

CONNECTION

NEW ENGLAND'S JOURNAL
OF HIGHER EDUCATION AND ECONOMIC DEVELOPMENT

VOLUME IV NUMBER 2

SUMMER 1989

Campus 1990

Adults Hit the Books

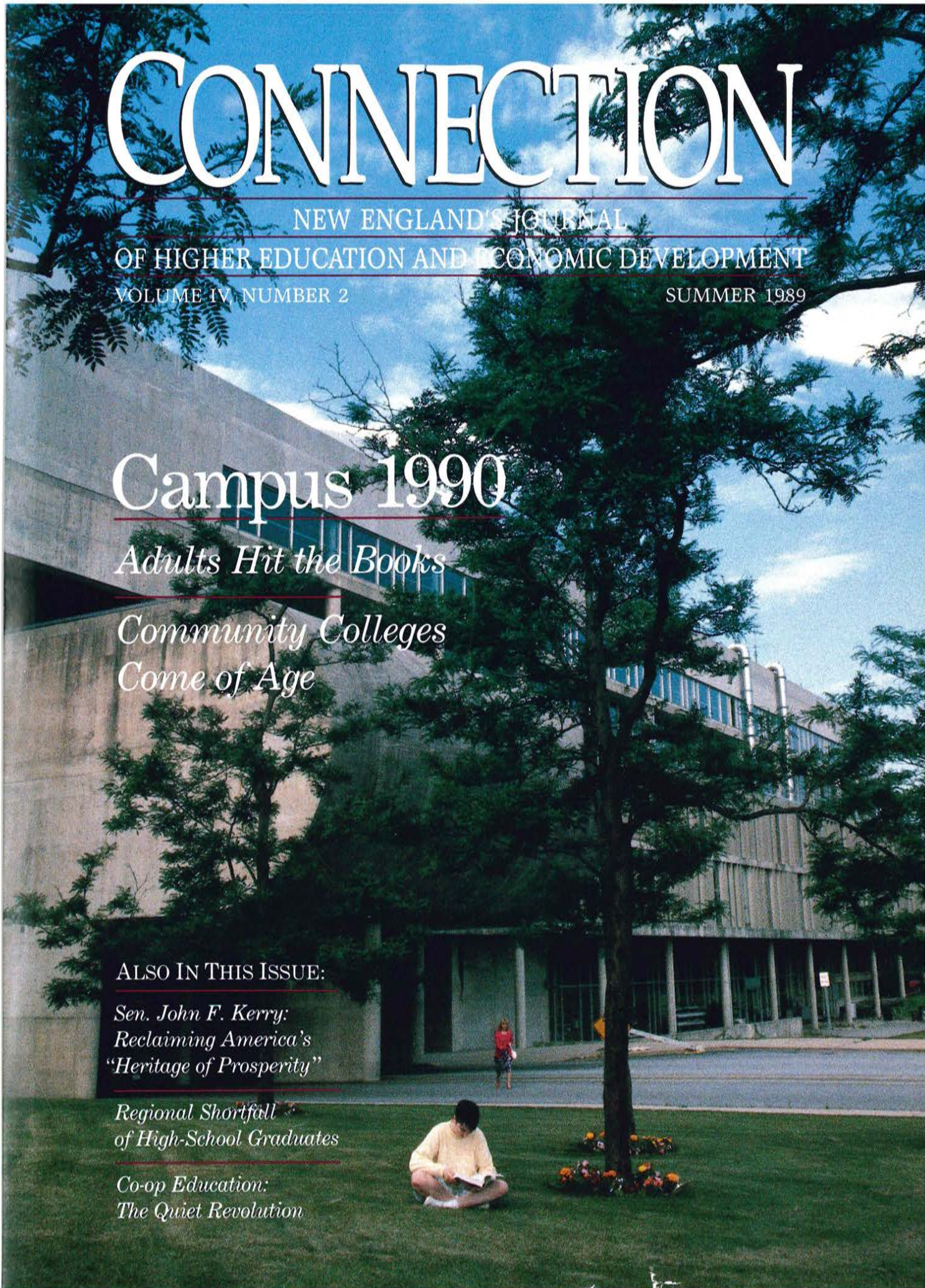
*Community Colleges
Come of Age*

ALSO IN THIS ISSUE:

*Sen. John F. Kerry:
Reclaiming America's
"Heritage of Prosperity"*

*Regional Shortfall
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*Co-op Education:
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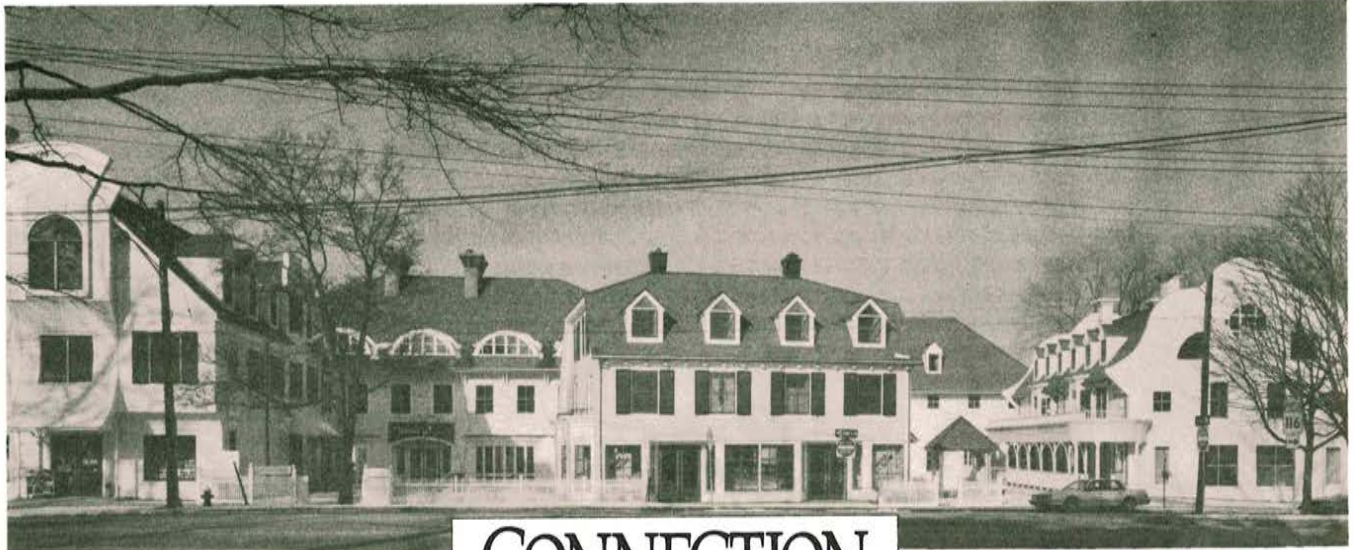
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VOLUME IV, NUMBER 2

CONNECTION

NEW ENGLAND'S JOURNAL
OF HIGHER EDUCATION AND ECONOMIC DEVELOPMENT

SUMMER 1989

- 4 EDITOR'S MEMO
About This Issue
Charlotte Stratton

- 8 DIRECTLY SPEAKING
From the High Schools,
A Grim Economic Warning
John C. Hoy

CAMPUS 1990

- | | |
|---|--|
| 10 Continuing Education:
Adults Hit the Books
<i>John O. Harney</i> | 38 Enrollment Decrease of 4 Percent
Anticipated for Fall
<i>Wendy A. Lindsay</i> |
| 21 New England's Community Colleges
Come of Age
<i>Ellin Anderson</i> | 40 Future Harmonizes With Past
in Best Campus Architecture
<i>Dan Pinck</i> |
| 28 Cooperative Education Sparks
"Quiet Revolution"
<i>Kenneth G. Ryder</i> | 43 Neighborhoods vs. Universities
on Student Housing
<i>Alan Daly</i> |
| 33 Special Report: Regional Shortfall
in High-School Graduates
<i>Charles S. Lenth and Robin Etter Zuñiga</i> | 45 Pluralism is Campus Goal for 1990s
<i>JoAnn Moody</i> |

FEATURES AND DEPARTMENTS

- | | |
|---|---|
| 5 SHORT COURSES
News and Events
Briefly Noted | 55 Let's Win Back Our "Heritage
of Prosperity"
<i>Sen. John F. Kerry</i> |
| 49 INTERNATIONAL
"Cautious Optimism" About Future
of Chinese Programs
<i>John O. Harney</i> | 60 REGIONAL STUDENT SERVICES
Plastics Engineering, Social Work
Attract RSP Grad Students
<i>Kenneth Connolly</i> |
| 52 WASHINGTON & BEYOND
Supreme Court Hands Congress
Problem of Minority Access
<i>Michael J. Bennett</i> | 62 PEOPLE
Summer Brings Presidential Changes
<i>Wendy A. Lindsay</i> |

Cover photo by David Fischbach, courtesy of the Community College of Rhode Island

CONNECTION

NEW ENGLAND'S JOURNAL
OF HIGHER EDUCATION AND ECONOMIC DEVELOPMENT

Connection: New England's Journal of Higher Education and Economic Development is published quarterly by the New England Board of Higher Education, 45 Temple Place, Boston, Mass. 02111. Phone: (617) 357-9620. Vol. IV, No. 2 Summer 1989. Copyright © 1989 by the New England Board of Higher Education.

Publisher: John C. Hoy
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Interim Director, Advertising Sales:
Janice Queenan
Subscription information: \$12 per year (4 issues); \$5.00 per issue. Printed by Wellesley Press, Framingham, Mass. Advertising rates available upon request.

The New England Board of Higher Education

was established as a nonprofit agency by the New England Higher Education Compact, a 1955 agreement among the six states that was ratified by the U.S. Congress. It is the purpose of the Board to advance and develop programs that encourage higher educational opportunities and improve efficiency in the use of resources among New England's public and independent colleges and universities.

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EDITOR'S MEMO

This issue of *Connection: New England's Journal of Higher Education and Economic Development* looks ahead to the 1990s, examining trends that will characterize what promises to be a decade of sweeping change in higher education.

New England's colleges and universities must prepare now for a projected drop in traditional-age applicants. According to a special report prepared for *Connection* by the Western Interstate Commission for Higher Education in Colorado, a 4.2-percent decline from last spring in the number of 1989 graduating high-school seniors in New England reflects a pattern that will continue for at least the next five years. "In a region whose economic 'miracle' has been fueled by brains rather than brawn, this story from the high schools is very grim indeed," writes NEBHE President John C. Hoy.

Adult learners will pick up some of the slack: The nation is seeing a boom in continuing education. Currently, more than 6 million students age 25 and older are enrolled for credit on U.S. campuses, representing 45 percent of all college students. In the 1990s, they will make up the majority of learners. Reasons include the "baby bust," employer demands that workers upgrade their skills, and the desire for professional advancement and self-improvement on the part of more and more adults, according to *Connection* contributing writer John O. Harney.

Also on the horizon as New England enters the 1990s is the emergence of the community college as an increasingly viable higher-education option. Lower tuition is not the only reason: As Ellin Anderson's regional overview of community and technical colleges reveals, states are fine-tuning institutional offerings to meet students' educational requirements and the needs of the workforce, and to provide the flexibility of professional programs demanded by working adults.

Outgoing Northeastern University President Kenneth G. Ryder is spokesman for "college education that works"—cooperative education. "The academy has begun to recognize that an individual can learn in the workplace what cannot be learned in the classroom," Ryder writes in *Connection*. During Ryder's tenure, Northeastern has established itself as the international leader in cooperative education, testament to its aptness and relevance to modern technological societies. The decade ahead will certainly see an expansion of co-op programs throughout the region.

Connection reports on this spring's Summit Conference on Educational and Employment Opportunity in New England, which focused on the education and employment needs of minorities—the fastest growing segment of New England's population. Recognizing how failure will affect the region's future economy and quality of life, leaders of higher education, business and government who are committed to promoting minority achievement are working together to implement the recommendations of NEBHE's report, *Equity and Pluralism: Full Participation of Blacks and Hispanics in New England Higher Education*. In national affairs, Washington columnist Michael J. Bennett tries to make sense of the "piecemeal series of laws, programs and processes" designed to assure minority access to education and employment, describing how the Supreme Court has "dumped the problem of equality right where it belongs—in the lap of Congress."

Writing for *Connection*, U.S. Senator from Massachusetts John F. Kerry shares thoughts on how America can reclaim the "heritage of prosperity" we once took for granted. "While some of my observations may sound an alarm, they are not warnings of gloom or doom," Kerry says. "They are alarms, meant to set out a series of choices we confront and a group of issues we must think about. If we do think about these issues and make the choices, our future is unlimited." □

Charlotte Stratton is managing editor of *Connection*.

**AT&T GRANT FOR
ENGINEERING
AWARDED TO TUFTS**

The AT&T Foundation has awarded Tufts University's College of Engineering a \$120,000 grant to establish a master's degree program in manufacturing engineering. The award is part of a national grant program to promote education and research in manufacturing. Sixteen U.S. universities have received grants, totaling more than 2.6 million. The AT&T grant to Tufts will help fund curriculum development, instruction by visiting industry professors, stipends for teaching assistants, equipment and library resources.

