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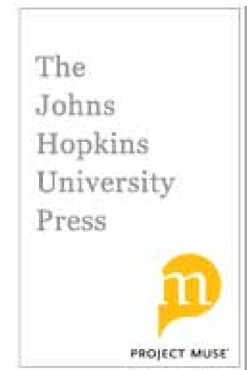

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What Is Going On in Higher Education? Is It Time for a Change?

Judith Dozier Hackman

Scenes from a Dean's Office

What is going on in higher education in these last years of the twentieth century? Can we tell where we are going? And can we tell where we should be going? Come with me while I revisit four recent scenes around the tables of higher education.

Scene One: The Women's Table

Time: Tuesday morning, 23 July 1991.

Place: Yale's Office of Institutional Research located in what we like to call "the garret"—really a fourth-floor attic. The only natural light comes from small windows overhead. There is one big open room, with partial wall dividers. Nine women and two men are seated around a round table.

Characters: The project's team consists of three recent Yale College women graduates; their institutional research leader, Beverly Waters; and the project's advisory group (director of institutional research John Gold-

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in, historian and archivist Judith Schilf, assistant secretary of the university Marci Sternheim, Yale architect Pamela Dellfinich, and me). I am involved because of the delicate political nature of the project. This morning there are two additional participants: Edward Tufte, professor of statistics and political science whom many know from his work on the visual presentation of statistics, and the leading character, a young Chinese-American architect and artist, very petite, wearing chinos and a plain white T-shirt, brimming with creative energy and confidence—Maya Lin. As a Yale undergraduate, she won the national competition for designing the national Vietnam Veterans' Memorial and later the Civil Rights memorial, both stunning and evocative pieces.

Action: This is a special session of our regular weekly meeting to sort out problems in counting women who have studied at Yale each year since its founding in 1701. The university commissioned Lin to design a sculpture in honor of women at Yale and in celebration of twenty years of women undergraduates at the institution. Spiraling out from the center with the university's beginnings into the future, the annual enrollments of women will be etched on the surface of the Women's Table. The sculpture, an oval of green granite on a stone pedestal, will have water from a central pool trickling over the surface and cascading gently down the sides like a tablecloth. It will stand across from the main entrance to Sterling Memorial Library, Yale's main library.

Throughout June, we nine women have been gathering around this table on Monday mornings at eleven to ask questions that will influence the results: When is a Leslie a woman, and when a man? How do we determine the gender for Asian names? How much time do we have before our work is etched in stone? And the standing joke: May we institutional researchers, social scientists, and historians carve explanatory footnotes on the table's pedestal?

This morning Maya Lin talks about the artistic purpose and importance of the spiral of numbers. The growth of women students' presence in the life of Yale University will be graphically represented by the increasing width of annual numbers: a single zero for more than a century and a half, then double-digit entries beginning in 1873 when the Art School first recorded women students, moving wider up to four-digit numbers by the 1970s, culminating in 4,823 (or nearly half of the student body) for the academic year 1990–91. The spiral will move through only three quadrants of the table, leaving the future open.

Around our own table as we discuss the Women's Table and explain our difficulties in enumerating the women students who have sat at Yale's table for nearly a century and a half—what is going on?

Scene Two: The International Picnic Table

Time: Sunday afternoon, 25 May 1991.

Place: A picnic table in the Hackmans' wooded backyard in Bethany, Connecticut.

Characters: A veritable United Nations of about twenty mathematics and science tutors from the program I direct, along with assorted friends and family. The tutors hold weekly office hours in the evenings, each in one of the twelve residential colleges or on Old Campus where most freshmen live. They are American, Brazilian, Greek, Hong Kong Chinese, Indian, Iranian, Israeli, People's Republic Chinese, Polish, Romanian-Israeli, Sri Lankan, Swedish, and Turkish.

Action: The picnic is a social gathering, aimed at strengthening this tutoring program, which has two main purposes: to support Yale undergraduates in their natural science courses (often translated as giving guidance for but not solving homework problems) and to promote the natural sciences by nurturing science majors and by encouraging science literacy among nonmajors.

