will continue to use public monies yet simultaneously insulate themselves from the rigors of public accountability. Throughout policy discussions, various stakeholders have begun to rethink taken-for-granted answers to a number of core questions about the premises of the American higher education enterprise. These questions include: To what extent should higher education institutions adapt to changing market demands? Should the state be an owner or a regulator of higher education institutions? And, what financing and operational practices of higher education will best service the public's interest?

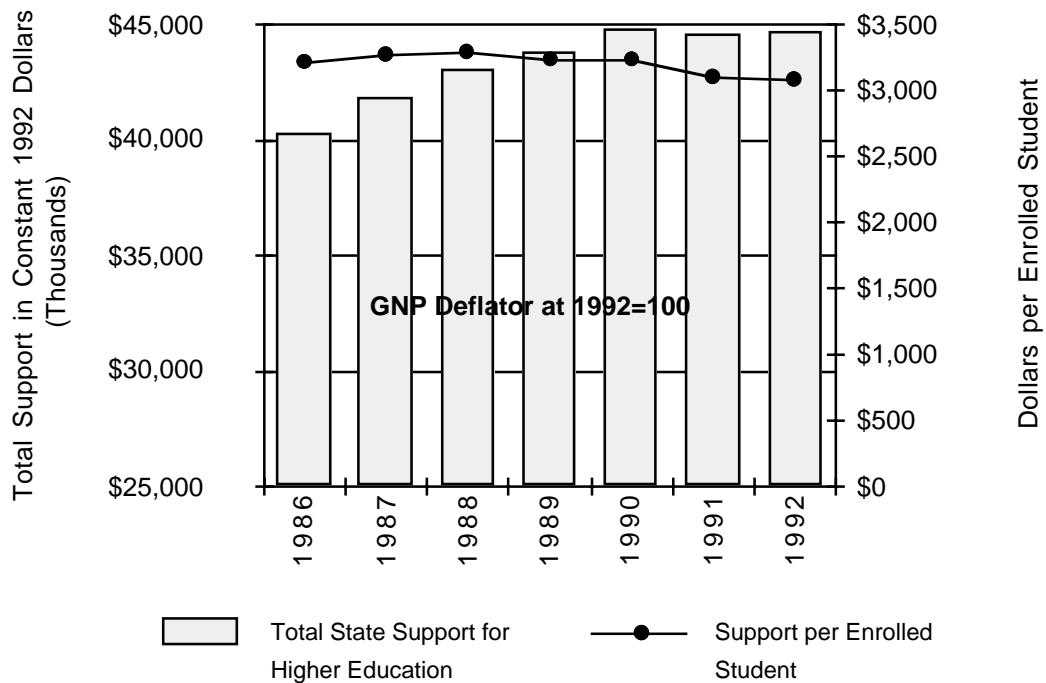
Withdrawal of Public Support

A decline in government revenues that marks the beginning of this era reflects changes in budgetary priorities that occurred in state legislatures across the U.S. in the late 1980s and the during the first half of this decade—the products of a political push to balance the federal budget and the resulting devolution of federal programs to state and local governments. Many states now find themselves facing structural deficits caused

by Washington’s mandate for medical-services spending—which collides with local decisions to increase spending for K-12 education, prisons, and aid to the elderly, and which simultaneously conflicts with a commitment to reduce taxes. In 1990, the medical-services program, Medicaid, first displaced higher education as the second largest category of state spending, eclipsed only by elementary and secondary education.

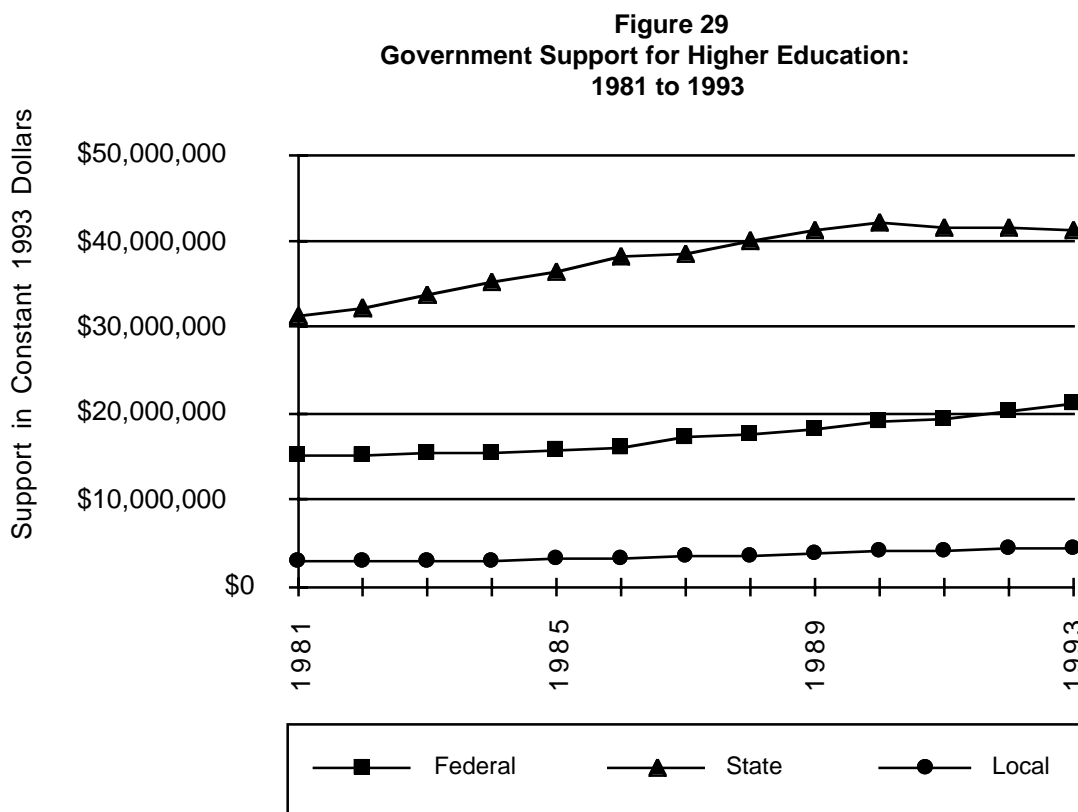
The erosion of state funds, in particular, general fund appropriations, between 1986 and 1992 can be seen clearly in Figure 28. Although spending increased slightly over this period, the actual dollars allocated per enrolled student have dropped—and should continue to drop as the 1990s draw to a close. From another perspective, state funding fell 8.8 percent between 1980 and 1993 for public institutions alone—the colleges, universities, and systems that enroll the majority of American students.