**NEW REGIONAL
"COMMON MARKET"
FOR EDUCATORS**

Education commissioners in the Northeast have agreed on a contract enabling their states to implement a Northeast Regional Credential for Educators, beginning in 1990. This will permit an individual with a teaching certificate in any one of the seven states to receive a Northeast Regional Certificate, permitting him or her to teach in the other states as well. The contract has been hailed at the first step toward a "North-east Common Market for Educators," a long-range plan to ensure an adequate supply of highly qualified educators for the future.

**SPRINGFIELD TECH
COLLEGE NAMED
A CIM CENTER**

IBM Corp. has designated Springfield Technical Community College as a CIM (Computerized Integrated Manufacturing) training center. The center, a component of the college's Center for Advanced Technology, will train students and workers. A grant of approximately \$500,000 will be awarded over a three-year period, through the IBM/CIM Higher Education Alliance Program. This program seeks to identify higher-education institutions as sites for training centers. There are 39 CIM centers nationwide and two in New England; the other is at Thames Valley State Technical College in Norwich, Conn.

**HARVARD MEDICAL-
LEGAL PROJECT ON
SOCIAL SERVICES**

Physicians must learn that helping patients get social support services may be as vital to the patient's well-being as medical treatment. A small band of professors at the Harvard Medical School and Harvard Law School have formed the Medical-Legal Services Project, designed to help patients become more aware of their eligibility for programs such as Medicaid, food stamps and Social Security. The project will also explore the relationship between social factors and health, and compare the health-care systems of the United States, Canada and Great Britain.

**CONNECTICUT GROUP
ISSUES HISPANIC
FACULTY DIRECTORY**

The Connecticut Association of Latin Americans in Higher Education has compiled the first directory of Hispanic faculty and staff in Connecticut. Wilson Luna, director of financial aid at Greater New Haven State Technical College, edited the new publication, which has been distributed to all Connecticut colleges and universities, high-school principals and guidance counselors, libraries, community organizations and the CALAHE membership. Copies are available from: Wilson Luna, Director of Financial Aid, GNHSTC, 88 Bassett Road, North Haven, Connecticut 06473.

**MARTIN LUTHER
KING SCHOLARSHIPS
AT FITCHBURG STATE**

Fitchburg State College in Massachusetts has established a \$10,000 minority scholarship program in honor of Martin Luther King, Jr. The program was announced during a June 8 admissions reception at St. Paul's African Methodist Church in Cambridge. Oliver Ford, vice president for academic affairs at the college, said the scholarship fund will eventually provide up to 20 awards of \$500, based on financial need and academic achievement. Fitchburg State College has also pledged to double its minority enrollment, which currently ranges from 3 to 5 percent.

**CANADIANS TOP U.S.
IN KNOWLEDGE OF
CURRENT EVENTS**

A recent poll conducted for the Canadian news weekly, *Maclean's*, which surveyed attitudes of 1,000 Canadians and 1,000 Americans, reveals striking differences in how much residents of the two nations know about each other. Canadians seem to be better informed than their neighbors to the south: Only 12 percent of U.S. residents polled knew that Canada was their country's largest trading partner, as opposed to 83 percent of Canadians. In addition, while 97 percent of Canadians knew about this year's Free Trade Agreement, only 57 percent of Americans were aware of it.

**INTERNATIONAL MBA
AT JOHNSON &
WALES UNIVERSITY**

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New this year at Johnson and Wales University's Graduate School is an MBA in international business. The degree program has a comprehensive two-year, 36-credit, 11-course curriculum preparing students for international careers. "International education is no long a choice, but a requirement for this nation America has already had throughout its history," says Allan Freedman, director

**HOWARD HUGHES
MEDICAL INSTITUTE
GRANTS AWARDED**

tuftness. A total of \$61 million has been awarded to 51 institutions nationally. HHMI, based in Bethesda, Md., was created in 1953 to conduct biomedical research. In 1987, the institute began a grants program to support other scientific endeavors, particularly in education.

Tufts University, the Massachusetts Institute of Technology, Dartmouth College and Yale University have each been awarded grants from the Howard Hughes Medical Institute. The grants are designed to bolster undergraduate science education, in hopes of combatting a national decline in global competitiveness. HHMI, based in Bethesda, Md., was created in 1953 to conduct biomedical research. In 1987, the institute began a grants program to support other scientific endeavors, particularly in education.

**NERComP ANNOUNCES
ACADEMIC
COMPUTING JOURNAL**

and universities in New England to facilitate the use of academic computing. Carol MacKnight, director of the Office of Instructional Technology at UMass/Amherst, will edit the new publication.

NERComP, the New England Regional Computing Program, has published the first issue of its semi-annual *Journal of Computing in Higher Education*. The journal is designed to promote exchange of information about instructional technology and educational management information systems among academic and administrative personnel in higher education. NERComP is a non-profit organization established in 1967 by colleges and universities in New England to facilitate the use of academic computing. Carol MacKnight, director of the Office of Instructional Technology at UMass/Amherst, will edit the new publication.

**UMAINE/MACHIAS
LAUNCHES FIRST
FUND DRIVE**

tution. U/Maine Machias President Frederic A. Reynolds explains the reasoning behind the effort: "Although we are grateful for the legislative and system support for our campus, we are at an age where private funds must be sought to maintain excellence and support a diversity of programs."

The University of Maine at Machias is conducting its first official fundraising campaign, directed by Iona Coffin, development officer for the university. The development office at UMaine Machias was established last year to centralize all fundraising efforts on the campus and to gather more support for the institution. U/Maine Machias President Frederic A. Reynolds explains the reasoning behind the effort: "Although we are grateful for the legislative and system support for our campus, we are at an age where private funds must be sought to maintain excellence and support a diversity of programs."

**UNH REPORTS ON
STATE LODGING AND
TRAVEL INDUSTRY**

many areas of the state do not offer the opportunities for growth previously reported. The report revealed that some of the state's areas are saturated, offering little room for expansion.

Professor of Hotel Administration Peter Keim assigned 35 of his students at the Whittemore School of Business and Economics of UNH to study media claims that New Hampshire offered ample room for growth in the hotel and motel industry. The resulting 300-page study contends that, on the contrary, many areas of the state do not offer the opportunities for growth previously reported. The report revealed that some of the state's areas are saturated, offering little room for expansion.

**TRINITY STUDENTS
SWEEP MATH/SCIENCE
SCHOLARSHIPS**

preparation for a career. Both students are biology majors at Trinity and will receive \$7,000 for each remaining year of undergraduate work. Nationwide, a total of 1,200 nominees from 550 colleges and universities competed for the awards.

Two Trinity College students are the first Vermont recipients of the Barry M. Goldwater Scholarships for Excellence in Science and Mathematics. Established in 1988, the federal scholarship fund enables two outstanding students in each of the 50 states to pursue studies of mathematics and the natural sciences as preparation for a career. Both students are biology majors at Trinity and will receive \$7,000 for each remaining year of undergraduate work. Nationwide, a total of 1,200 nominees from 550 colleges and universities competed for the awards.

**SALEM STATE BEGINS
EXCHANGE WITH
JAPANESE COLLEGE**

to begin reciprocal studies at Kokusai Sogo Gakuin in 1991.

Salem State College has entered into an exchange agreement with Kokusai Sogo Gakuin, a junior college located in Niigata, Japan. Under the agreement, six Japanese freshmen will enroll at Salem State College annually, beginning in September 1990. The students will apply to Salem State through the regular admissions process, and must demonstrate proficiency in the English language. Salem State students are expected to begin reciprocal studies at Kokusai Sogo Gakuin in 1991.

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From The High Schools, a Grim Economic Warning

JOHN C. HOY

This is no time to go into the cap-and-gown rental business. In New England, the high-school class of 1989 reflects a 4.2 percent decline in graduates from the previous spring, compared with a 1.3 percent drop in high-school graduates nationally, according to the most recent projections.

In fact, for the next five years, New England high schools will graduate fewer and fewer students. Net family in-migration to the six-state region being what it is—negligible—the drop in high-school graduates will lead to the sharpest decline in numbers of local college candidates in memory. The result: labor-strapped New England will approach the year 2000 with a significantly more shallow pool of skilled, college-educated workers.

In a region whose economic "miracle" has been fueled by brains rather than brawn, this story from the high schools is very grim.

National data on high-school graduation rates is compiled and released periodically by the Western Interstate Commission for Higher Education in Colorado. Closer to home, the New England Board of Higher Education has habitually pored over the data and sounded a warning to policymakers. Now that rock-bottom regional unemployment has prompted fears of an exodus by the region's businesses seeking to expand their operations, that call has its best chance yet of being heard.

The number of New England's high-school graduates will drop so fast that by 1994, the region will have a cumulative total of 158,261—or 17 percent—fewer

high-school graduates than would have been the case if high schools continued to graduate as many students as they did in 1988.

This trend, reliably predicted for 18 years, must now be taken seriously by policymakers to prevent an economic stall. The demographics of higher education from 1989 to 1994 will shape New England's entry-level skilled-labor pool from 1995 to 2000. Judging from the facts, the pool will be shallow.

The demographic changes upon us reinforce a few simple notions: New England's future economic well-being depends on our willingness to invest in education today. And we must extend the benefits of education to all New Englanders, whether they are members of minority groups who have not participated fully in higher education or the workforce, welfare recipients who may need further education and training to find decent jobs, or working people from chief executive down, whose skills must be upgraded constantly to keep pace with increasingly sophisticated business practices and formidable foreign competition. Not to mention the middle-class kids who are being squeezed out of even our public colleges and universities because of rising costs and plummeting state appropriations.

And we must act soon. The decline in high-school graduates is here and now. Nationally, the high-school class of 1990 will reflect a 6.3-percent decline from the class of 1988. In New England, the number of graduates will drop a whopping 12 percent in those years.

The decline in New England as a whole from 1988 to 1991 is projected to be 18.3 percent. The most affected New England state will be Connecticut, with a projected 21-percent decline from 1988 to 1991, followed by Massachusetts (19.8 percent), New Hampshire (15.9 percent), Rhode Island (15.4 percent), Vermont (14 percent) and Maine (11.1 percent).

The decline will begin to bottom out nationally in the 1991-92 academic year, but not in New England, where a gradual drop will continue through 1993-94. The total decline from 1988 to 1994 will top 20 percent in New England. Af-

ter 1994, a gradual recovery is projected based on the increase in births between 1982 and 1986.

This recovery should not be overestimated. Even by the year 2004, New England high schools will not graduate students at the 1988 level. Nor can the demographic recovery be underestimated: Education programs depend upon critical mass. Underinvestment based on smaller classes could cost us in excellence. Any downsizing to accommodate smaller high-school and postsecondary classes must be flexible enough to be reversed.

The reasons for the steep declines in New England go beyond the sheer number of births. Interstate migration to New England grade schools slowed between the mid-1970s and the mid-1980s. In Connecticut, the net in-migration of 3.2 percent at the grade-school level reversed to a net out-migration of 2.4 percent. Maine experienced a similar reversal. Only in Rhode Island did out-migration reverse to net in-migration.

If this cloud has a silver lining, it is that colleges and universities will, by economic necessity, reach out to more adults who wish to continue their education. But for now, the more ominous result is that New England employers will have to look outside the region to recruit college-educated skilled workers for increasingly knowledge-intensive jobs. As most New England employers already know, the region's high cost of housing and generally higher cost of living will make that a Herculean task.

The New England economy is more dependent on new skilled workers than any other region of the United States. But we are not producing as many of those workers as we could. The high-school completion rate of Blacks and Hispanics, while much improved, still lags behind the rate of White students. And while 20 percent of 1995 job openings will require four or more years of college, Blacks and Hispanics are underrepresented on college campuses. That must change, as a matter of prudent economic policy and social justice. □

John C. Hoy is president of NEBHE and publisher of *Connection*.

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CAMPUS
1990

Six years ago, Thomas Small earned his master of liberal arts from Harvard University's Extension School, just around the time his 90th birthday was rolling around. Small, the oldest degree recipient in Harvard's 350-plus years, received his bachelor's degree from Boston University in 1918. He talks as if the intervening half-century he spent as a corporate executive were little more than a semester break. "I always knew I would go back to school when I retired, and I did," he says.

Today, at age 95, Small would like to take more courses with the 14,000 other "non-traditional" students enrolled at Harvard, but his eyes are bad, and the trip from Boston to Cambridge has become unmanageable. Now he continues his education by listening to audio-cassettes supplied by the Massachusetts Commission for the Blind.

PHOTO AT LEFT:
Boston University Photo Services

Adults Hit the Books

*Continuing education is growing fast,
but so are questions about quality*

JOHN O. HARNEY

The first revolution in American higher education is symbolized by the millions of American women who now represent a majority in a system created for men. The second is symbolized by Thomas Small and others like him—though few others are quite like him—who have shown that higher education does not have to equal seminary-style, residential learning or be reserved for 18- to 22-year-olds.

In the 1990s, students age 25 and older are expected to represent a majority on campus, and about half of them will be studying part time.