This picnic is also the changing of the guard for the coordinator. Hay Yeung Cheung of Hong Kong, a young physicist and coordinator for the past two years, is leaving for Bell Labs. I dined with two members of his Hong Kong family at commencement time. His mother is a former maid who speaks virtually no English. His sister is an English translator for the Hong Kong police. The new coordinator is Ibrahim Semiz, also a brilliant physics graduate student. Ibrahim grew up on a tree farm near a small Turkish village. Both coordinators have become dear friends who speak fluent, though heavily accented, English—sometimes a challenge for one who grew up in a small Illinois farming community.

The picnic is a chance to relax, to visit, to celebrate the previous year, and to bid farewell to several tutors who are moving on. It is also an opportunity to continue the year's conversations about science—a cause common to all of us, regardless of cultural and national background.

Around our picnic table as young scientists from around the world relax and discuss how we can improve science and science education—what is going on?

Scene Three: A Common Table or Separate Tables?

Time One: 4 P.M., Saturday, 1 September 1990.

Place One: Woolsey Hall. The event is freshman assembly, held each fall in the largest auditorium on campus.

Time Two: Ever since, but especially in the first few months after the event.

Place Two: The media—at Yale and throughout the country.

Characters: Eager and somewhat nervous incoming freshmen and their proud, anxious, and intermittently sad parents and families. Advancing in procession to the stage in multi-colored academic garb are the president, the dean of Yale College, the university chaplain, the masters and deans of each of Yale's twelve residential colleges, and associate and assistant deans. The university organist booms out the stirring music traditional to the occasion. For me, this is always a thrilling experience.

The leading character is Professor Donald Kagan, who became dean of Yale College and my much-appreciated boss in the fall of 1989.[1] He is a distinguished scholar of history and classics, a highly respected teacher, outspoken and not afraid to be unpopular in his views, which range from athletics to politics to educational philosophy. He was quoted in the *Yale Alumni Magazine* at the time of his appointment as saying, "There are places in this University where a motion to wish me a happy birthday would get a close vote" (Kagan 1990, 43). And later, he referred to articles in the *Yale Daily News,* the student newspaper, which had sought opinions from various faculty members about the new dean: "Since I had been, and continue to be, known to favor what I call 'common studies,' or a core curriculum, another faculty member said my appointment was very dangerous because I believed some things were more important than others" (Kagan 1990–91, 32).

Action: In his welcoming speech to the class of 1994, Kagan praises "the presence and the contribution of the many racial and ethnic groups rarely if ever represented in Yale's early years," then laments: "The study of Western Civilization in our schools and colleges is under heavy attack." The thesis of his address is: "It is both right and necessary to place Western Civilization and the culture to which it has given rise at the center of our studies, and we fail to do so at the peril of our students, our country, and of the hopes for a democratic, liberal society emerging throughout the world today." He points out the many virtues of Western thought, its tolerance and respect for diversity (which he finds unknown in most other cultures), and its encouragement of self-criticism. He says "My claim is that most of the sins and errors of Western Civilization are those of the human race. Its special achievements and values, however, are gifts to all humanity" (1990–91, 44, 46).

Kagan closes by urging the freshmen to take pride in the cultures of their families, to learn about and share those cultures with all of us.

[1]As of 1 July 1992, Donald Kagan has returned to the faculty, Benno C. Schmidt, Jr., has resigned as president of Yale, and the graduate dean, Judith Rodin, has become provost.

"But," he says, "most important, do not fail to learn the great traditions that are the special gifts of that Western Civilization which is the main foundation of our university and our country. Do not let our separate heritages draw us apart and build walls between us, but use them to enrich the whole. In that way they may join with our common heritage to teach us, to bring us together as friends, to unite us into a single people seeking common goals, to make a reality of the ideal inherent in the motto e pluribus unum" (1990–91, 46).

Since that speech on 1 September 1990, I have watched from two rooms down the hall as the national media—newspapers and magazines and radio and television—have beaten a path to Kagan's door, mailbox, telephone, and fax machine. On our own campus, more than a score of articles and editorials, pro and con, have appeared in a variety of undergraduate publications. The interest continues even today.