Figure 28
State Funding of Higher Education: 1986 to 1992



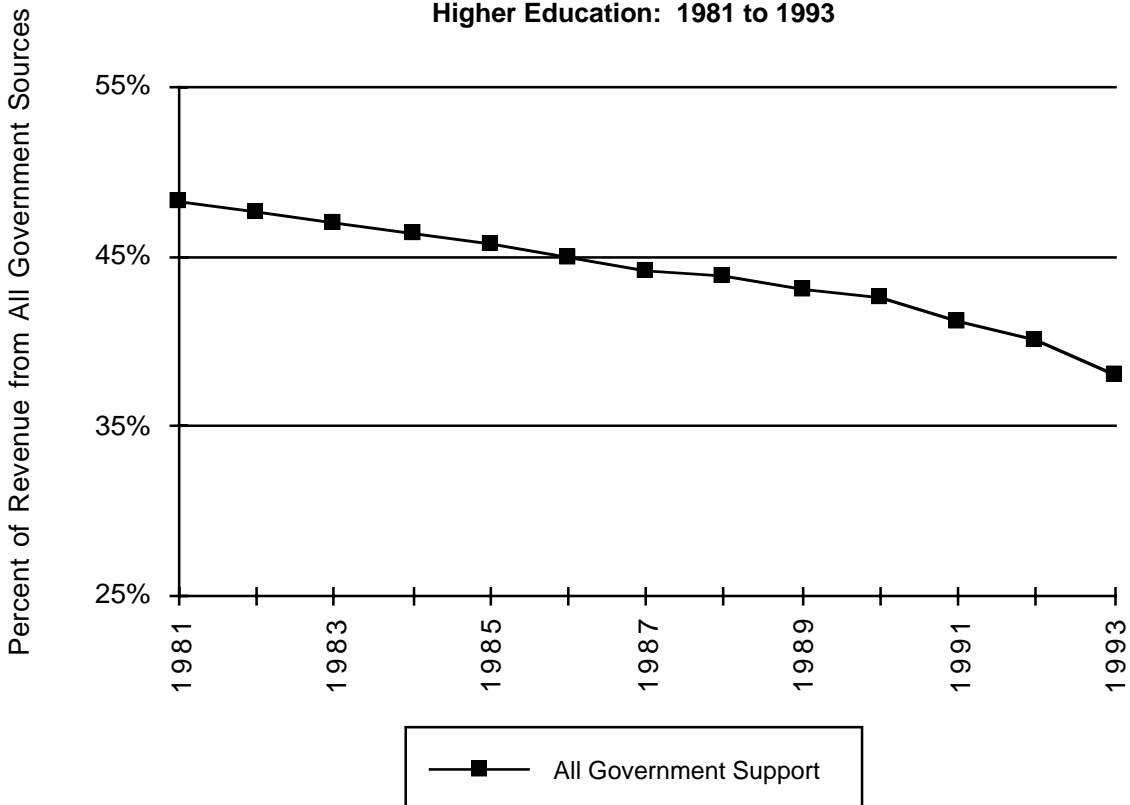
Source: U.S. Department of Education, National Center for Education Statistics, "Financial Statistics of Institutions of Higher Education" surveys; and Integrated Postsecondary Education Data System (IPEDS), Finance surveys.

Although it has not declined significantly, direct local and federal support for higher education flattened between 1981 and 1993 (Figure 29). Overall, government funding as a percentage of all revenue sources for higher education declined between 1981 and 1993 by almost 10 percentage points (Figure 30).



Source: U.S. Department of Education, National Center for Education Statistics, "Financial Statistics of Institutions of Higher Education" surveys; and Integrated Postsecondary Education Data System (IPEDS), Finance surveys.

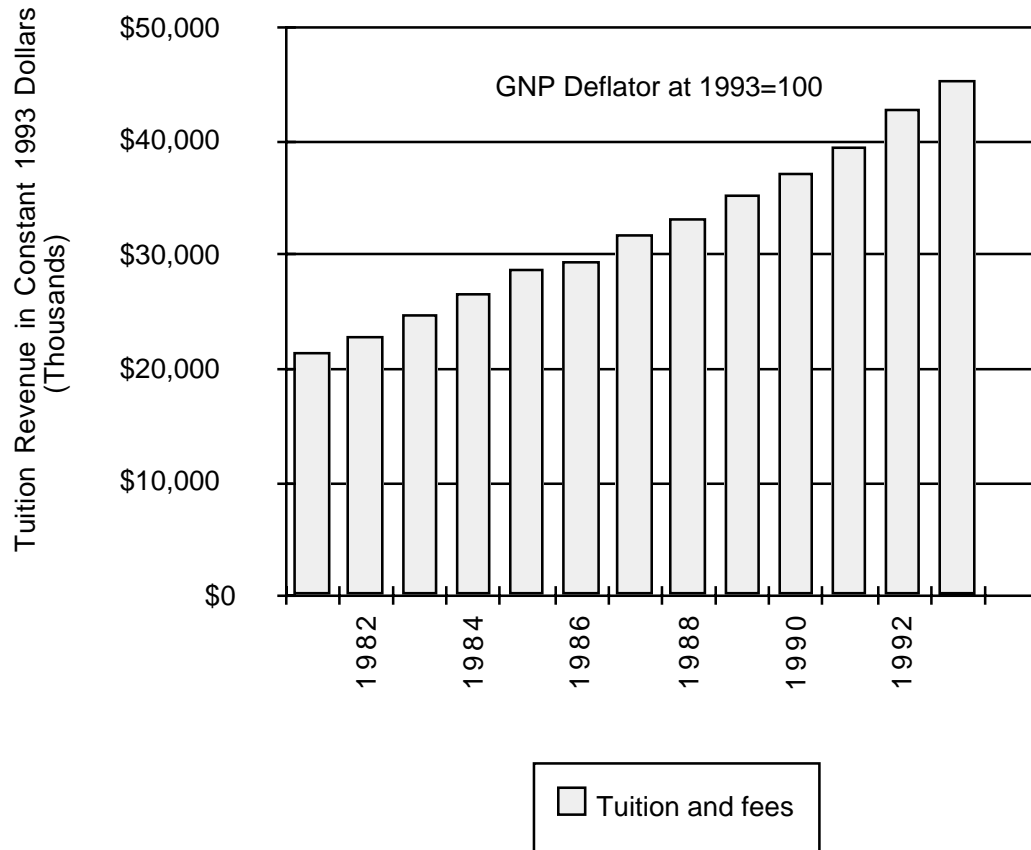
Figure 30
Government Funding as a Percentage of All Funding for
Higher Education: 1981 to 1993



Source: U.S. Department of Education, National Center for Education Statistics, "Financial Statistics of Institutions of Higher Education" surveys; and Integrated Postsecondary Education Data System (IPEDS), Finance surveys.