College students have come of age for two chief reasons. The baby bust of the late 1960s and 1970s is producing a dearth of traditional-age students, so colleges and universities are trying hard to fill classes by attracting older students. Also, the fast-changing workplace requires workers to upgrade their skills more frequently than ever, so large numbers of working baby-boomers want to or have to go back to school. In 1984, two-thirds of adult-education courses were taken to get a job or advance in a job, according to the U.S. Department of Education.

There are other factors. Many adults count self-esteem among reasons to pursue continuing education. The decision to enroll often follows major changes in students' personal lives; for example, divorced adults account for more than their fair share of adult students. Then there's the financial incentive: Census figures show that people who have professional degrees earn more than people with doctorates, who, in turn, earn more than people with master's degrees, on and on, down to high-school dropouts who earn the least.

Whatever the motivation, more than 6 million students age 25-plus are enrolled for undergraduate or graduate credit at U.S. colleges and universities. They represent 45 percent of all college students, according to a College Board study released in 1988.

Add to those 6 million credit-seekers the many more adults who have chosen less formal routes of continuing education, from professional workshops to correspondence courses, and the number of adult students tops 20 million. The number of adults taking credit and non-credit courses increased nearly 80 percent between 1969 and 1984, while the U.S. population grew by one-third, according to the Department of Education. Call it adult education or continuing education (or as Brown

University prefers, "resumed education"), but call it a revolution.

A matter of survival?

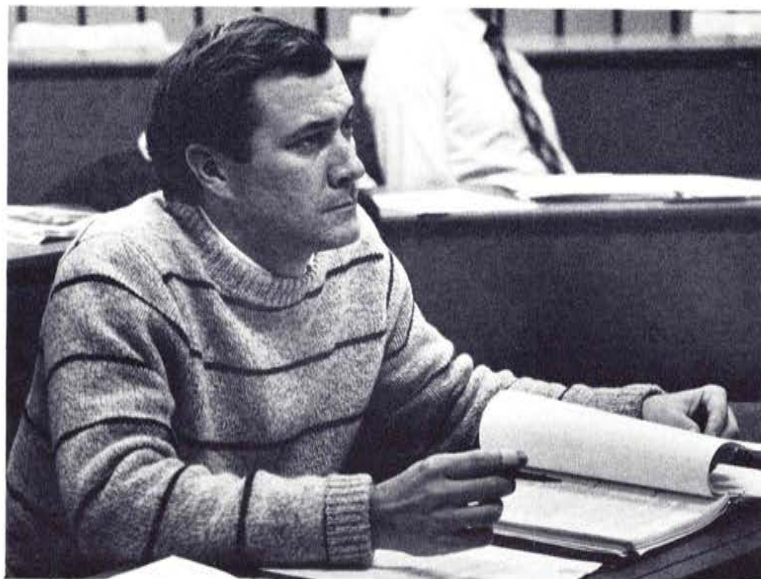
The impetus for reaching out to adults goes beyond goodwill. For many colleges and universities, recruiting older students is a matter of survival. By 1994, high-school graduating classes in the United States will have shrunk by almost 12 percent, and in New England, the decline will be even sharper—about 23 percent, according to the Western Interstate Commission for Higher Education, which tracks trends in high-school graduation.

The Department of Education projects that total enrollment at U.S. colleges will fall through 1992, but part-time enrollment will increase steadily, reaching 5.5 million in 1992. That fact is bound to capture the attention of college finance officials. Because of differences in courseloads, 2.5 adult students are needed to produce the same revenue as one traditional-age student, according to the College Board.

But discerning the overall financial impact of the continuing-education explosion is tricky business. Harvard officials note that part-time students outnumber traditional students by 3-to-1 and bring in about \$55 million a year, without demanding room and board or other big-ticket items associated with full-timers.

Besides, continuing-education courses often serve as entrees to degree programs, picking up the slack created by a drought in high-school graduates. For example, several students are participating in Northeastern University's 12-week paralegal program to find out if they want to go to law school. That trend is good news for independent colleges like Northeastern, but not so good for public institutions that lose money on in-state residents, who comprise the bulk of continuing-education students.

At many institutions, public and independent, the financial impact is less striking than the psychological. "Some of the deans and directors of continuing education are saying the biggest problem they're having with their campuses is dealing with the political ramifications of the success of their programs," says Clifford Baden, director of the Harvard and College Board-sponsored Institute for the Management of Lifelong



Because the fast-changing workplace requires upgrading skills more frequently than ever, large numbers of baby-boomers are going back to school.

Education, a \$2,600-a-head, intensive two-week program for continuing-ed professionals.

Some continuing-education programs are graduating more students than traditional academic departments at their institutions. "These are [students] who, by and large, the faculty and much of the administration are unaware of," says Baden. "Many of these programs are generating a surplus for the institution. To the extent that revenues equal power or importance on campus, this is a new phenomenon for campuses that have let [continuing-ed faculty and students] do their own work on the sidelines, and are now finding that the people who were doing that work had a commitment to quality and were very successful."

In some cases, just introducing innovative continuing-ed programs is a challenge. Norwich University became actively involved in adult education beginning in 1982, when it assumed several continuing-ed programs from Goddard College. Through its Vermont College campus in Montpelier, Norwich now offers nursing programs throughout Ver-

mont as well as weekend undergraduate courses geared to adults in the southern part of the state. Norwich also operates nationally renowned master's programs in poetry and short-story writing and art therapy.

"This is something very new and different for a very traditional military college that only accepted 18- to 22-year-olds and required them to have their hair cut off. We have really and truly changed the whole image and mission of the institution," says Major General Russell Todd, president of Norwich.

The most formidable resistance to the change came from established faculty members. Says Todd: "The traditionalist believes that you can't get a degree by coming summers and Christmases. But when they meet face-to-face with these people and discover that they really are scholars, and there really is an alternative means of teaching, it helps."

Colleges and universities have had to make other major adjustments to court adult students, 70 percent of whom work full-time. (The unemployed made up about 6 percent of the U.S. labor force at the time of the College Board study, but just 3 percent of adult students.) Classes are scheduled on weekends and weekday evenings at places that are convenient to working adults. Campus administrative offices are open late, and day-care centers have emerged on some campuses for the children of students. Institutions are measured, in part, by the number of parking spaces they have and the evening hours their bookstores keep.

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According to the recent College Board study, *How Americans in Transition Study for College Credit*, 70 percent of adult students count "convenient location" among the main reasons for choosing a college, and half of adult students spend less than 20 minutes traveling to class. Only about 40 percent cite curriculum; 30 percent cite cost; and 20 percent cite academic quality.

Because nothing is more convenient than courses at work or home, many continuing-ed programs stress independent study, and growing numbers use television and telecommunications to reach students at their workplace or nearby. The University of Maine is using telecommunications to send continuing-ed courses to high schools and other key locations throughout the state. Northeastern uses satellite and microwave to transmit courses, mostly in engineering and science, to working professionals at their companies. A "Talk-back" system allows class discussion via telephone. The only hitch when the program began: getting company chiefs to give workers the periodic hour or so of release time needed to take the course. After some initial reluctance, employers reportedly have seen the value of the trade-off.

Another approach: The University of Massachusetts at Amherst's College of Engineering provides credit and non-credit courses to working engineers, through videotapes of live lectures that are delivered to students' companies.

Responding to a changing society

Continuing education may offer academia's best hope for ridding itself of the ivory-tower image; continuing-ed directors say their divisions are better suited than any other on campus to bring pluralism to student populations and respond quickly to society's changing needs, particularly employers' needs.

On the first count, there is still a long way to go. Whites represent almost 90 percent of adults studying for college credit, while Blacks and Hispanics are under-represented. But says Kay Kohl, executive director of the National University Continuing Education Association, "A lot of low-income students and a lot of minority students have had to go to school part-time. If you're arguing for diversity, it's pretty hard not to argue for continuing education."

For now, the composite sketch of the adult student features the visage of a White woman in her 30s or 40s. The fastest-growing group of adult students is between ages 35 and 54. In 1984, 17 percent of Americans in this age group were taking credit and non-credit adult-education courses, up from 11 percent in 1969, according to *Trends in Adult Education, 1969 to 1984*, a study by the Department of Education. Women are heavily represented largely because, since 1982, they have accounted for the majority of new entrants to the workforce—73 percent of the increase in New England—and with that has come the constant need to upgrade skills.

On the second count—responsiveness to changing needs—continuing-education divisions are impressive indeed.

Take the Community College of Vermont's Training Opportunities program. In the past two years, the program has offered non-credit customized training sessions for more than 700 employees of about 50 Vermont companies at their worksites. Last year, the Training Opportunities Program helped General Electric in Rutland make its management structure more participatory, helped employees of a creamery with business writing and gave workers at a southern Vermont firm a course in blueprint-reading, which revealed that a more basic math course was also needed. That's being negotiated.

In Boston, dozens of Soviet emigres step off international flights every month, so Northeastern has teamed up with the Jewish Vocational Service to offer C-programming and CAD/CAM courses to master's and Ph.D.-level emigres who have antiquated skills because of the lack of technical resources in the Soviet Union.

Northeastern's State-of-the-Art program offers non-credit courses in high technology and engineering for more than 4,000 students a year, up from about 300 students in 1980-81. New courses are added to the program at the rate of about 30 percent a year, based on conversations with employers. Now Northeastern is mulling over a program in asbestos management.

State-of-the-Art courses are designed on short notice and taught on short schedules; most courses last about 10 weeks. "The program is meant for people who need something, and are ready to move relatively quickly. They don't want to have to spend a year or two years, because whatever it is they're dealing with demands a quicker reponse than that," says Ray Williams, executive director of Northeastern's continuing education division. "This isn't just a perk or a fringe benefit. This is the essence of staying alive in your business."



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If that's the case, waiting for other academic departments to respond to fast-changing needs could be hazardous to the health of a business, some educators contend. Says John Boulmetis, an assistant professor of adult education at the University of Rhode Island: "Universities, by their very nature, are degree-driven. The colleges of continuing education try to keep their fingers on the pulse of the community as much as possible, so that not only do they become a vehicle to offer degrees, but also they will develop courses that meet specific needs of agencies and corporations."

For public institutions, where decisions on course offerings must survive a labyrinth of approvals, that distinction is particularly important. "The cutting-edge of all community colleges, as it turns out, is continuing education simply because [continuing-ed divisions] are freer to innovate. We have fewer encumbrances to block change," says Jack Burns, dean of The Open Campus at Middlesex Community College, whose 12,000 night students give it the biggest continuing-education program among Massachusetts community colleges.

Explains Burns: "If a group of people come to us and say they would like to have a course that teaches them something about wastewater treatment... and we have a couple of faculty who have taught the course in other areas, or are themselves professionals or experts in that area, we can get a course up and started within a six-week period."

Most of all, continuing-education programs have been responsive to students. This summer, the University of Bridgeport's Metropolitan College graduated the first five students under its IDEAL program, designed for people age 23 and over who have some college



Antioch/New England Graduate School photo.

credits and want to earn bachelor's degrees in elective studies or business on a super-short schedule.

With their previously earned credits in hand, and additional credits for life experience, IDEAL students can complete up to one-third of their required degree work in five-week courses offered eight semesters a year at any of four sites in southwestern Connecticut. Since the IDEAL program began in November 1988, the evening and weekend courses have attracted 188 students, most of whom are working full-time.

"Most people can commit to five weeks, but they may not be able to commit to 14 weeks be-

cause business trips and other things get in the way. And this way, if they miss a semester, another one is beginning in a short time," says Louise St. Onge, assistant dean of the university's Metropolitan College. The university has developed a host of methods to help IDEAL students pay for their courses, about \$585 a pop. A local bank has agreed to extend a special \$5,000 credit line for students in the program. Under a family payment plan, one family member pays full tuition and another pays half price.

At the University of New Hampshire, the New England Center for Continuing Education, a cooperative effort by the region's six land-grant universities, in 1987 launched "The Future of New England Project."

The project, based in part on a major New England Board of Higher Education survey of leaders in business, government and education, was designed to provide continuing education for the six-state region's decision-makers. In 1987 and 1988, nearly 800 participants took part in non-credit conferences and working groups focusing on New England's rapidly changing

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economy, international opportunities for the region, management of natural resources and the future of agriculture. In 1989, a national awards program cosponsored by the American College Testing Program and the National University Continuing Education Association called the project one of the most innovative in the country.

Still, some educators say continuing education is missing opportunities. Sven Groennings, a professor at the Institute of Higher Education at the University of Georgia and senior fellow with the New England Board of Higher Education, notes that about 12 million Americans serve on voluntary boards that bring them face-to-face with complex liability, organization and communication issues. "That's where we train people for leadership in society. But a course design is not tailor-made by universities to fit that enormous and growing market," says Groennings. Continuing-education courses addressing the internationalization of the economy are also urgently needed, he says.

Teaching adults

Scholarly journals now and again feature an exchange of barbs among those who view lifelong learning as a unified process and those who view andragogy (helping adults learn through self-directed study) as distinct from pedagogy (helping children learn through teacher-directed study).

There is little debate, however, that the attitudes of older students make adult learning very different from traditional learning. "Undergraduates are content to ab-

sorb facts, whereas adults want a much more interactive kind of study, where they can bring to bear their own life experiences," says Michael Shinagel, dean of continuing education and university extension at Harvard, where about four in five Extension students have a bachelor's degree, one in four has a graduate degree and many have doctorates.