These media presentations focus on Kagan's call for a return to the centrality of Western civilization in undergraduate education in this country and on his opposition to "political correctness" as a threat to the freedom of expression essential in academia. The major criticism from students and others disagreeing with the speech is their strong belief that the history, literature, and philosophy of Western civilization have too often ignored or distorted the contributions of other cultures, of minority Americans, and of women.

In this call for a core of learning centered around Western civilization—for a common table rather than separate tables—and in the impassioned reactions of those who fear they will have no place at the table—what is going on?

Scene Four. The Technology Turntable

Time: 2 p.m., 27 September 1991.

Place: The turntable stage in the front of Davies Auditorium at Yale's Becton Engineering Center. This stage makes it possible to prepare a science experiment behind the front wall and then rotate the stage to bring the demonstration to the view of students seated in the auditorium.

Characters: Sixteen staff and faculty have serendipitously coalesced into "TTSG"—the teaching technology staff group. Members are drawn from across the campus: academic computing, audio-visual center, facilities planning, language laboratory, library, telecommunications, Yale College dean's office, Yale College registrar's office, and the departments of biology, German, and physics. The co-convenors of TTSG (Philip Long, director of academic computing, and I) gathered the nucleus of this group late last fall when we thought we would be support staff to a faculty committee charged with the study of teaching technology in Yale Col-

lege. That support project did not materialize. Instead TTSG emerged with a life of its own.

Action: The event is "Info Expo—Technology in Support of Teaching"—the most ambitious result of our grassroots networking. Info Expo was born last May at what Phil and I thought would be our last 1990–91 meeting, when we would review the year and move toward one or two meetings a semester in the future. Instead, someone said the equivalent of, "Let's put on a show!"—and we did.

On 27 September at Info Expo in Becton Center, more than two hundred faculty, staff, graduate students, undergraduates, and media representatives gathered in Davies Auditorium to communicate and learn more about teaching technology. The event began with The Show: presentations by four faculty, including our premiere showing of international video beamed from the satellite dish recently installed on top of this very building, atop Becton Center, a demonstration of laser disk technology developed to show medical students and doctors multiple sections of a cadaver, a multi-media physics presentation on resonance, and a rapidly set-up desk-top computer for interactive teaching in economics. After the show came The Fair and refreshments, where participants mingled, visited, and tried out library databases, computer experiments, and other technologies.

As the turntable of technology twirls and the network of people concerned with the improvement of teaching grows—what is going on?

IS IT TIME FOR A CHANGE?

What did you observe in visiting these four scenes from my past year? What parallels or discontinuities with your own experiences did you observe? What did these scenes communicate about trends in higher education now and far into the twenty-first century?

Is it time for a change? Intentional change is always difficult, especially in large and intractable organizations like the "organized anarchies" of our colleges and universities (Cohen and March 1974). As we look at what is going on in these latter days of the twentieth century, you may want to keep in mind two theories of change espoused recently by two quite different Massachusetts residents.

The first is Paul Tsongas, who explained his reasons for entering the Democratic Presidential race this way: "There are moments in history when ideas catch fire. . . . Back then [referring to former, mostly ignored speeches] I lit a match and nothing happened. Now gasoline is all over the floor" (in Ajemian 1991, 19).

A Harvard organizational psychologist, J. Richard Hackman (who is also my husband and a Massachusetts resident), espouses a two-factor theory of organizational change. "If you want to change an organization," he says, "do two things: be prepared and lie in wait." Be prepared, meaning, have a clear understanding of where you want to go. Then lie in wait until the time is right to move. He suggests that the right time for change is most often a time of disarray, turbulence, and lowered defenses.

So, is the time right now for change in higher education? Do my stories reveal disarray and turbulence? Is there gasoline all around?

I believe these four scenes capture four critical forces affecting higher education. In my stories and perhaps in yours, in research and scholarly writings, in demographic changes, in statistical reports, in the media—all around us I find signs of these four forces of disarray and turbulence:

- The force of increasing gender equality
- The force of increasing globalism
- The force of increasing multiculturalism
- The force of expanding technology[2]

I see these forces as powerful, driving currents pouring into a turbulent river on which float (at least for now) the many vessels of higher education—luxury liners, rowboats, canoes, tugboats, and self-propelled paddleboats. We need to understand these forces—their power, their direction, and even the debris from faraway hills they may be bringing with them—to respond intelligently and successfully to their inexorable movement.