Confronted with a steady decline in government support, most colleges and universities have offset their revenue losses by passing the costs on to students through dramatic tuition increases. Figure 31 reports the step increase in revenues from tuition and fees from 1981 to 1993; by the end of that 12-year period, revenue from these sources had more than doubled.

Figure 31
Tuition and Fee Revenues of Higher Education:
1981 to 1993



Source: U.S. Department of Education, National Center for Education Statistics, "Financial Statistics of Institutions of Higher Education" surveys; and Integrated Postsecondary Education Data System (IPEDS), Finance surveys.

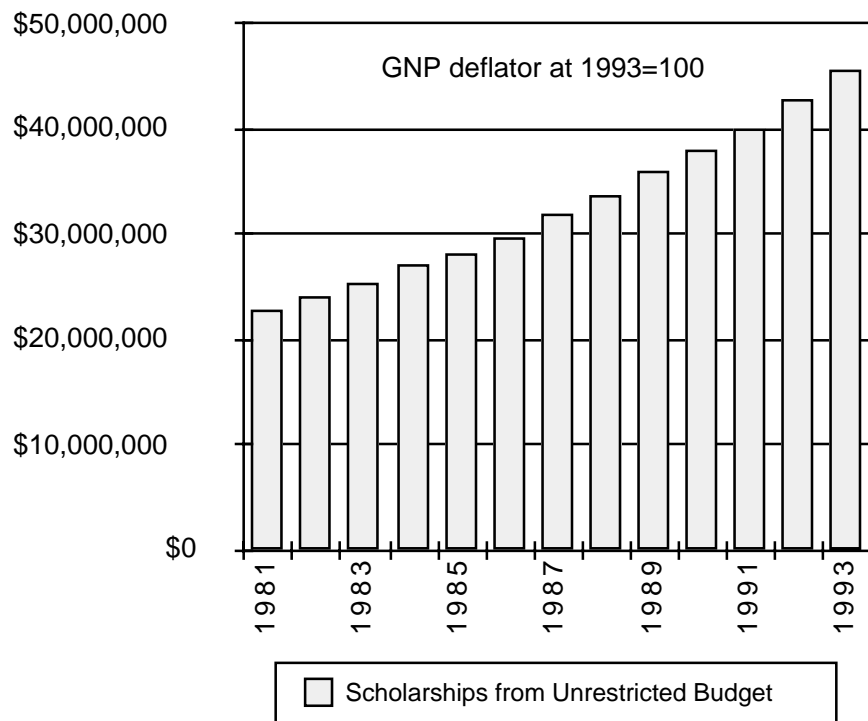
Price Resistance and Discounting

The success of sustained tuition increases to fill the fiscal gap now promises to become self-defeating. Political resistance to these tuition hikes has increased as middle-income families express fears about college being priced out of reach. As a result, the past two years have witnessed only modest increases in public tuition levels in most states, and it is no longer politically feasible to impose double-digit tuition increases, at least for in-state undergraduate students.

Of necessity, private colleges and universities have been subsidizing student financial aid by recycling tuition revenues—a practice that redistributes the tuition

burden by supporting students of fewer means with the tuition dollars of those who pay the full price. In recent years, many four-year public institutions have come to operate increasingly like their private counterparts. Called “discounting,” this practice has actually become one of the factors exerting upward pressure on tuition levels. Figure 32 demonstrates how expenditures for student financial aid from private institutions’ unrestricted operating budgets increased from 1981 to 1993.

Figure 32
Unrestricted Financial Aid Expenditures in
Private Colleges and Universities: 1981 to 1993

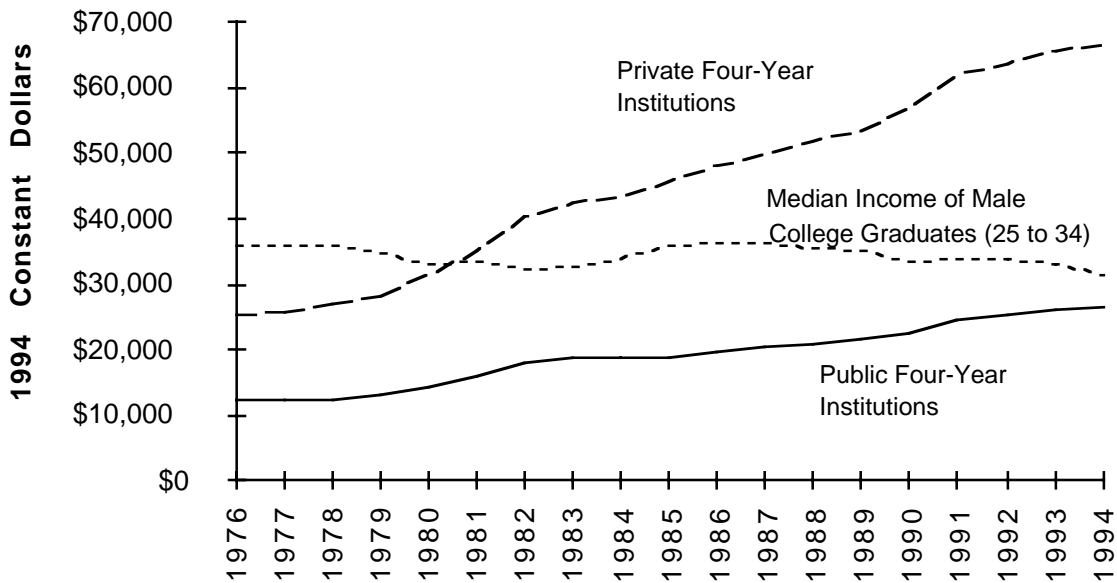


Source: U.S. Department of Education, National Center for Education Statistics, "Financial Statistics of Institutions of Higher Education" surveys; and Integrated Postsecondary Education Data System (IPEDS), Finance surveys.