No question either that the more savvy older students may appear threatening to regular college faculty who are tapped to teach continuing-ed courses. "The adult students ask a lot of questions, and it's important for those students that they understand what an instructor is saying and how useful it is to them," says Boulmetis of URI.

Nonetheless, when Shinagel surveyed Harvard senior faculty members on their impressions of teaching at the Extension School, compared with teaching at Harvard College, the overwhelming majority said Extension students were more motivated than traditional students and "more interested in the intellectual process." Says Shinagel, "There was a greater range in [students'] ability, but many of the faculty found their Extension teaching as satisfying as their Harvard College teaching, if not more satisfying."

The College Board study found that 83 percent of continuing-education classes are taught by regular faculty members. But who teaches what is a weighted issue. At Northeastern, working professionals, rather than engineering faculty, teach most State-of-the-Art courses, and the university considers that a plus. "It's not a theoretical approach as you might have in a master's degree

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program or a Ph.D. program. It's a hands-on, practical, problem-solving approach," says Williams.

But are the instructors competent? Says Williams: "I don't have tenured faculty, so if I'm getting any remarks from students that there are serious issues with a faculty member, we bring him in very quickly, and if we can't straighten it out, we just replace him."

According to Baden of the Institute for the Management of Lifelong Education, continuing-education instructors drawn from the business community "will not necessarily have the academic qualifications that would entitle them to become standing members of the faculty, but they may know more about the topic from a pragmatic point of view, and that's precisely what the students in continuing-education programs are looking for."

But some educators say that in less technical fields, students who see a preponderance of part-time instructors should also see a red flag. "It's not that some of these people would not be very dedicated. But they are way underpaid and underappreciated. You've got some pretty serious morale problems," says Shinagel, noting that two-thirds of instructors at the Harvard Extension School are Harvard-affiliated faculty.

Part-time instructors also may have limited access to resources. Some adult students report that many adjunct faculty, whatever their competence, have no offices, so more hectic, less effective office hours.

A question of quality

According to the recent College Board study, about half of adult students take classes with traditional-age students; most receive the same quality of instruction

NAS President: Scientists waste time pencil-pushing

National Academy of Sciences President Frank Press is railing against the inordinate amount of time scientists are forced to spend writing grant proposals. Press says that at one well-known institution, 100 scientists pushed pencils through 500 proposals last year. To make matters worse, the academy president says, in 1988 the National Institutes of Health, a major source of research dollars in New England, delivered funds for only about one-third of the proposals approved by its peer reviewers.

Press has called on the Bush administration to double the current \$10-billion federal budget for basic science over five years and clean up the proposal process.

as traditional students and are held to the same academic standards. But the study notes that neither adult students nor employers, who pay millions of dollars in tuition assistance for employees, are able to judge program quality.

The quality of non-credit courses is particularly difficult to assess. More than 1,000 U.S. colleges and universities, as well as professional societies and other organizations award continuing education units to give students something to show for non-credit courses and seminars. One CEU is awarded for each 10 hours of instruction in an organized course. For example, a student who satisfactorily completes Northeastern's paralegal certificate program, which involves over 100 contact hours, would earn 10.4 CEUs. But the Council on the Continuing Education Unit in Washington, D.C., concedes that it has no way of ensuring quality. "Because we're not an accrediting agency, and anybody can issue the CEU, it's kind of an honor system," says a council spokesperson.

For now, most quality assessment of both credit and non-credit courses is left to market forces. "The adult may have no way of judging the quality of a program before he or she goes in. But they are very keen judges of quality once they're in a program," says Baden. "Adult students talk with their feet, and if they're not happy with the quality, they don't come back, and they tell their friends... That's very different from the traditional undergraduate program."

In Northeastern's State-of-the-Art program, 60 percent of participants are repeat students. "That speaks a little bit about the quality, because they [aren't in a situation where they] have to take a course to complete a degree," says Williams, the executive director. He adds that many students have been promoted or received pay-raises after completing the program.

New England employers that offer tuition reimbursement are generally wary of adding new quality control to a system they think is working well, and some corporate leaders concede that their tuition plans are not so much vehicles to train workers as they are fringe benefits to attract workers in a tight labor market. But the proportion of credit and non-credit continuing-education courses provided by schools and colleges has declined steadily to about half, and as the list of continuing-ed providers grows, employers are likely to experiment with some new ground rules.

State Street Bank in Boston, like most companies, currently makes no effort to steer student-employees toward specific courses as long as the programs are related to the employees' work. But says senior vice president Robert Summers, who oversees training and development at the bank: "What we would like to do in the long term, five or 10 years, is get to the point where we are able to control it a little bit more, even to the extent of trying to hook up with one or two universities and saying you coordinate the program, and we'll have all the students go through that program."

The future of employer-provided tuition reimbursement itself is unclear. Nationally, about 40 percent of adult students receive some tuition assistance from their employers, according to the College Board. But the tax incentive to take up employers on their offer is constantly in jeopardy. Until 1988, employees could

exclude from federal income taxes up to \$5,250 a year in employer-provided tuition assistance for any course. Today, employees get a tax break only if the assistance is used for courses that are strictly related to the employee's current job or required as a condition of employment in a new position. In other words, employees who want to take courses to make themselves attractive candidates for advancement are out of luck. Until the change in the law, employers were paying at least \$70 million annually for tax-free tuition reimbursement.

Public policy lacking

Many educators see the gutting of tuition-reimbursement as just another example of shortsighted public policy on continuing education.

Only in recent years has Congress relaxed rules governing federal loans and grants to allow institutions to allocate financial aid to part-time degree candidates. Federally guaranteed loans still are reserved for students studying half-time or more.

Some continuing-education programs are graduating more students than traditional academic departments at their institutions.

And even in the case of Pell grants and other federal assistance, colleges and universities have a financial incentive to favor full-time students: Awarding grants to part-timers generally involves the same amount of paperwork as for full-timers, but ultimately brings much less revenue into the institution.

Meanwhile, the National Advisory Council on Continuing Education, established in the 1960s to advise policymakers on the federal government's role in continuing education, accomplished little and was eventually scrapped. Federally enacted grant programs for continuing education have gone unfunded throughout the 1980s.

"The federal government is essentially a non-starter on [continuing education]," says the University of Georgia's Groennings, who served on the advisory council. "Part of the reason is that continuing education has grown and grown whether there's been federal money or not. So the federal government says this is not a crisis and focuses on something else."

The statehouses have not done much better. Some states have created special student-aid programs for part-timers, but few have worked to nurture continuing education. Massachusetts public institutions define continuing-education students as those who attend classes at times other than regular weekday hours, and their programs are not subsidized. "Continuing-education programs, because they are not subsidized by the state of Massachusetts, have to at least break even or make a little bit to cover the additional overhead costs... so our tuitions are higher, by definition, than the regular day-school program tuition rate," says Burns of Middlesex Community College.

The Massachusetts Board of Regents of Higher Education has considered changing the rules to provide some assistance for continuing-ed programs, but state fiscal problems make that change unlikely any time soon.

A liberal future?

Educators say continuing-education will keep growing in popularity despite policy neglect. Its shape in the coming years will largely be determined, as it is now, by the changing needs of the workplace. A few distinct and significant trends are also likely to emerge.

First. While an estimated 85 percent of today's adult students have taken college courses and half have com-



Community College of Rhode Island photo.

pleted four years of college, international competition will demand that colleges and universities use their resources to reach a new market: the more than 20 million Americans who cannot read, write, understand or compute at a level that enables them to function in a complex world. Institutions increasingly will use their continuing-ed programs to provide basic skills directly to the functionally illiterate and to train others to teach basic reading, writing and arithmetic.

Second. Although the College Board estimated 65 percent of adults seeking degrees are studying in one of five career-oriented areas: business, education, health, computer or information science and engineering, an aging adult-student population will give rise to a learning-for-the-sake-of-learning mentality. "Senior citizens [represent] a significant and growing part of the population, and they sometimes have as many as 20 good years after retirement and don't want to atrophy," says Shinagel of Harvard's Extension School. "They're sort of picking up unfinished business that they had to drop when they were having families and pursuing careers."

Explains Shinagel: "What we're trying to do now is create a learning society, where people will get into the habit of learning over their entire lifetimes." In that society, Thomas Small would fit just fine. □

John O. Harney is a contributing writer and editorial consultant for *Connection*.

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- Portion of U.S. high-school class of 1982 that attained a postsecondary diploma, certificate or degree within four years after leaving high school: one-fifth.**
- Portion of 1972 senior class that did: half.**
- Maine's rank among states in high-school graduation in 1987: 13.**
- Maine's rank in 1982: 32.**
- New Hampshire's rank among states in high-school graduation in 1987: 29.**
- New Hampshire's rank in 1982: 11.**
- Number of students who took advantage of the NEBHE Regional Student Program in the 1988-89 academic year: 5,036.*
- In the 1968-69 academic year: 648.*
- Percentage of women in the U.S. labor force who had some college education in 1988: 44.3.***
- A decade earlier: 33.0***
- Percentage of men in the U.S. labor force who had some college education in 1988: 46.3.***
- A decade earlier: 39.7.***
- Number of women who have joined the New England labor force since 1982: 396,000.***
- Number of men who have joined the New England labor force since 1982: 148,000.***
- Total number of federally guaranteed student loans from 1966 to 1988: 43 million.**
- Net default rate after collections: 9.2 percent.**
- Representing: \$6 billion.**
- Number of students assisted by the NEBHE/Massachusetts Health Professions Student Contract Program since 1976: 1,000.*
- Default rate: 0.*
- Percentage of 1987 Boston high-school seniors who could *not* name the six New England states: 40.0†
- Number of New England states that rank in the top 10 nationally in civilian jobs related to manufactured exports: 4 (Connecticut, Massachusetts, New Hampshire and Vermont).††
- Growth in Vermont's civilian employment related to manufactured exports from 1984 to 1986: 28 percent.††
- National rank of Connecticut in civilian employment related to manufactured exports: 1.††
- National rank of Connecticut in size of sales tax: 1.*
- Time it takes a U.S. car manufacturer to bring a new model to market: 60 months.†††
- Time it takes a Japanese car manufacturer: 40 months.†††

SOURCES

- * NEBHE research
- ** U.S. Department of Education
- *** U.S. Department of Labor Bureau of Labor Statistics
- † National Governors Association
- †† U.S. Census Bureau, 1986 data
- ††† American Society for Training and Development



Vermont Technical College photo.

In recent years, more and more academically able students have chosen to go to community colleges because of lower cost.

Facing Their Share of Problems,

Community Colleges Come of Age

ELLIN ANDERSON



After a quarter century at the bottom of the higher-education totem pole, New England's community colleges are getting some well-deserved recognition and respect. Why is this happening now?

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Gerard F. Burke, president of Massasoit Community College in Brockton, Mass., says: "Probably more than any other segment of public higher education, community colleges are the most relevant to today's society, whether one is talking about dealing with the illiteracy problem, or the high-school dropout rate, or returning individuals who want to retool and get into another occupation."

The need for affordable quality education has made the community college a viable option for more and more people. But Edward Liston, president of the Community College of Rhode Island, says that affordability is not the most important factor at his institution.

"I honestly believe that in the past five years or more, programs have had as much to do with it as cost," he says. "We offer the kind of programs that people want, in the time frame they want. The whole relationship to time—and time is money, of course—plus the payoff factor, is a very acceptable one, in the two-year vs. the four-year programs. People are interested in the fastest way to gain proficiency."

As Burke relates: "Massasoit offers about 50 different programs, from diesel engineering technology to theater arts, from electronics to nursing. For about \$800 a year, that's got to be the best the best buy in town."

University of Hartford President Humphrey Tonkin, in a speech to this spring's graduating class at Greater Hartford Community College, said that the inception of the first community colleges in the early 20th century "in many respects was the most important single invention in higher education that this country has ever seen." Tonkin called the community college model "a brilliant invention," since com-

munity colleges are able to adapt to social changes "perhaps more effectively than any other part of higher education," and offer lifetime opportunities for learning.

Community colleges are based on the idea that everybody is entitled to higher education, Tonkin said, "a liberating principle not acknowledged by most people in other parts of the world, and not always acknowledged by people here."

Andrew M. Scibelli, president of Springfield Technical Community College in Springfield, Mass., comments: "I think what's happened is, when I say we've come of age, people understand that you don't open a door and say to an unqualified student, you may enter

Faced with these challenges, community colleges and state technical institutes must simultaneously maintain quality and the open-door policy that is ideally the community college's philosophy. Meanwhile, fiscal crises in several New England states are making it difficult to expand existing programs and threatening basic services. In addition to this, organizational upheaval has been widespread in two of the region's vocational-technical college systems.

The critical financial situation in Massachusetts will strongly impact the community colleges—significant providers of skilled workers—at a time when there is already a labor shortage. In July, on a day some are calling "Black Thursday," Massachusetts Gov. Michael S. Dukakis vetoed \$22.5 million slated for FY 1990 higher education funding and withheld \$16.8 million, pending the availability of new revenues.

Scibelli sums up the effects funding cuts will have on community colleges in one word: devastating.