Current One: Increasing Gender Equality

Maybe, just maybe, gender equality really is happening—not feminization, but rather a movement toward equalization of the roles played by men and women in higher education and beyond.

Yale's Women's Table makes it something we can touch: a spiral that begins with a century and a half of zeroes and grows into four figures. From my perspective as a member of the Yale community and the mother of a recent Yale graduate, women really are a part of Yale. Most of us in that garret were women—partly because of our mission, but also because of our roles in the university. Three of Yale's six officers are women.

[2]After identifying these four forces for this address, I read remarks by James Duderstadt, president of the University of Michigan who, in speaking about public education, identified three: pluralism, globalization, and knowledge (1991, 5–14). Since delivering the speech, I have heard Agnar Pytte, president of Case Western Reserve University, advocate that universities should be "global, green, diverse, and smart."

Women are deans of Yale Graduate School and nursing. Women have further to go at Yale—especially in the numbers in tenured positions and in the sciences—but the current is strong and growing swifter.

Nationally, there is major growth in women's participation, roles, and responsibilities; but the picture is uneven. In our colleges and universities, women students outnumber men. Between 1970 and 1989, the total enrollment of women more than doubled (from 3.5 to 7.2 million), while men's enrollment grew more slowly (from 5.0 to 6.3 million). Across all levels of higher education enrollment, women exceeded men by 14 percent in 1989 (U.S. Department of Education 1990, 12, 169).

At the undergraduate level in 1989, women received 52.6 percent of bachelor's degrees (Carter and Wilson 1991, 31). In graduate education at the doctoral level, which of course feeds the pool of women available for faculty positions, women have made substantial progress toward equality. National Research Council statistics show that in 1973 women earned 18 percent of doctorates (Sylvia 1991, 38), in 1979 28.6 percent, and in 1989 36.5 percent (Carter and Wilson 1991, 34). Women's doctorates, however, are not distributed evenly across fields of study (Sylvia 1991).

Growth or movement toward equalization in higher education leadership positions—both administrative and faculty—is, as we all know, much slower. The percentage of women serving as college presidents has more than doubled in the last fifteen years but their number is still relatively small. According to Donna Shavlik, Director of the Office of Women in Higher Education in the American Council on Education, only 12 percent of presidents (360) are women (in Blum 1991, A-20). Although the number of female faculty has increased in the past twenty years, their proportion of the total has not changed. At entry levels, the proportion of women assistant professors has grown from 24 percent in 1972 to just over 38 percent in 1989; but the proportion of women full professors in 1989 was still only 13.6 percent (Blum 1991). For many women, academe is still a revolving door.

What does this mean for leadership in higher education? Do women lead differently? Are women leading differently? Will organizations where men and women are more nearly equally represented at all levels be different from those where men have been predominant? The time is right for further research on these questions.

Conflicting views about women and leadership are demonstrated by the varying perspectives of eleven well-known respondents ("Debate" 1991) to Judy B. Rosener's *Harvard Business Review* article, "Ways Women Lead," (November-December 1990).

Many researchers find that women have characteristic ways of leading. Carol Gilligan and her colleagues concluded that women "develop an ethic of care and connection as distinct from a male ethic of justice and autonomy" (Glazer 1991, 327). Helen Astin and Carole Leland in a cross-generational study of seventy-seven women leaders, primarily in higher education, found that: "Virtually all of the women in the study conceive of leadership as a process of 'working with and through people.' They constantly acknowledge the thoughts and energies of others who helped them or who laid the groundwork for their labors: 'Things I accomplished . . . not one of them did I accomplish alone. . . .' " (1991, 157).

Sally Helgesen (1990) contrasts traditional, "masculine" hierarchical models of organizational leadership with an alternative "web of inclusion" model which, she finds, women more often follow. She contrasts chain-of-command communication to open access to leaders, sitting behind a desk to sitting around a table, and limited participation to extending the circle of inclusion. Drawing on her research and that of other scholars, she extols the frequent and perhaps socialized tendency of women and women leaders to listen, to include, to make connections—all skills needed in the changing world of higher education. Moreover, they can be identified as emerging from each of the scenes we have visited.