Much of the price resistance phenomenon has its foundations in the decreasing value of a college degree, described as the “price-earnings squeeze” by Professor Zemsky in his keynote address. Gone are the days of low cost and high return, replaced with the paradoxical sense that a college education, while increasingly necessary, is also

less economically rewarding. Figure 33 provides a compelling explanation for the increased focus on cost that has come to dominate the public's scrutiny of American higher education. Not only have tuition increases exceeded the rate of inflation, but students and parents are being asked to pay more for less—in terms of likely earnings in relation to stated prices.

Figure 33
College Costs* and Average Incomes:
1976 to 1994 in Constant Dollars



*College costs include tuition, fees, room and board.

Source: U.S. Department of Education, National Center for Education Statistics, "Financial Statistics of Institutions of Higher Education" surveys; and Integrated Postsecondary Education Data System (IPEDS), Finance surveys; U.S. Department of Commerce, Bureau of the Census, Current Population Survey.

Increased Market Pressures and Vocationalism

Fiscal constraints and calls for accountability have been accompanied by emerging pressures from the market. Higher education has become increasingly consumer-driven, as students and parents offer resistance to tuition increases and demand greater accountability for the quality and cost-effectiveness of institutions.

Other competitive forces—particularly from the for-profit sector and especially from the growing information-services industry—have further taxed traditional institutions, as outlet markets begin to emerge and higher education’s near-monopoly in conferring training and education credentials breaks down.

In many ways, those who have best understood the changing nature of this educational market are the new, often proprietary, institutions that have emerged to challenge traditionally organized colleges and universities, as well as the nation’s community colleges, which have always offered vocational education and training. Unfettered by the traditions of the academy, these specialized providers are proving that they can offer educational programs that satisfy a consumer movement increasingly concerned with attaining the credential that programs of postsecondary education are expected to provide. Just over the horizon is a second wave of entrepreneurs ready to combine the educational and entertainment potential of electronic technologies, creating products and services to attract both younger and older learners who are accustomed to shopping for the services they seek.

The proliferation of these education outlets is evident in the growth in the number of institutions by their Carnegie classification (Figure 34) from 1987 to 1994. During the maturation era, when this trend first began to appear, associate’s degree-granting as well as specialized and professional institutions experienced the greatest growth in number, and they continued to increase in the current era of post-massification. It is important to note here that—while the number of doctoral degree-granting institutions increased slightly, and master’s degree-granting institutions actually declined—the number of baccalaureate institutions jumped. What this fact may reflect is the sheer necessity of a bachelor’s degree to compete in the American labor market of the 1990s, as described by Professor Zemsky in his keynote.

On a programmatic level, similar shifts are evident. Students continue to choose majors toward vocational and professional degrees, as they seek to ensure their own success in a turbulent labor market. Figure 35 demonstrates how, between 1970 and

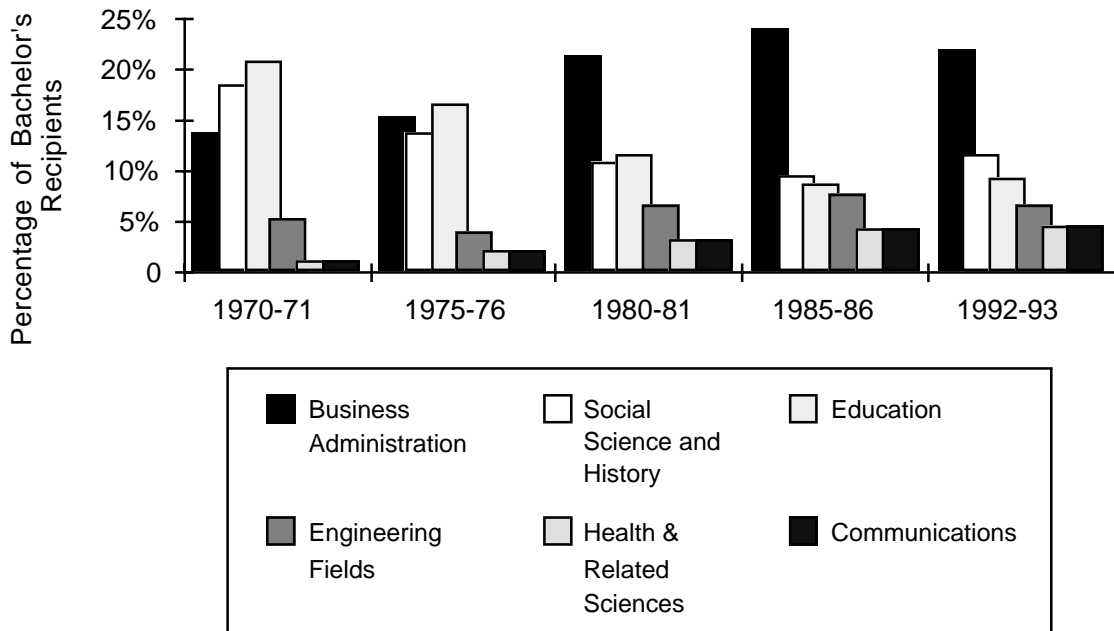
1993, business administration degrees skyrocketed; and engineering, health and related sciences, and communications degrees increased significantly.

Figure 34
Number of Institutions by Carnegie Classification 1987 vs. 1994

SCHOOL TYPE (CARNEGIE CLASSIFICATION)	1987	1994
Doctoral-Granting Institution	213	236
Research University I	70	88
Research University II	34	37
Doctoral University I	51	52
Doctoral University II	58	59
Master's-Granting Institution	595	532
Master's (Comprehensive) Universities and Colleges I	424	439
Master's (Comprehensive) Universities and Colleges II	171	93
Baccalaureate-Granting Institution	572	633
Baccalaureate (Liberal Arts) Colleges I	142	163
Baccalaureate (Liberal Arts) Colleges II	430	470
Associate of Arts Colleges	1367	1480
Professional Schools & Specialized Institutions	642	690
Tribal Colleges	n/a	29
Total (All Categories):	3389	3600

Source: "A Classification of Institutions of Higher Education." Carnegie Foundation for the Advancement of Teaching, 1987.