"It's the worst possible time this could happen in education," he says. "If there's one particular message that we get—and we're very involved with business and industry, in terms of contract training and other kinds of cooperative ventures—the workforce is in trouble, they do not have sufficient numbers of qualified people."

Burke of Massasoit agrees. "We are the chief supplier of nurses and respiratory therapists and technicians and secretaries in this area. Not to keep open enrollment, not to give us the resources we need is like shooting yourself in the foot economically," he says.

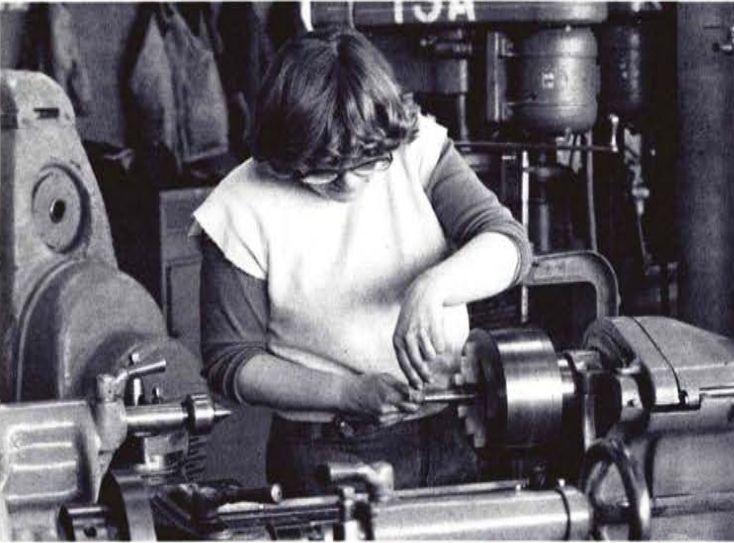
Last year, for the first time, Scibelli's institution had to turn away 500 students. This year he will have to turn away the same number, if not more. "The impact is fewer people in an already depressed market," he says. "It's very shortsighted."

Streamlining administration

In Connecticut, widespread concern about the quality of technical education resulted in a proposal by the Board of Governors for Higher Education to merge the state technical colleges with the community college system. The technical colleges had suffered a 40-percent decline in enrollment during 1982-88, while costs doubled. In December 1988, a private consultant commissioned for a study concluded that the technical colleges had failed in their mission to alleviate the shortage of qualified workers that is threatening the state's ability to compete economically. With only 736 graduates statewide in 1988, the technical college's ability to support Connecticut's manufacturing base and emerging technologies was in doubt.

The merger plan was scrapped in favor of legislation that has put the technical and community colleges under the direction of a single governing board, a move the Board of Governors believes will help the tech colleges become more responsive to the needs of students and industry.

Despite a difficult budget year, the Connecticut Legislature was able to grant an increase of 2 percent in funding to the Connecticut community colleges (distinct from the tech colleges). Fall 1987 enrollment was



David Fischbach/Community College of Rhode Island photo.

More than any other segment of public higher education, community colleges are relevant to society's basic needs.

the nursing program. What you do is you take the student who is poorly prepared, and you work with them and prepare them. Once they've proven themselves, you let them enter the program of their choice, if they meet those qualifications. We spend an enormous amount of time and effort and money on support services and on remediation."

Many challenges

New England is a region characterized by disparate environments and economic conditions. Community college and state higher-education system administrators are charged with providing quality education to all citizens, whether they live in densely populated urban settings or remote rural areas. They must balance industry's needs for trained graduates with the student's right to a sound general education. New England's community colleges and technical institutes are developing a wide variety of programs to answer society's needs, such as the use of technology to reach rural sites in northern New England, and outreach programs for minority or non-English-speaking groups. Transfer to four-year institutions is emerging as another major issue on the agendas of community and technical-college systems.

up 4 percent from fall 1986; fall 1988 enrollment rose 5 percent from fall 1987; and spring 1989 enrollment was up almost 9 percent from spring 1988. At the same time, community college enrollment grew only 4 percent nationally.

At a recent conference of the Association of Community College Trustees in Hartford, Connecticut Economic Development Commissioner Stephen B. Heintz spoke of the colleges' role in the state's economy. "The community college is truly an extraordinary hybrid with great potential for furthering economic development goals," he said. Locally based, with knowledge of local labor markets, local schools and local leadership, but linked financially and institutionally to the state, he continued, "community colleges have the ability to foster the cooperative efforts between state and local governments and the partnerships between the public and private sectors recognized as critical to progressive economic development."

New Hampshire's fiscal troubles were reflected in a lean \$55.8-million appropriation to the University of New Hampshire System, a 4-percent increase; and \$16.9 million to the state's seven technical colleges, a 5-percent decrease from current funding levels. The word "vocational" has been dropped in reference to the college, to avoid confusion with the state's vocational secondary schools. Postsecondary Technical Education Commissioner Mary Pillsbury Brown says: "People get the two confused, and students like the feeling that they're going to a college, not a vocational school."

Brown opposes current transfer policy within the public system, where credits earned at New Hampshire's two-year technical colleges are not accepted by four-year institutions.

"I just feel that oftentimes people still think we're building birdhouses, and our kids are doing a lot more than that," Brown says. Recently the New Hampshire Technical Institute of Concord competed in a solar-car race in which its entry came in second after MIT's and beat Dartmouth's. Other competitors in the race included the Worcester Polytechnic Institute and the University of Lowell.

The tech colleges specialize in training programs for business, which particularly benefit what Brown calls the greater-Nashua area's "wall-to-wall-industry." New Hampshire Technical College at Nashua employs a full-time training director. Between June 1988 and June 1989, the college conducted 41 industry-funded training programs for 1,322 employees of area companies.

Brown expresses confidence about the future: "I'm very much sold on our kind of education, and I think by the year 2000, technical two-year graduates are going to be most in demand, as long as we teach them to think critically and make sure they can communicate."

While there are no community colleges per se in New Hampshire, the School for Lifelong Learning, based in Durham, offers liberal arts and professional programs, for bachelor's and associate's degrees, at locations throughout the state.

Telecommunications in Maine, Vermont

In Maine, dispute about a "market-run" (or, in the eyes of critics, industry-controlled) curricula for the

vocational-technical institutes culminated in the resignation of their executive director. More recently, the voc-techs were renamed the Maine Technical College System.

Maine higher-education officials are optimistic about the new Community College of Maine, a telecommunications program run by the University of Maine at Augusta. CCM will permit delivery of higher education to remote and rural areas of the state, a cost-effective alternative to building new campuses, and a means of diversifying the curriculum at Maine's small rural high-schools, some of which have no more than 30 students. The interactive two-channel television system will deliver live courses, linking the university campuses with the technical colleges and selected high-school classrooms.

Community colleges and state technical

institutes must simultaneously maintain

quality and an open-door policy.

Beginning Sept. 1, 1989, a fiber-optics system will interconnect 45 sites across the state, including 23 high schools, six vocational-technical colleges, Maine Maritime Academy, the seven university campuses and 11 off-campus centers. During this first phase, 26 undergraduate associate-degree courses will be offered, plus five graduate courses primarily for teachers, nine technical courses, offered by the tech colleges, and five hours per day of programming for high-school students. The Maine Legislature has granted \$2.2 million for the project, and \$4.5 million in federal funding has been awarded through Title III grants. Next summer, 50 additional high schools will join the network.

Meanwhile, Vermont, which has only one technical college campus, has implemented its own telecommunications program. Vermont Interactive Television is a two-way audio-video system that links the Vermont Technical College in Randolph Center with sites in Newport, Springfield and Lyndonville, and eventually with two other sites. Private industry is making donations to VIT, which it uses for training purposes and televising conferences. VIT's audience also includes high-school students, teachers and state legislators, who will use it to broadcast legislative hearings.

Dona Welch is spokesperson for the Community College of Vermont, a non-traditional institution operated through a network of 12 site offices, located at population centers around the state. "We are probably the state in New England that is financially the best-off right now," she says. "We've been very, very fortunate. But we are always seeking additional monies for our scholarship program."

This spring, the U.S. Department of Education awarded the Community College of Vermont a \$250,000 grant for a pilot project, Vermont Partners in Education. The award is being used to develop a model curriculum focusing on increasing motivation and interest among high-school students and encouraging them to learn the basic academic and technical skills necessary for success in Vermont's job market. The purpose of the program is to provide Vermont bus-

ness and industry with entry-level employees who possess appropriate technological skills, as well as to help students improve their aspirations and establish goals for personal development.

VPIE is a partnership of secondary schools, students, business and industry and the college. The program combines intensive student interaction and academic-skills tutoring with enrichment classes in personal awareness, self-discipline, goal setting and decision-making. Vermont business partners provide technical training experiences, on-site tours and information sessions, and a core of employee mentors to work with students on an individual basis.

Rhode Island's model college

The Community College of Rhode Island, which celebrates its 25th anniversary this year, owes much of its success to the efforts of President Edward J. Liston. Liston arrived at the college, then called Rhode



David Fischbach/Community College of Rhode Island photo.

Island Junior College, in 1978. He concentrated on developing vocational programs and instated an aggressive marketing campaign. During his tenure, enrollment has grown from 8,000 to 14,700 students.

Liston, founding president (1966) of Housatonic Community College in Bridgeport, Conn., describes the impetus that created the community college in New England: "It was the democratization of higher education, an outgrowth of the general feelings of unrest and disenfranchisement, the attitudes of the 1960s. There was an attempt to open up the institutions, particularly higher education, to more people, sort of an egalitarian movement.

"In Connecticut, just as an example," he continues, "the University of Connecticut only considered high-school students in the top third of their class, the state colleges considered the students in the top half of their class, and there were virtually no community colleges. And so where did the the bottom half of the class go? The bottom half of high-school classes in the state of Connecticut in many cases contained some very good students, who either went to independent institutions or out-of-state public institutions. So we started the community colleges and then immediately opened up public higher education to one-half of the high school

classes, who didn't have the opportunity to go to a public institution."

Liston defines the model community college as "one that [has] a very strong arts-and-sciences base, and prepares students well for upper-division work. It also has a vast array of sound technical programs that give students a choice, and then, in that sense, serves as an economic development arm of the state, or the region. The third very important ingredient is an ambitious program of community services. We aggressively pursue the use of our facilities for purposes other than the normal educational endeavors. This place is jumping every day, every night, seven days a week, and that's by design."

When transfer is the goal

During the New England Board of Higher Education Summit on Educational and Employment Opportunity for Blacks and Hispanics in New England this past

April, topics under discussion included helping community-college graduates matriculate to four-year institutions. More than 50 percent of minority students in U.S. community colleges do not persist in their studies and obtain

More than 50 percent

of minority students in U.S.

community colleges do not obtain an associate's degree.

an associate's degree, and very few degree recipients continue their academic careers on four-year campuses, according to NEBHE's report, Equity

and Pluralism: Full Participation of Blacks and Hispanics in New England Higher Education. At the summit, President Liston of CCRI cited studies demonstrating that those who have gone on do as well as or better than students who began their freshman year at a four-year campus.

A major barrier to community college students who wish to transfer or complete four years of undergraduate education is the failure of four-year institutions to accept the academic credits earned at the community-college level. Preparation for academic and social adjustment to the four-year campus environment is equally crucial, but not always available. This may be remedied by providing continuous academic counseling throughout the community-college years. Scholarships earmarked for transfer students, faculty exchanges and collaborative projects between two- and four-year campuses would also facilitate the transfer process.

Minorities made up almost 15 percent of Connecticut community-college enrollment in 1988-89, up from 14 percent in 1987-88. In addition, 55 percent of minorities in Connecticut public higher education are in the community colleges. Agreements ensuring that four-year campuses will accept academic credits earned at

certain community colleges must become more widespread, according to Antonio Perez, president of South Central Connecticut Community College. Agreements between Massachusetts community colleges and the University of Lowell, the University of Massachusetts and Worcester Polytechnic Institute have worked successfully in pre-engineering programs.

At South Central Connecticut Community College, a minority fellowship program lets Connecticut minority graduate students teach at the college during the last year of their graduate work. The teacher receives \$3,000 per semester and remains "on approval" until he or she becomes familiar with the institution. In addition, resources have been set aside for professional development of minority faculty.

The Connecticut Board of Governors for Higher Education has established an Advisory Committee on Transfer/Articulation for identifying approaches to enhancing the transfer process. In a memo to the Connecticut Conference of Independent Colleges, Higher Education Commissioner Norma Foreman Glasgow said: "Improving linkages and student movement from two-year to four-year colleges and universities can help stem attrition rates. This is particularly important for minority advancement, since community colleges serve a large number of minorities who can move on to baccalaureate and advanced degrees."

In Connecticut, transfer/articulation agreements exist between individual colleges and individual programs on an ad-hoc basis. The Board of Governors advisory committee on transfer/articulation has joined forces with the Community College System's own committee, created in February 1988. The Connecticut General Assembly has passed legislation establishing a pilot transfer/articulation program in the public system, to be implemented in academic year 1991-92.