Whether men and women truly lead organizations differently, there are so-called female leadership models that men as well as women could and, in my opinion, should try.

Is it time for a change? Yes. Now is the time to consider weaving webs of inclusion and connection, finding different and diverse ways of working with each other and leading our organizations.

Current Two: Increasing Globalism

In previous decades, but especially in the past few years, sweeping international changes have taken place, including growing global interdependence and changes in the role of the United States. Technology is a powerful current pulling us irresistibly into a larger stream. In the words of a television commercial, "The world is getting smaller and what we need to know is getting bigger."

In many arenas, world leadership by the USA is threatened; in others, it is clearly reduced. For example, two decades ago most of the world's largest banks were American; today only two rank among the top twenty (Interassociation Task Force 1991, 1).

What Yale scenes reflect increasing globalism? All of them, but especially the International Picnic Table. I believe that much of the turbulence in higher education is related directly or indirectly to changing

relationships around the globe. Our mathematics and science tutoring program, whose tutors over the past five years have found ways of working together across their own nearly twenty cultures and nations, illustrates the changing mix of graduate students and faculty in our universities and, thereby, the opportunities for exchange and learning as well as the potential difficulties.

Educational statistics show that the United States is an increasingly international society. Between 1980 and 1989, doctorates awarded to U.S. citizens actually declined by 2,049, a loss more than made up by those with permanent visas (up 314) and much more so by those holding temporary visas (up 2,946). In 1989, nonresident aliens received 19.2 percent of American doctorates. In the physical sciences, they made up 28 percent; in engineering, 42.5 percent (Carter and Wilson 1991, 35).[3]

What does this mean for higher education? Let me mention a few, most of which can be viewed either as problems or as opportunities—both for action and for research:

1. Our students must become internationally competent, which requires a variety of changes in their education: increased study of foreign languages by students at all levels; travel and study abroad at non-American universities; acquiring better understanding of other cultures and geographies; and area studies at undergraduate and graduate and professional levels.
2. Global change permeates the management of colleges and universities in ways that many of us seldom notice: management of financial resources—interest rates, currency exchange rates, investment portfolios; understanding and following immigration laws; providing for foreign students, faculty, staff, and visitors; and running student exchange programs, here and abroad.
3. Global change affects our research into and policy analyses of higher education by increasing the need to put our scholarship into comparative contexts and by requiring international collaboration among scientists and others.
4. Colleges and universities must understand what is needed for the support of international education and make these requirements clear to our institutions and to funding sources. A recent proposal is the "Recommendations on the Reauthorization of the Higher

[3]At the undergraduate level, the percentages are much smaller, with nonresident alien students receiving 2.7 percent of bachelors' degrees awarded in 1989 (Carter and Wilson 1991, 31).

> Education Act for Title VI, International Education and Fulbright-Hays (102(b)(6))." (Interassociation Task Force 1991).

Elaine El-Khawas of the American Council on Education suggests that our young people may be more ready and more willing to become international students and participants than our institutional structures and policies permit (personal communication, 1991).

Is it time for a change? Yes. Now is the time to make major changes in how our country and our institutions understand and participate in the global society.

Current Three: Increasing Multiculturalism

The national media's attention to "PC"—political correctness in speech and behavior—in my opinion, stems partly from the rapidly shifting composition of racial and ethnic groups in this country.

Historically, calls for a common core of study have often followed waves of in-migration, not only to the country but to higher education (Rudolph 1962; Veysey 1965). Leon Botstein sees many of the "great innovations in core curricula of the past" stemming from such accommodations. Among his examples are Columbia University's general education program as "an outgrowth of the first World War and America's decisive entrance into European affairs"; Robert P. Hutchins's programs at the University of Chicago and those of Barr and Buchanan at St. John's College as "responses to the crisis of confidence in American democracy in the face of the arrival at the university of diverse ethnic and religious groups after 1918"; and the Harvard *Redbook* program as seeking to address "perceived needs . . . in the challenges of the post [World War II] era" (1991, 102–3).