Figure 35
Distribution of the Top Six Majors in 1993 as a
Percentage of Degrees Awarded: 1970-71 to 1992-93

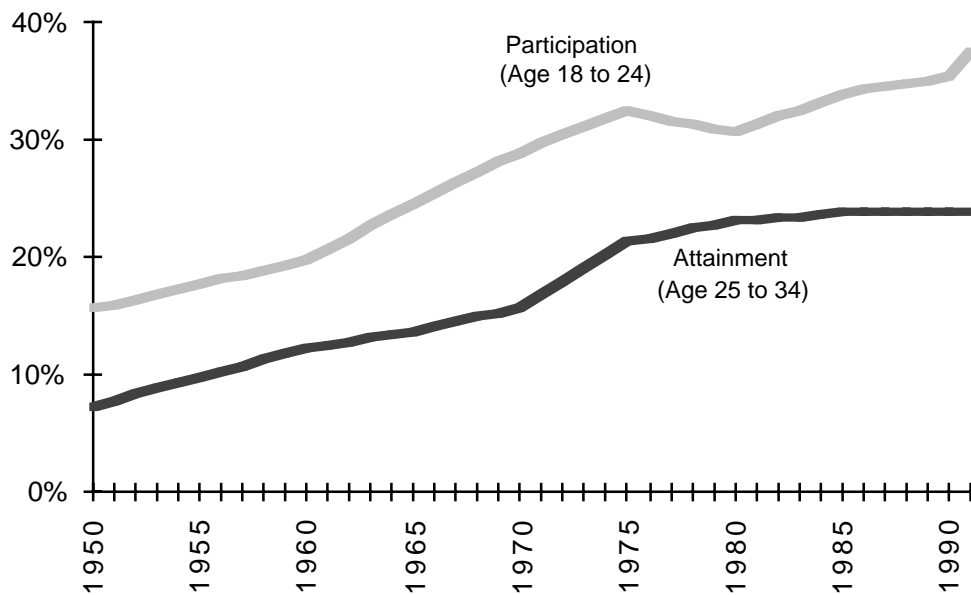


Source: U.S. Department of Education, National Center for Education Statistics, "Degrees and Other Formal Awards Conferred" surveys, and Integrated Postsecondary Education Data System (IPEDS), "Completions" surveys.

Persistence Problems and the Elongation of Time to Degree

In recent years, individual achievement goals have come to dominate the higher education policy arena, eclipsing social justice demands for providing widespread access. Problems with persistence and graduation have also become a concern in this new era—perhaps the result of an increase in outlet markets, a decrease in attachment to single institutions, and the inability of many students to finance their educations once they have begun. As Professor Zemsky pointed out in his keynote address, there is a widening gap between the rate of participation and degree attainment for American higher education students. As shown in Figure 36, currently, more than 40 percent of those who begin college fail to receive the baccalaureate degree.

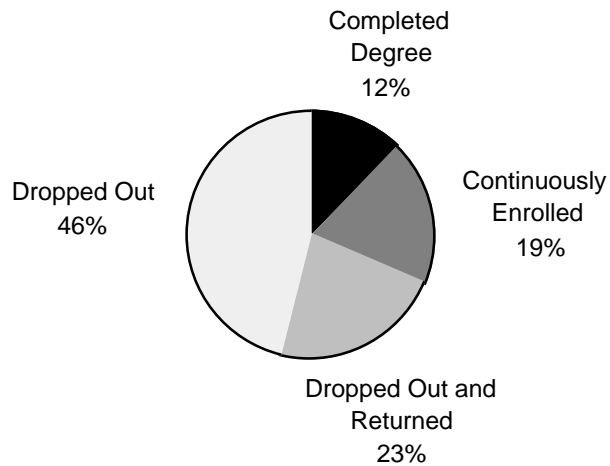
Figure 36
Participation vs. Attainment (U.S.)



Source: U.S. Department of Commerce, Bureau of the Census, Current Population Survey.

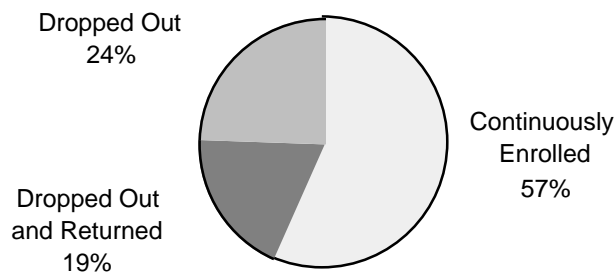
Current data illustrate the pattern of declining completion rates for students who matriculated in the fall of 1989. Figure 37 shows that, of the students who began an associate's degree program in the fall of 1989, nearly half had dropped out by the spring of 1992, and 25 percent were attending only intermittently. A similar trend is observed for bachelor's programs in Figure 38. Of the students who matriculated in 1989, almost one-fourth had dropped out by the spring of 1992, and nearly 20 percent were attending only intermittently.

Figure 37
Persistence Patterns in the Spring of 1992 for Students
Matriculating in Associate's Programs in the Fall of 1989



Source: U.S. Department of Education, National Center for Education Statistics, Beginning Postsecondary Student Longitudinal Survey, 1992.

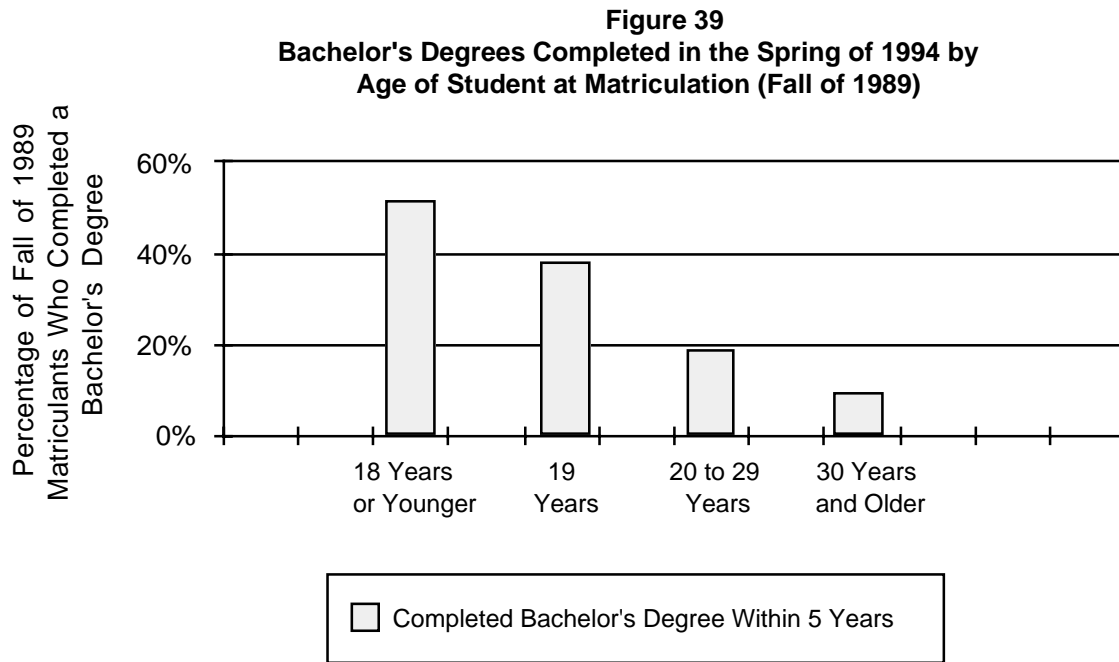
Figure 38
Persistence Patterns in the Spring of 1992 for Students
Matriculating in Bachelors' Programs in the Fall of 1989



Source: U.S. Department of Education, National Center for Education Statistics, Beginning Postsecondary Student Longitudinal Survey, 1992.