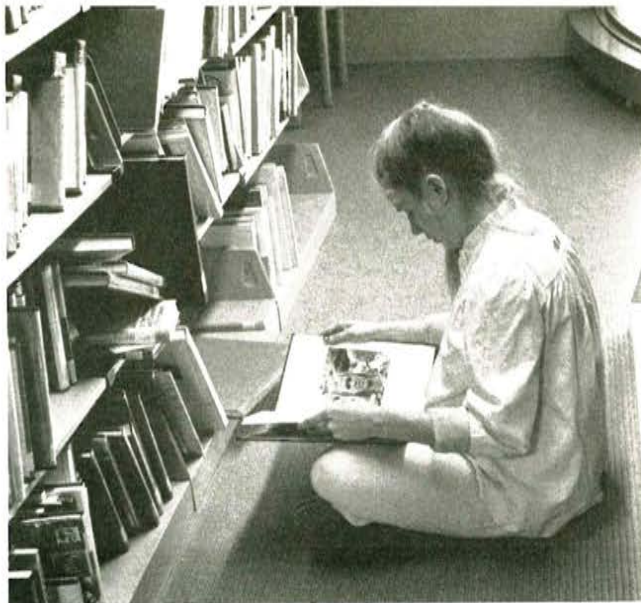
NEBHE plans to work with academic organizations and the six New England state chancellors and commissioners of higher education to encourage two- and four-year institutions to form agreements facilitating transfer of academic credits.

Transfer support system at Bunker Hill

Bunker Hill Community College in Charlestown, Mass., offers counseling for students who wish to transfer to a four-year institution. Several activities, such as transfer information fairs, are geared to all students; others are specifically for minorities. As of spring 1989, Bunker Hill's student body was 16.7 percent Black and 7.4 percent Hispanic.

"We have counselors who can sit down and help [students] with their individual concerns, give them help with transfer matters," says Bunker Hill counselor Jimmy Roberts. "We also have a separate career and transfer center which contains college catalogs, plus other directories where they can get information on colleges from across the nation."

For community college students who want to transfer, knowing which courses will be accepted and how to pay for the third and fourth years of college present major difficulties. The Massachusetts Transfer Compact, an agreement between the community colleges and the state's four-year institutions, allows consistency in the Bay State's higher-education system. Bunker Hill also has individual transfer/articulation agreements



David Fischbach/Community College of Rhode Island photo.

with independent institutions, usually for a specific program or major. "That's where it gets so complicated," Roberts says. "There are some courses that will not transfer. That's the purpose of the individual counseling."

Bunker Hill made an agreement with Suffolk University during the past academic year, in which students who major in Bunker Hill's management, accounting, fashion or business/liberal arts transfer options can receive credit in the university's School of Management. Students in the nuclear medicine technology and medical radiography programs may apply certain courses towards a bachelor's degree in health administration at Emmanuel College; and students taking Bunker Hill's business/liberal arts transfer options may transfer courses to New Hampshire College.

For a "Minority College Literature Day," Roberts requested information from colleges that have large populations of minority students. "I had a huge display where students could stop by and get information, and I was there to help the students," Roberts relates. "Some of the faculty who had attended minority colleges were there also to talk with students."

The choices of some minority students are influenced by reports of racism on New England four-year campuses. In these cases, Roberts may recommend a minority or predominantly minority four-year institution, "if a student is really nervous or afraid, because I don't think they need that kind of fear trying to be successful in college. Some students wouldn't even think about it, but I think some students really take it more seriously.

"And there aren't any [predominantly minority four-year institutions] in New England," he continues. "There are some in D.C., in Detroit, most of them are in the South. I had one student here who's definitely going to a college in the South, she's been accepted and is very excited. But it's not right for all Black students."

Haphazard transfer agreements

In New Hampshire, students at the New Hampshire Technical Institute at Concord may automatically transfer to the state university and two state colleges if they have a C average or better. For students at the remaining six technical colleges, the process is more difficult.

The tech colleges recently completed a transfer/articulation agreement with New Hampshire College, an independent four-year business and professional college. The University of Lowell also accepts credits from the New Hampshire tech colleges. Commissioner Mary Pillsbury Brown says she finds it ironic that some Massachusetts institutions accept the students' credits while the New Hampshire state university system does not.

"It's very frustrating, and I've talked to some of the trustees, some of whom are very supportive of my feelings, but it takes time to change attitudes," Brown says.

While the University of Vermont will transfer credits from Vermont Technical College, there is no formal articulation agreement in the public system. Each year, between 15 and 20 percent of VTC students transfer to four-year institutions. There are transfer/articulation agreements with a number of independent Vermont institutions and out-of-state colleges and universities, including the Rochester Institute of Technology, Wentworth Institute of Technology, Northeastern University and the University of New Hampshire.

Gerard Burke, president of Massasoit Community College, says of the Massachusetts Transfer Compact: "In theory, there's supposed to be easy transferability from one segment to the other, but that does not always work out in practice." Massasoit has several agreements with independent four-year institutions including Stonehill College and Wentworth.

Springfield Technical Community College has transfer/articulation agreements with independent institutions including Western New England College, Springfield College, American International College, Our Lady of the Elms College and Rensselaer Polytechnic Institute.

But transfer to a four-year institution is not always the goal: Many employers want applicants with associate's degrees. Scibelli says that the main thrust of his institution's mission is to give students an adequate education in two years. Between 70 and 80 percent of Springfield Tech's students go directly into the workforce, and may or may not choose to continue their educations.

CCRI President Liston comments: "We turn a student out as a chemical technician, and he's making \$26,000 a year at the end of two years, and doesn't go on to get a baccalaureate degree—so what? Our chemical technology people make as much as a B.S. in chemistry. Is it a failure because people don't go on, or is it a success?"

Pioneering national project

Jane Spaulding, assistant director of programs at the Association of American Colleges in Washington, D.C., says that while four-year colleges and universities actively recruit students from the nation's high schools, they do not make the same effort in reaching out to community college students.

One reason, she says, is that "approximately 90 percent of all persons attending community colleges re-

quire remediation work, either in reading, writing or mathematics.... They are in a sense a forgotten group of people."

The Ford Foundation and the Association of Ameri-



David Fischbach/Community College of Rhode Island photo.

can Colleges are cosponsoring the National Project on Community College Transfer, which is designed to facilitate the transfer process, particularly for minority students. Goals of the program are to strengthen links between community colleges and four-year colleges, to show community college students that a bachelor's degree is not out of their reach; and to prepare them for the social and academic challenges involved in attending a four-year institution.

During the summer of 1990, Smith College of Northampton, Mass. will conduct a summer program for 25 women students from Greater Hartford Community College, at least half of whom will be minorities. Scholarships will pay for room, board, tuition, books and childcare. Credits earned in the program are transferable to a four-year or two-year institution. In 1991, Smith will also host students from Asnuntuck Community College in Enfield, Conn. and Tunxis Community College in Farmington.

While in recent years more and more academically able students have chosen to go to community colleges because of lower cost, "many times, to begin in a community college is to end in a community college," Spaulding says. "Of all the students who will say at an orientation program, at a community college, 'Yes, I want to transfer,' we know that fewer than one in 20 actually does. So statistically, you've got a horrendous chance, even if you want a baccalaureate degree, of actually getting one if you begin in a community college."

Says Spaulding: "We have more of what Ernest Boyer [president of the Carnegie Foundation for the Advancement of Teaching] refers to as 'the continuous fabric of education,' that high schools will sometimes feed to community colleges and community colleges will naturally feed four-year institutions. But I will tell you that as that has evolved, so have many roadblocks along the way. It's just very logical to try and put into place a project that would knock them down." □

Ellin Anderson is associate editor of *Connection*.



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This Northeastern University student received placement in medical technology at the Lahey Clinic. Northeastern University/Bob Kramer photo.

Cooperative Education: A Quiet Revolution

KENNETH G. RYDER



CAMPUS
1990

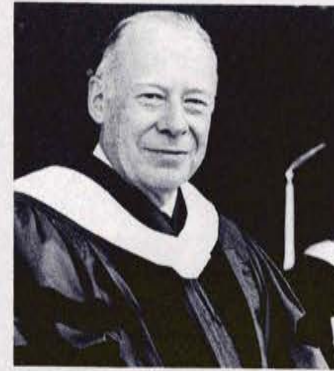
The establishment of Harvard College just 16 years after the arrival of the first Europeans on American shores not only epitomizes the value Americans have always placed on higher education but demonstrates the perceived necessity of higher education as integral to the functioning of any society. Patterned on the elite European universities, of which Oxford and Cambridge were prime exemplars, Harvard was founded to meet the needs of a landed aristocracy in an agrarian society.

Over a century and a half later, with the rise of the Jeffersonian concept of an informed citizenry as the cornerstone of democracy, and with the coming of the industrial revolution, higher education began a transformation, still only partially realized, where access to a college education is seen to be both an individual right and a social necessity.

Cooperative education, with its formal linking of traditional study in the academy to practical learning in the workplace, has grown up in the wake of this cultural development and has come of age in the technological revolution of our own era. Its expansion from programs in 60 colleges and universities at the end of World War II to programs in 1,000 colleges and universities today testifies to the aptness and relevance of cooperative education to a modern, egalitarian technological society. The reasons for our confidence that co-op will continue to grow are many.

Education that works

In spite of the fact that many cooperative education programs are designed for only the most academically talented students, academicians have often been skeptical of the value of "an education that works." Recently, however, researchers led by Dr. Robert Sternberg of Yale have posited and begun to demonstrate what those of us involved in cooperative education have known intuitively for a long time, namely, that there are at least two distinct types of human intelligence. One is theoretical and abstract and shows itself through traditional measures like SAT and IQ tests; the other is applied and reveals itself in psycho-social behaviors like self-discipline and the interpersonal skills of leadership and cooperation. This latter is a function that permits an individual to translate abstract intelligence into productive action. Other studies have demonstrated that student achievement in co-



Kenneth G. Ryder

TOPPLING THE IVORY TOWER

Throughout his 14-year tenure, Northeastern University President Kenneth G. Ryder has advocated a college education that works. And, as the university itself has become increasingly international, Ryder has positioned it as the world leader in cooperative education.

"I've been lucky enough to preside over the institution when it was truly coming of age," he says. "It hasn't yet achieved full maturity, but it has grown immeasurably, both in terms of quality and diversity of programs, and just in terms of overall presence."

While more than 80 New England institutions offer cooperative education, Northeastern's program was the first and remains the best-known. Through Northeastern, placements are available around the globe, and more than 60 percent of co-op students are retained by their employers upon graduation.

"We believe that there's much to learn in the real world," Ryder states. "The ivory tower says: 'Pull away from the real world, isolate young people, immerse them in the learning of the past, keep them safe and protected, and avoid the distractions of the world. We don't believe that."

"We believe that there's so much to learn in working in the real world, get-

ting real experience, getting self-confidence, learning what the latest techniques are in various professional fields. Even for the student in liberal arts, there's an immense opportunity for learning.

This increasingly international university is now the world leader in cooperative education.

"And also, it does produce money."

The average Northeastern co-op student, Ryder says, earns about \$8,000 a year for a total of six months' employment. Co-op positions in competitive fields like computer science or engineering may bring in \$12,000 to \$15,000 yearly.

NEBHE President John C. Hoy comments: "Ken Ryder has guided Northeastern into becoming the quality 'workhorse' institution of New England, the campus whose alumni touch virtually every school district, every corporation and every agency of state government throughout the region. His legacy exemplifies the spirit of cooperation among all the segments that have created a robust regional economy."

Northeastern has applied the concept of "education that works" to the graduate level as well: its law school was the first in the nation to adopt a cooperative program. The model has also been influential overseas; as Ryder relates, thanks to contact with Northeastern, "both Limerick and Dublin now have thriving co-op universities that break rather substantially with the tradition common to the British Isles, that of Cambridge and Oxford.

"There are some 30 to 40 countries that now have co-op, and there is every indication that it's expanding rapidly, because it meets the needs of nations and of people very directly."

Tufts University President Jean Mayer reflects on his colleague: "Under the leadership of Kenneth Ryder, Northeastern has become an irreplaceable as-

set, giving tens of thousands of students 'an education that works.' Northeastern graduates are well-prepared for the job market, while at the same time their horizons have been broadened, and they are ready to take their place in society."

The university has added a dozen facilities to its urban campus in as many years, a substantial physical expansion Ryder says is "only symbolic of the kind of programmatic growth that went on during that period. Our financial resources, for example, have increased from about \$30 million to \$130 million."

Northeastern's aggressive marketing campaign, which includes widely viewed TV commercials, is speeding its transformation from a regional to a national institution. Changing demographics, as well as the desire for name recognition, is at issue: according to projections, the pool of public high-school graduates in Massachusetts will have shrunk by 43 percent from 1980 to 1994. "We had at one point as many as 70 percent of our students from Massachusetts," says Ryder. "If we're going to be stable, we have to reach out to other states where there is a different demography."

Forty years at Northeastern

A native of Brockton, Mass., Ryder received his bachelor of arts degree from Boston University in 1946, and a master of arts in history from Harvard in 1947. He first came to Northeastern in 1949 as an instructor in history and government, was named assistant professor of history in 1953 and associate professor in 1956. Along with teaching, Ryder took on administrative responsibilities as secretary of the faculty from 1955 to 1958.