What Yale scene suggests the force of multiculturalism? The Common Table or Separate Tables debate. Kagan's freshman assembly speech, which praised diversity and the contributions of our increasingly varied cultures but also called for a renewed emphasis on Western civilization, would not have been a likely topic or, if delivered, would not have seemed controversial in a nation and university stable in their composition. The passionate responses pro and con, from in and out of the university would not have arisen in less transitional times.

At Yale, the proportions of students, especially undergraduates, from diverse racial and ethnic backgrounds have grown enormously. In 1990–91, 26 percent of nonforeign undergraduates were people of color, 12.8 percent of them Asian-Americans. We have active cultural, but not residential, centers for Afro-Americans, Asian-Americans, Chicanos, and Puerto Ricans.

Like most institutions, Yale College offers a curriculum that reflects increasing multiculturalism and intellectual broadening. But at the same time, the Yale catalogue brims with courses in Western civilization and Yale minority faculty are relatively few. National statistics already show major changes and project much greater proportions of people of color. What are their potential effects on colleges and universities?

Clark Kerr's foreword to Philip G. Altbach and Kofi Lomotey's excellent book, *The Racial Crisis in American Higher Education,* states, "A new world is being born. One set of statistics—minority percent of total United States population: 1950—12 percent, 1980—15 percent, 2000—30 percent (census estimate), 2150—45 percent (census estimate)" (1991, x). The numbers of minority students enrolled and graduated at all levels of higher education also have been growing, but the news is not all good. Between the 1970s and the end of the 1980s, minorities' total enrollment toward a degree more than doubled. But much of this growth, especially for blacks and Hispanics, occurred in the 1970s.

In graduate education at the doctoral level, which of course feeds the pool of minorities available for faculty positions, the number of Hispanic, Asian-American, and Native American doctorates increased during the 1980s, but the doctorates by African-Americans declined. The most shocking statistics are the raw numbers of minority U.S. citizen doctorates in some fields. Of 3,221 Americans graduating in the physical sciences in 1989, there were eighteen American Indians, thirty-five blacks, and seventy Hispanics, with about half that number in engineering. In 1989, there were 117 Asian-American U.S. citizen doctorates in the physical sciences and 172 in engineering (Carter and Wilson 1991, 35).

Increased representation in higher education leadership positions—both as administrators and as faculty—is much slower than enrollments and degrees for minorities. Many of them encounter the academic revolving door so familiar to women.

Between 1975–76 and 1985–86, the number of ladder faculty in the United States remained virtually constant (363,101 and 366,666). The number of white faculty members decreased by 1.5 percent while the number of minority faculty increased by 31 percent. But the beginning numbers were small, and there were large differences among various minority groups. Asian faculty members almost doubled, while black faculty increased by only 2 percent. In 1985–86, minority faculty made up less than 10 percent of all ladder faculty (Rodin 1989, 39).

What does this mean for higher education? Philip Altbach cuts to the heart of the matter: "Race is one of the most volatile and divisive issues in American higher education. . . . In many ways, society has

asked colleges and universities to solve deep problems which it is unable or unwilling to solve for itself" (1991, 5).

Although Altbach and his co-authors most certainly are not very optimistic, he does find signs of hope. I believe we can and should build on these hopes; higher education may very well be the critical leader in this area. He continues:

> The academic community has tried, with some success, to find solutions to racial problems. There is a significant consciousness on campus concerning race and minority questions. . . . Changes have been made in the curriculum. . . . Minority studies programs have been established and institutionalized. . . . Resources have been found to support minorities. After some initial errors by administrators in reacting to the tensions, it seems that there is a growing commitment to solving intergroup problems on campus and creating a positive campus climate. (1991, 16)

Is it time for a change? Yes. Now is the time to gather around common, mutually shared and constructed tables rather than around separate tables—both in higher education and in the larger society.