An explanation for this trend is made clear when the numbers are parsed by the age of the student, compared with success, or completion, rates within five years of matriculation (Figure 39). Only half of the traditional-aged matriculants in 1989, and less than 40 percent of those who began their postsecondary educations at age 19 in the same year, completed their degrees within five years. The completion rates of older

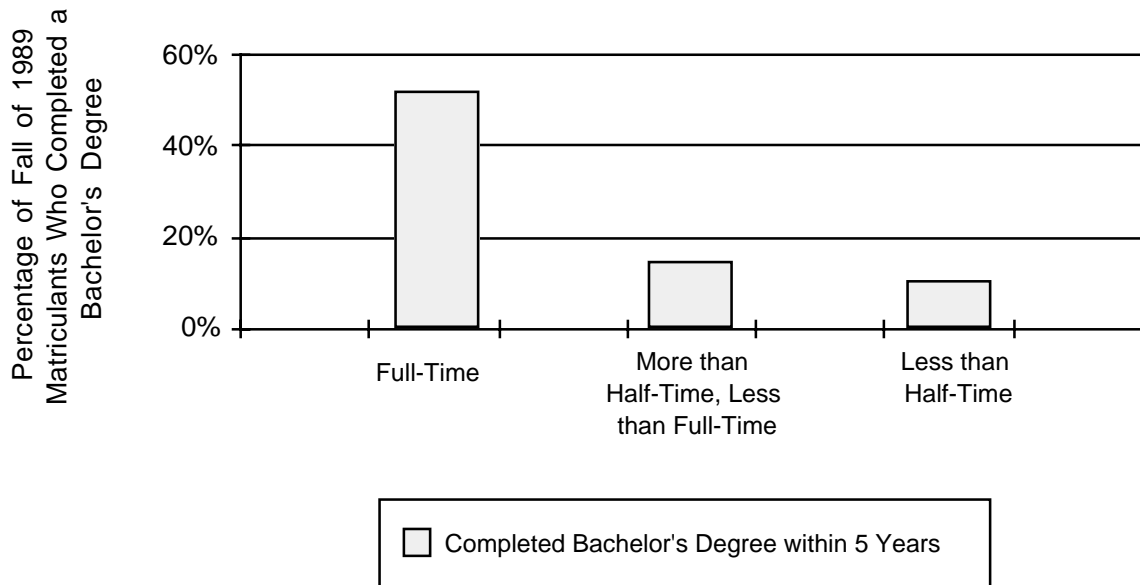
students are dismal. Less than 20 percent of students aged 20 to 29 at matriculation in 1989, and only 10 percent of students aged 30 and older, received their bachelor's degrees by 1994.



Source: U.S. Department of Education, National Center for Education Statistics, Beginning Postsecondary Student Longitudinal Survey, 1992.

Examining the percentage of degrees completed by students' attendance status further explains these low rates, since older students are more inclined to attend school part-time and intermittently. The effects of this pattern of attendance on degree completion is revealed in Figure 40. While 50 percent of those who matriculated in 1989 as full-time students received their degrees within five years, less than 20 percent of those who entered as part-time students did so. Only 10 percent of those who matriculated less-than-half-time completed their degrees by 1994.

Figure 40
Bachelor's Degrees Completed in the Spring of 1994 by
Attendance Status of Student at Matriculation (Fall of 1989)

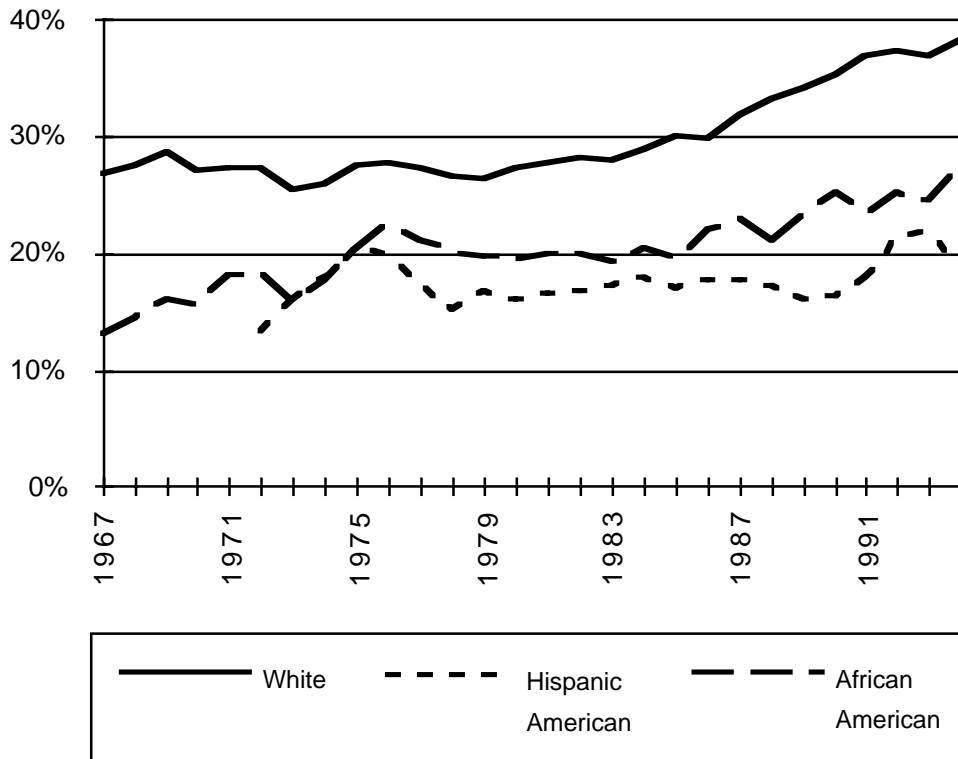


Source: U.S. Department of Education, National Center for Education Statistics, Beginning Postsecondary Student Longitudinal Survey, 1992.