In 1958, Ryder was appointed dean of administration, and in 1976, vice president for university administration, with responsibility for coordinating the new office of academic affairs. He was named executive vice president in 1971, and president in 1975. In 1983, Ryder was asked by international co-op representatives to be the first president of the World Council on Cooperative

Education, a body dedicated to achieving a better relationship between education and work as a strategy for human development. He served in 1986-87 as chairman of the National Association of Independent Colleges and Universities, which has more than 800 member institutions.

Ryder has served as director of the Shawmut Bank of North America, Arkwright, the Boston Private Industry Council, Inc. and Stone & Webster, Inc. In 1978, he was named a member of the Commerce and Industry Council of the Urban League of Eastern Massachusetts, and later served as chairman of its Employment Subcommittee. He currently serves on the Private Industry Council of Boston.

Student co-op positions in competitive fields like computer science or engineering may bring in \$12,000 to \$15,000 yearly.

David C. Knapp, president of the University of Massachusetts System, has worked with Ryder on a number of projects, including the Boston Higher Education Compact for the public schools and the Massachusetts Partnership for Educational Telecommunications. "He's been a very important and effective leader for higher education within the city and in the state as a whole," Knapp says. "He has a very level-headed, calm way of addressing issues. He's shown real leadership in the decade that I've been here, a decade that's been difficult in many ways."

Upon appointment of a new president, Ryder will assume the position of university chancellor. After his successor's initial orientation, and until the president can play a more active role, Ryder will concentrate his efforts on fundraising, alumni relations and ongoing work with educational associations, providing continued coverage of the university's external commitments. □

op programs is more highly correlated to extracurricular success than to classroom performance. In other words, the academy has begun to recognize that an individual can learn in the workplace what cannot be learned in the classroom.

Cooperative education has another pragmatic advantage that makes it increasingly attractive in an era of spiraling tuitions: Students and their parents can choose a college education that goes a long way toward paying for itself, in terms of both substantial earnings from co-op job placements during schooling and higher starting salaries in more senior positions after graduation. At Northeastern University, for example, students earn, on average, 90 percent of their tuition costs from their co-op jobs. Northeastern co-op graduates, moreover, begin their careers at a salary

Co-op's track record with minorities makes it an ideal vehicle for the racial integration of corporate America.



ing the adjustment of the white corporate environment to his presence. The co-op practicum works both ways, providing a real life laboratory for the integration of the professional world.

Worldwide cooperative education

Perhaps the most startling and telling development for the future is the worldwide expansion of the concept and practice of cooperative education. From the Netherlands to Hong Kong, from Canada to Australia, from Germany to Nigeria, over 30 nations have adopted the co-op model in their colleges and universities. Indeed, in the very shadows of Oxford and Cam-

level that averages significantly higher than non-co-op graduates in comparable fields. With few signs of any easing of the tuition burden and its concomitant indebtedness, co-op's financial return will continue to exert its appeal to students.

Benefits for the workforce, minorities

Corporations large and small, facing a labor shortage in professional fields that will persist unabated into the 21st century, are looking for ways to gain a competitive edge in workforce recruitment. One way to accommodate the aging of the population and the decline in the number of people entering the labor market is to keep 18-to-22-year-olds in the workforce. Co-op provides an ideal mechanism for doing this without robbing young people or the nation of the education and training requisite to our continued economic prosperity and productivity. Companies that enter into co-op agreements with colleges and universities have already found that they can co-opt the most talented young people into a permanent association to the benefit of both the firm and the employee.

This mutual advantage is particularly appropriate to members of minority communities, the portion of the population that will increase over the next two decades. It is not accidental that several traditionally black higher-education institutions like Wilberforce University have recently adopted co-op programs. Co-op's track record of brokering minorities into mainstream corporations makes it an ideal vehicle for the racial integration of corporate America.

I recently spoke with an executive of a major high-tech company who told me of the value of his co-op experience, not only in smoothing his orientation to the culture of the white corporate world, but also in eas-

A Northeastern co-op student works with computer-aided design at Camp, Dresser McKee. Northeastern University/J.D. Levine photo.

bridge, more than 100,000 English students participate in co-op programs at polytechnic institutions—a number double what it was just a few years ago.

This unheralded burgeoning of cooperative education, especially in third-world countries, embodies the central economic and educational imperative of the modern world: For a nation to compete and flourish in a high-technology world, it needs large numbers of educated, trained and experienced professionals. Both mature and developing nations are coming to recognize that they can no longer depend on an elite corps of educated managers commanding an army of unskilled laborers to build an industrial infrastructure for economic growth. The insistent demand of working-class and poor people in third-world nations for economic as well as political democracy, alongside an acute shortage of professional graduates, presages fundamental changes in the educational structures of these once-colonial nations. Cooperative education is poised at the forefront of this quiet revolution.

So, as a mature strategy of higher education, cooperative education is clearly in tune with the temper of the times. What makes co-op's future so promising is its link with the three-and-a-half-centuries'-old ideals of American experience and culture. It rewards and recognizes the value of the work ethic, self-sufficiency, equality of opportunity and upward mobility that are the cornerstones of economic democracy both here and throughout the world. □

Kenneth G. Ryder is president of Northeastern University.

Continuing the Tradition of Affordable Education Through ALPS



Photo by Joe Hickey

Taking part in the event are: (left to right) Rene Drouin, Vice-President, NHHEAF; Robert J. Condon, Chairman of the Board, NHHEAF; Tracy Hatch, Special Assistant for Education in NH; Dana Favor, Vice-President, New Hampshire Savings Bank; Mildred L. Dustin, President, NHHEAF; John S. Hamilton, Vice-President, Numerica Savings Bank and Cornelius J. Joyce, Vice-President, Bank of New Hampshire.

On May 1, 1989, the New Hampshire Higher Education Assistance Foundation in conjunction with Granite State Management & Resources and the New Hampshire banking community, signed an agreement to continue the Alternative

Loans For Parents and Students Program (ALPS) into the 1990's.

The ALPS Program has already enabled thousands of college students and parents to secure the funding necessary to affordably manage their investment in higher education.

For more information on the ALPS Program call the
TOLL-FREE-FINANCIAL AID HOTLINE

1-800-444-3796

GRANITE STATE MANAGEMENT & RESOURCES

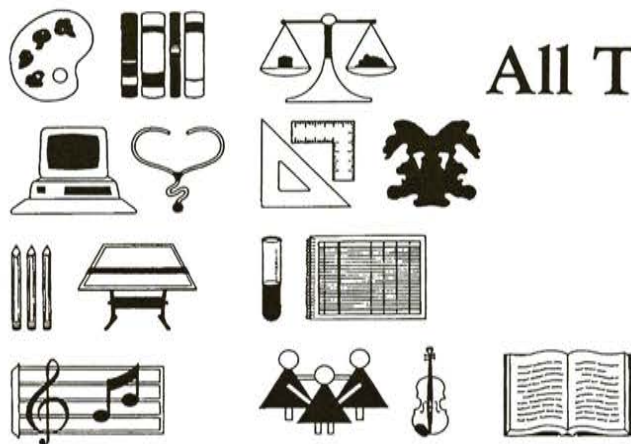
PO Box 2287, Concord, NH 03302

The Massachusetts Institute of Technology and the Knight Foundation of Akron, Ohio, have launched a \$7.5-million funding drive to benefit MIT's program in Public Understanding of Technology and Science, whose major activity is the Science Journalism Fellowship Program. The five-year drive involves a \$5-million challenge from the Knight Foundation, plus \$2.5 million in funds raised by MIT.

The Knight Foundation is approximately the 20th largest foundation in the United States. Its grants sponsor activities in communities across the country, principally those served by Knight-Ridder newspapers.

The six-year-old mid-career fellowship program is designed to improve the skills of journalists covering medicine, science, technology and environmental issues internationally for radio listeners, television viewers and magazine readers.

"Being involved in the Science Journalism program was like spending a year in a scientific candy store," says Bill Booth, a 1986-87 participant who is a correspondent for the *Washington Post*. "The public benefits by having reporters who write about science better informed. [The reporters] become more critical, learn to understand the issues and the players and how to track down the best information to cover science issues more fully".



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New England Campuses Must Prepare for Drop in High-School Graduates

A special report prepared at the request of NEBHE

CHARLES S. LENTH AND ROBIN ETTER ZUÑIGA



Changes in the size of high-school graduating classes do not in themselves account for changes in postsecondary enrollments. Many factors affect the transition from high school to college, but demographic patterns are fundamental. This is particularly true when changes in the patterns are as dramatic as they have been in recent years and will continue to be during the next decade.

Between 1979 and 1986, the annual number of public high-school graduates fell from 2.8 million to about 2.3 million, a drop of nearly 15 percent that reversed the historic pattern of growth. In some regions, decreases were even more dramatic, including a 19-percent drop for the six-state New England region. These downward trends will continue into the early 1990s.

Will New England's colleges and universities face enrollment shortfalls in the 1990s? The immediate signs are more positive than negative. Despite decreases in the number of new high-school graduates since the late 1970s, applications are up, enrollments are fairly steady, and many institutions are turning away qualified applicants. Nevertheless, with the number of high-school graduates dropping before the mid-1990s to the lowest level in nearly 30 years, colleges and universities across the nation may soon face different enrollment conditions. How will these changes affect New England's colleges and universities?

The following report, prepared for NEBHE by the Western Interstate Commission for Higher Education provides, data and projections to help institutions answer these perplexing questions. Twice before, in 1979 and 1984, WICHE published projections of the number of high-school graduates by state. These earlier reports played an important role in focusing attention on precipitous declines in the size of graduating classes since the late 1970s.

The following report contains new projections that reflect economic and educational patterns of recent years and extend the projections horizon to the year 2004 by following those born in 1986 through the school system. These projections, it should be noted, are not predictions. The projection methodology

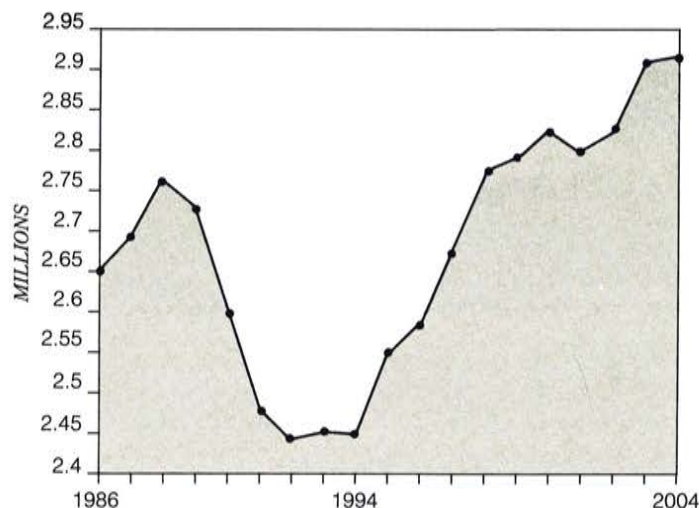
reflects past and current conditions, but does not take future behavioral, economic or policy changes into account.

The national outlook

National data and projections for new high-school graduates are important to New England for several reasons. First, as major importers of students from across the nation, New England's colleges and univer-

FIGURE 1

High School Graduates, 1986-2004 (projected)
*U.S. Totals—Combined Public and Non-Public**



*Includes estimated non-public graduates for 12 states and the District of Columbia.
Source: Western Interstate Commission for Higher Education.

sities will be unavoidably affected by these national patterns, if not in the size of entering classes then at least in the distribution of these students across regions and population groups as these patterns change. Second, the national patterns provide a yardstick for assessing the changes in store for New England. Third, as a relatively labor-short region, New England's economic growth and employment pictures may be particularly vulnerable to fluctuations in the number of new workforce entrants, both high-school and college graduates.

Nationally, the pool of high-school graduates recently experienced a brief recovery: an increase of 4 percent between 1986 and 1988. This brief recovery followed the declines that have occurred since the 1970s, although these earlier declines are not indicated in **Figure 1**. After 1988, the national totals fall precipitously, virtually replicating the fall-off in births that occurred in the period 1970-1974. The decrease between 1988 and 1992 is projected to be nearly 12 percent nationally, and the totals will remain at this low level through 1994.

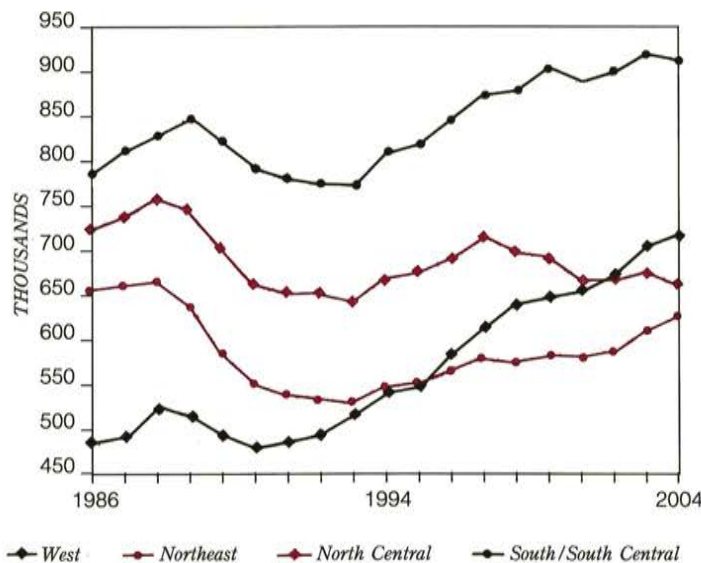
Of equal significance to this decline and valley is the sharp and continuous recovery in the number of high-school graduates that will occur between 1994 and 2000, followed by another sharp increase in 2003. By the end of the projection horizon in 2004, the number

tained recovery is in sight. By 2004, new graduates are projected to be 8 percent below the 1986 level.