Current Four: Expanding Technology

Progress in science and technology is creating an "age of knowledge." The changes brought about by expanding technology may be even more profound than those of the first three forces described here. James Duderstadt, president of the University of Michigan and former dean of the Michigan School of Engineering, described this age of knowledge in two recent speeches:

> Today we are evolving rapidly to a new post-industrial, knowledge-based society, just as a century ago our agrarian society evolved through the Industrial Revolution. We are experiencing a transition in which intellectual capital, i.e., brain power, is replacing financial and physical capital as key to our strength, prosperity, and social well-being. (1990, 21)
>
> We are in the midst of an information revolution that is changing the basis of economic competitiveness and world power. Indeed, if you want to know the real reason for the recent events in eastern Europe, China, and the Soviet Union—the collapse of communism—it was the silicon chip, which created a truly international exchange of ideas and perspectives that could not be constrained by any government.
>
> In a sense, we are entering a new age, "an age of knowledge," in which the key strategic resource necessary for our prosperity, security, and social well-being has become knowledge itself, that is, educated people and their ideas. (1991, 7)

What Yale scene reflects the impact of an expanding technology? Again, more than one scene, but especially the Technology Turntable. The growing interest in teaching technology, and technology's capability of supporting teaching, not only at Yale but at other schools, is only one example of the impact of expanding technology on higher education.

What does this mean for higher education? Expanding technology worldwide carries a mandate for all of us in higher education. We must support research and education about new technologies in our colleges and universities and expand these benefits nationally and globally. In this age of knowledge, where "educated people and their ideas" are becoming "the key strategic resource necessary for our prosperity, security, and social well-being," there is a greater need than ever for effective research and teaching about higher education.

Is it time for a change? Yes. Now is the time for us and our students to operate effectively in the age of knowledge brought about by expanding technology.

TURNING TURBULENCE INTO OPPORTUNITY

The vessels of American higher education are afloat in very turbulent waters. The way to port is by no means clear, nor is it clear what that port will be. Tsongas prepared to light a match when he saw gasoline all around. Hackman recommended that we be prepared and lie in wait until disarray and turbulence offer the opportunity for successful change.

There is a crisis of confidence in higher education. Turbulence is evident in the press, in government actions, in public outcries. The leaders of our colleges and universities remark on it. For example, Yale's President Benno C. Schmidt, Jr., concluded in his 1991 baccalaureate address that "the skepticism and suspicion with which universities are now greeted and treated even by friends of learning exceed anything I can recall" (1991, 67).

In navigating our vessels of higher education through these troubled waters, we should avoid three catastrophic errors. The first is trying to drift with the currents. They are strong, the waves are difficult to ride, and drifters are likely to capsize. The second is trying to turn about and move upstream, retreating into the past. It takes a courageous captain to attempt this course, but the likely outcome is also disaster. The third is focusing on only one current, disregarding the rest. This, too, can swamp our boats as we are inevitably blindsided by the currents we ignore.

I suggest five more promising strategies: First, we should learn about and avoid the rocks and shoals. All of us—the captains, the pilots, the

rowers, the boat builders—need to know what lurks under the water and which way the currents are moving. Second, we need to review former trips down the river when, although the currents were different, the river beds and the principles of navigation were similar. This means remembering our history and studying what we have learned and can continue to learn from research. Third, we must follow lasting principles of navigation: higher education is about teaching, preparing students, doing research, and providing service. It is least about being a business. Fourth, we need to look beyond the present crisis. What is downstream? How will the riverbed and its rocks and shoals be affected by the strong currents? What other currents are out there? And finally, we need to capitalize on the energies and directions of the currents themselves as we steer toward destinations that those of lesser vision and commitment may not even see. We need to scan the entire set of critical, ever-changing issues and do our best to capture their energies while we avoid their rocks and shoals.

CONCLUSION

The 1990s and the opening years of the twenty-first century are times of turbulence. They can lead to disaster or to great opportunity for higher education. If we are prepared, it is time to sail out and to make a difference in higher education. It is:

- Time to consider new ways of working with each other and in organizations, to learn from alternate ways of inclusion and communication—what some have called women's, African-American, and Native American ways.
- Time to change how we prepare for and live on our increasingly interdependent globe.
- Time to make a major shift in how we learn from and work with people of multiple backgrounds and cultures.
- Time to participate fully in the age of knowledge and to prepare ourselves, our students, and our institutions to play roles in this new age.

In the words of the two metaphors of this speech: Let us gather round the tables and round our organizations to maintain and improve the leadership of higher education. And, in our study of higher education—in our research, our teaching, and our practice of higher education—let us work together to steer clear of the rocks and shoals, and then to seize the energies and directions of the currents of turbulence.

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