Finally, although the U.S. has prided itself on providing universal access to students of all ages and from all socioeconomic, racial, and ethnic backgrounds, two trends continue to concern us. First, while the doors are open, they are revolving—as many students enter and leave before completing their degrees. This fact is most troubling for racial and ethnic minorities, who continue to be economically disenfranchised and under-represented in higher education. Second, despite the considerable progress in enrolling minorities, white students still comprise the greatest proportion of enrollment for 18-to-24 year olds, and minority students still remain underrepresented (Figure 41). The issue is further compounded by the high school completion rates of African-American, Hispanic-American, and other racial or ethnic minorities—suggesting that the shortfall in minority enrollment in higher education may be rooted in problems with secondary school attainment. Ultimately, these concerns extend beyond higher education itself to the ability of secondary and

elementary education systems to prepare American minority students for further education. As a result of this and related observations, policy analysts now speak of the need not only for better articulation between K-12 and college but also for systemic reforms that reconceptualize the problems and solutions as a K-16—or K-infinity—system.

Figure 41
Enrollment of 18-to-24 Year Olds in Higher Education
by Ethnic Group

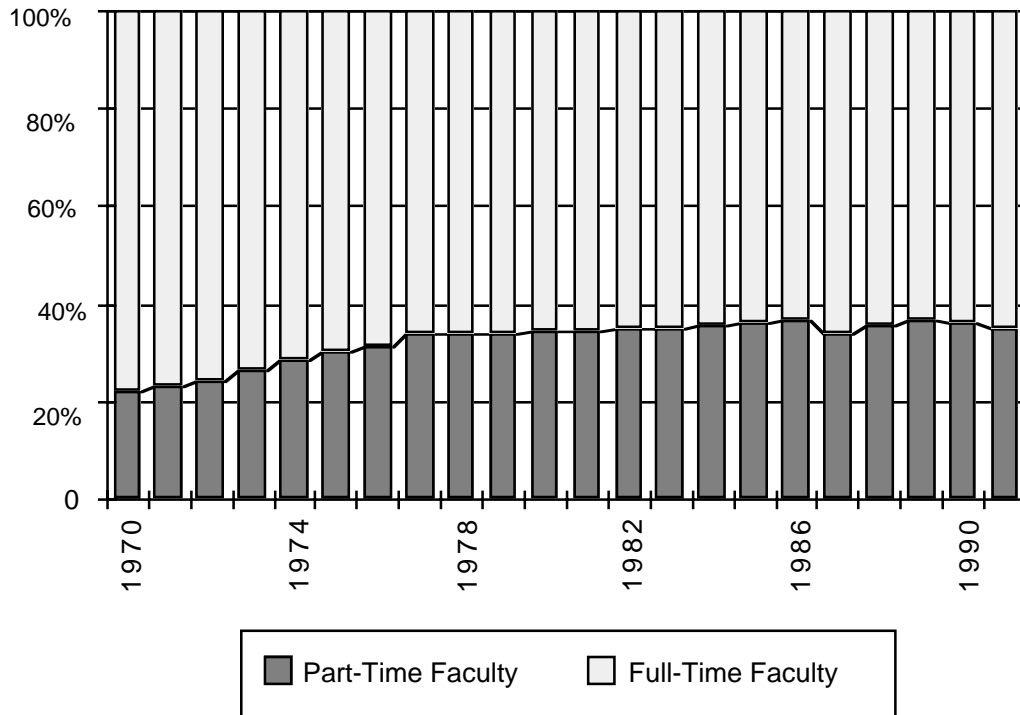


Source: U.S. Department of Commerce, Bureau of the Census, Current Population Survey.

The Agenda for Reform in a Time of Post-Massification

Faced with these pressures—declining revenue, increased expenditures for financial aid, growing demands for quality and accountability from consumers, trustees, and government, as well as resistance to tuition hikes—higher education has been forced to rethink its own enterprise. It has begun to borrow new business models from industry by downsizing, outsourcing, and reengineering many of its administrative functions in an attempt to cut costs. These reform efforts are being extended to the academic arena as well. In response to public complaints regarding faculty—in particular, faculty time spent on research rather than on undergraduate teaching—institutions have begun to reconsider mechanisms for enhancing faculty productivity as well as the very viability of tenure. As an interim strategy, institutions have increasingly relied on part-time and adjunct faculty positions in which the explicit job responsibility is teaching. As shown in Figure 42, the percentage of part-time faculty almost doubled between 1970 and 1991. It is important to note that institutions' hiring practices have a ripple effect, altering the demand for Ph.D.s, and that there is currently a widespread concern about the oversupply of doctorates. As shown in Figure 43, at a time when academic departments are experiencing retrenchment and downsizing, the number of doctorates granted rose sharply from 1989 to 1993 and then began to level off. Across the country, policy discussions are taking place about possibly limiting the number of admits to Ph.D. programs in selected fields—from physics to history—due to discouraging job market projections.

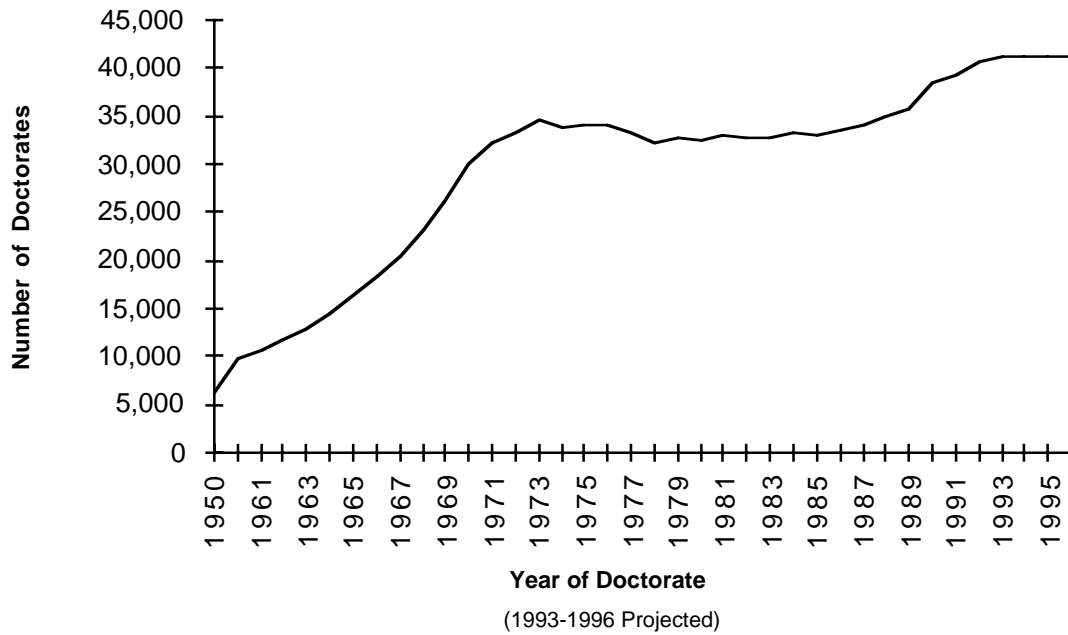
Figure 42
Percentage of Full-Time and Part-Time Faculty in Higher
Education: 1970 to 1991



Source: U.S. Department of Education, National Center for Education Statistics, Employees in Institutions of Higher Education; Integrated Postsecondary Education Data System (IPEDS).

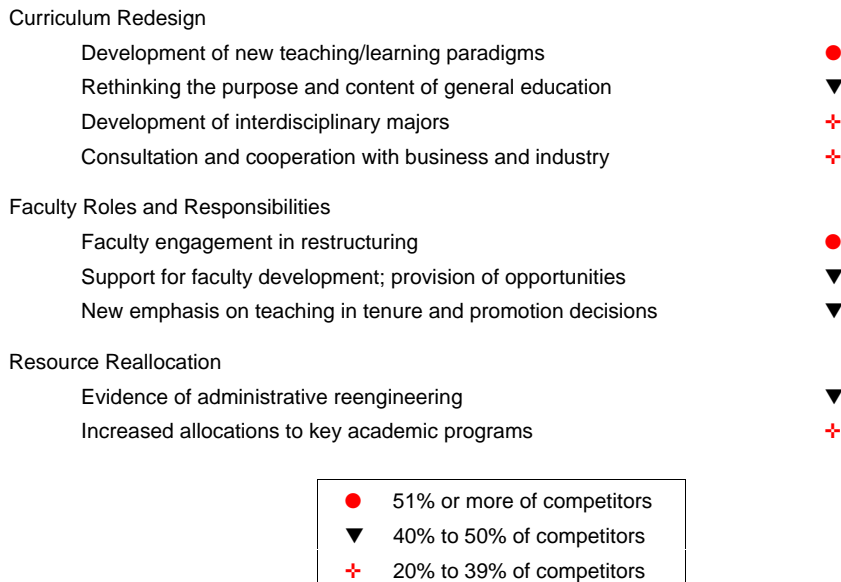
Higher education institutions are making headway in dealing with these emerging crises through new planning processes and innovative initiatives. Some promising evidence of the success of such transformation lies in a competition initiated in 1996 by the Pew Charitable Trusts—the Pew Leadership Award for the Renewal of Undergraduate Education—which recognizes baccalaureate institutions that have taken substantial steps to revitalize their operations and improve the quality of undergraduate teaching and learning. The tenor of higher education reform in the U.S. is reflected in the achievements of the 45 institutions nominated for the award. Figure 44 cites the areas of renewal activity most frequently cited by these competitors.

Figure 43
Doctoral Degrees Conferred: 1950 to 1996



Source: U.S. Department of Education, National Center for Education Statistics, "Earned Degrees Conferred: Projections of Education Statistics to 2004" surveys; and Integrated Postsecondary Education Data System (IPEDS), "Completions" surveys.

Figure 44
Areas of Renewal Activity Cited by Pew Leadership Award Competitors



Source: Pew Leadership Awards Institutional Response Documents

Despite the foothold that explicit reform efforts have gained, American higher education institutions still face serious choices about appropriate cost-cutting strategies. Unlike the Draconian downsizing that has become the norm for American corporations, higher education's tradition attempts to preserve academic positions. Until now, for the most part, when cuts have been mandated, they have occurred first in administrative units and then across-the-board in academic departments. This approach affects the entire institution and hinders the ability of that institution to invest selectively in its own future. In this era of post-massification, we are beginning to see a different management approach, where colleges and universities selectively invest in certain fields that will likely thrive in future markets. With little prospect of new revenue funds from traditional sources—public appropriations, higher tuitions, and unrestricted gifts—the initial reinvestment for future growth areas necessarily depends on funds garnered from savings as well as the elimination of obsolete programs and institutional functions.

Not surprisingly, this management approach exacerbates tension between faculty and administration and calls into question the premise of shared governance. The result is an inherent obstacle to the reform process: while an institution must now define a sense of collective purpose to serve its external constituencies, a recurring difficulty on campuses is translating this degree of commitment into a genuine process of institutional change. In a variety of ways, the collegial culture that once informed academic governance no longer functions. In its place we see a negotiated culture that stresses the interests of particular parties over those of the institution as a whole. This shift is evident in the slow progress of campus efforts to design tests and deliver new educational programs—a process that is more enterprise-like in the sense that it is modeled less either on legislative or regulatory procedures. Difficulties are encountered as the institution needs to enhance its entrepreneurial perimeters while still revitalizing its traditional core. In the process of bringing about these reforms, the traditions and prerogatives of academic governance seem out of place, designed more

to protect threatened values than to recast an institutional economy. The unfortunate result is that committees become bogged down in endless detail and in the wrangling that ineffective shared governance inevitably engenders.

Many in the academy still wish they could enjoy the respect once accorded institutions of higher learning. Indeed, the question most often asked within the academy is still: “How can society be made to recognize and support the value of what we do?” However, the question now regularly asked by legislators, employers, parents, and students is: “In what ways can postsecondary education serve us better?” Bridging these disparate perspectives will be one focus of American discussions to resolve the challenges posed in the era of post-massification. Of course, this is uncharted terrain, with extremely high stakes. Nonetheless, I am optimistic about the utility of the national research and policy analysis efforts currently underway in a number of American venues, especially that of my colleagues in the National Center for Postsecondary Improvement.

I greatly appreciate—and learn from—forums like this, which enable all of us to better understand the challenges we face in an international context. Thank you for your attention, and I look forward to our continued deliberations.