In contrast, the patterns in the South/South Central and West are quite different. In both regions, the projected dip between 1988 and the early 1990s is less pronounced, and the recovery is much stronger. By 2004, the total graduating class in the South/South Central region is projected to be 16 percent larger than the 1986 class. Even more dramatically, the graduating class of 2004 in the West is projected to be 47 percent larger than that of 1986, including a doubling of graduates in Alaska and Nevada, an 80-percent increase in Arizona, and an increase of more than 60 percent in California. Clearly, the national recovery projected for the late 1990s reflects uneven patterns across regions. Continuous growth in the West and South is expected to offset decreases in the Northeast and North Central regions.

FIGURE 2

*High School Graduates, 1986-2004 (projected)
By Region*



Source: Western Interstate Commission for Higher Education.

of graduates is expected to exceed the 1986 level by nearly 10 percent, but will fall short of the historical peak that occurred in the 1970s. (Bear in mind that these are patterns determined by those already born and by students already in the school system. Only dramatic and unprecedented changes in school progression patterns would change these patterns significantly.)

As **Figure 2** shows, the national "roller coaster" pattern of projected high-school graduates is composed of very different regional trends. The Northeast, including New England and the Middle Atlantic states, will experience a very sharp decline, from more than 650,000 new graduates in 1988 to about 520,000 in 1994. This will be followed by a gradual recovery, but total graduates in the region in 2004 will still stand at 5 percent below the 1986 level. A similar sharp decline is projected for the North Central region, where no sus-

sharpest in the nation. In the decade after 1976, births in New England increased steadily, but still remained more than 20 percent below the 1963 level in 1986. The effects of these significant demographic changes have been and will continue to be felt very directly in New England's schools, with those born at the low point in births (1976) at the traditional college-entering age in 1994.

In times of intense economic change and population mobility, migration in and out of states also has a significant impact on school-age cohorts. **Table 1** shows the estimated effects of interstate migration on the size of single school-age cohorts in the mid-1970s and mid-1980s. The changes over this 10-year period are significant in some states. In Connecticut, the net immigration of 3.2 percent at the grade-school level reversed to a net out-migration of 2.4 percent, a reversal in school-age migration that was shared by Maine.

New England's colleges and universities may need to tap other areas of the nation in order to fill college classes.

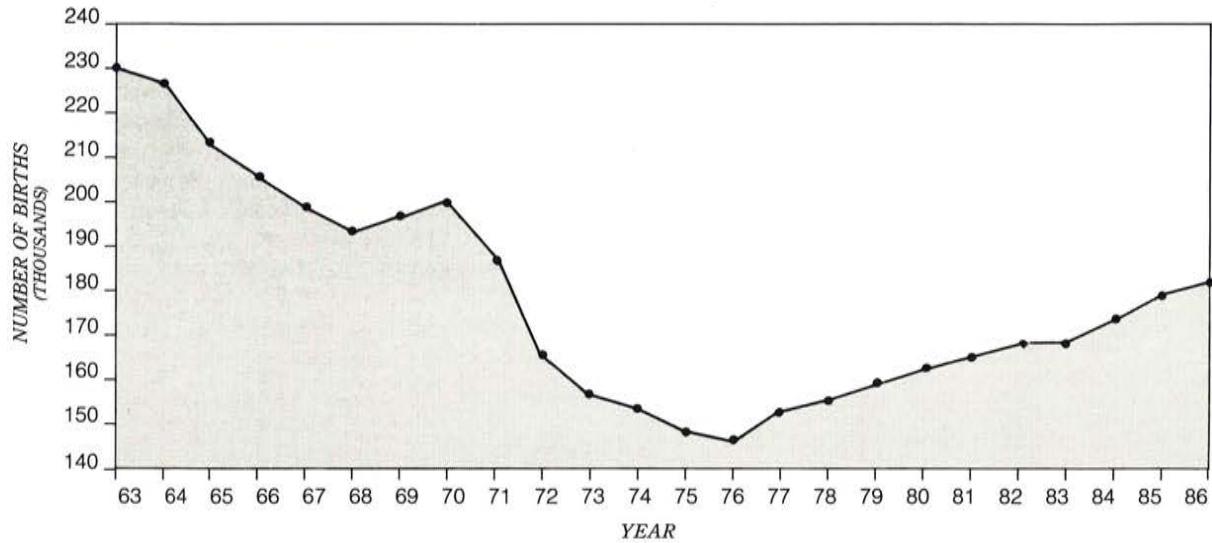
The outlook for New England

The projections for high-school graduates in the six New England states reflect underlying demographic trends and educational patterns, as they do for the nation as a whole. Three factors in particular—trends in births, in- or out-migration from states, and patterns of progression through school to graduation—shape the projections for future high-school graduates in New England.

Figure 3 illustrates the steep declines in the number of births per year in New England, from 230,000 in 1963 to slightly more than 145,000 per year in 1976, a drop of nearly 40 percent in this period alone. Nationally, births peaked in the late 1950s, then began to decline. The drop in New England, from the peak of the baby boom to the trough in the mid-1970s, was among the

FIGURE 3

Births in New England



Source: Western Interstate Commission for Higher Education.

In New Hampshire and Vermont, in-migration continued, but at a slower rate than during the 1970s. In Massachusetts, the out-migration slowed from 2.6 percent to a modest 1.0 percent, while in Rhode Island the out-migration reversed to a net in-migration. These estimated migration factors are based on grade-school enrollments only, and may not be consistent with overall migration rates or rates for other age groups.

Patterns of student progression through school also have a significant impact on the size of high-school graduating classes. Table 2 shows the progression of a cohort from ninth grade to graduation for 1976 and 1986. The crude cohort progression shows the size of the graduating class as a simple percentage of ninth graders four years earlier. The second column for each year shows this percentage adjusted for migration in or out of the state, using the estimated migration factors presented in Table 1.

TABLE 1
Affects of Migration on Grade-School Cohorts
Change in Size of Cohort

State	1972-73 to 1976	1982-83 to 1986
Connecticut	+3.2	-2.4
Maine	+4.9	-1.6
Massachusetts	-2.6	-1.0
New Hampshire	+4.2	+2.2
Rhode Island*	-7.5	+1.2
Vermont*	+2.8	+1.5

*Indicates non-public school data are not available. Rates are based on public-school enrollments only.

Note: Migration rates are calculated by tracing a single cohort from second through sixth grade.

In five of the six New England states the progression to graduation appears to be somewhat lower in 1986 than in 1976, after adjusting for estimated migration. In three of these states the crude progression and percentage is also lower. In other words, fewer ninth graders made it through to graduation in 1986 than did 10 years earlier. Only in Connecticut did the adjusted progression ratio increase, although even in this state there is no improvement unless estimated out-migration is taken into account. These measures provide little or no evidence that the actual progression patterns or graduation rates of individual students moving through the school systems have improved between the 1970s and 1980s.

As shown in Figure 4, these factors shape the outlook for the size of future high-school graduating classes in New England. The drop between 1988 and 1991 is exceptionally steep, continuing to decline more gradually through 1994. The total decline is more than 20 percent, from approximately 157,000 graduates in 1988 to 121,000 in 1994. After 1994, the recovery is gradual but sustained. By the year 2000, the number of new graduates is projected to be back up to nearly 140,000; and by 2004, back to almost 150,000. This surge at the beginning of the new century reflects the upturn in births between 1982 and 1986 (see Figure 3). The totals include estimated non-public graduates in those states (Rhode Island and Vermont) that do not collect these statistics.

Within the region, states show considerable variation in projected high-school graduates (see Figure 5). Over the short term (1986 to 1992), the largest decreases are projected for Connecticut, Massachusetts and Rhode Island; all face decreases of around 20 percent. Projections for Maine, New Hampshire and Vermont indicate decreases of 10 percent or less prior to 1992. Following this, all states in New England are projected to face gradual increases in the size of high-school graduating classes. These increases are most pronounced for

TABLE 2

Cohort Progression from Ninth Grade to Graduation

State	1976		1986	
	Crude Cohort Progression	Adjusted for Migration	Crude Cohort Progression	Adjusted for Migration
Connecticut	77.5%	77.0%	77.2%	80.2%
Maine	78.6	81.0	76.1	78.4
Massachusetts	80.4	80.8	75.8	77.3
New Hampshire	78.5	82.2	76.1	80.1
Rhode Island*	71.2	81.0	73.1	78.4
Vermont*	81.3	80.8	81.2	77.3

*Based on public-school enrollments only; non-public school data are not available.

New Hampshire and Vermont, with projected increases of more than 20 percent and 10 percent, respectively, by the year 2004. The other four states all remain below the 1986 number of graduates at the end of the projection horizon, despite steady increases in the late 1990s.

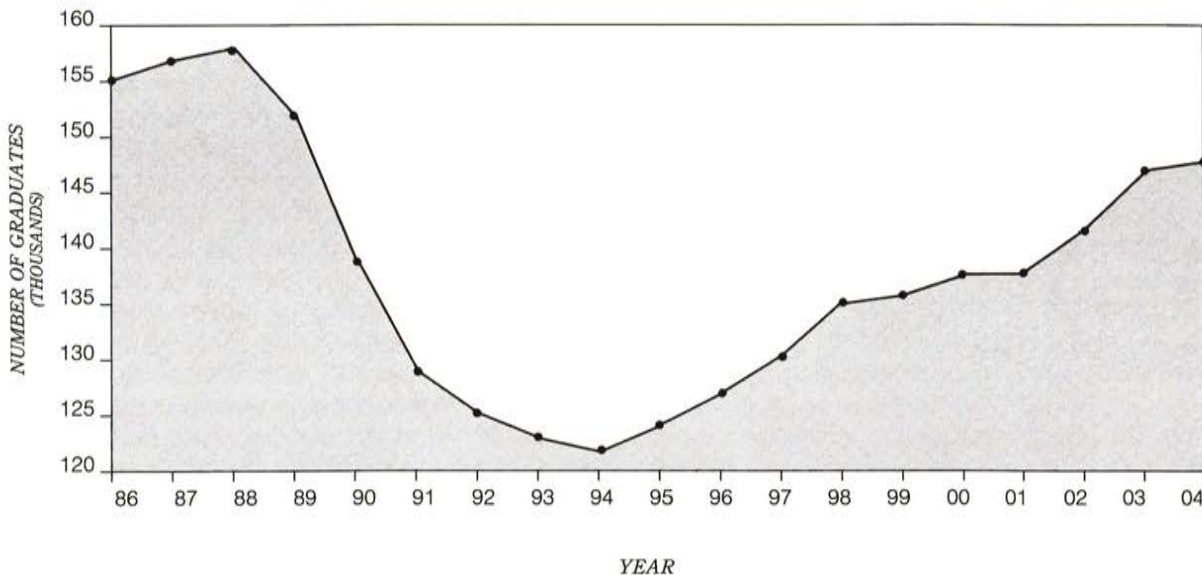
Has the outlook for a recovery in the number of high-school graduates improved during the 1980s in conjunction with continued economic growth in the region? **Table 3** compares the WICHE graduate projections based on data through 1982 (published in 1984) with those based on data through 1986 and a modified

projection methodology. The new projections include non-public graduates for all states, separately identified in the table. The modifications to the methodology previously used involve using exponential smoothing (a smoothed six-year average) in most instances. This gives greater weight to trends and conditions in recent years, compared to simple averages over longer time periods, and reduces the margin of error for near-term projections.

The new projections for Connecticut, Maine, New Hampshire and Rhode Island are significantly higher than the old projections based on 1982 data. For Massachusetts and Vermont the new public-school graduate projections are lower, but only slightly so, as shown by the projections on **Table 3**. For the New England states as a whole, the public-school graduate projections are up 5.6 percent for 1998, compared to the projections previously published by WICHE. These changes reflect the use of the modified methodology, and the sustained economic prosperity of most areas of New England. Taking into account the more than 15,000 graduates of non-public high schools in New England not included in the old projections, total high-school graduates in New England are now projected to number more than 135,000 in 1998.

FIGURE 4

*Projected Total High School Graduates in New England
1986-2004*



Source: Western Interstate Commission for Higher Education.

Before the mid-1990s, the number of high-school graduates will drop to a 30-year low.

Conclusions

Today, New England has the lowest regional unemployment rate and highest level of per-capita income of any region. Sustaining this growth depends upon many factors, one of which is whether the number and education of those entering the workforce will be sufficient to meet future needs. Thus, the size of future high-school graduating classes has wider implications than simply filling the entering classes of New England's many colleges and universities. Trends and changes are also likely to affect the conditions of New England's economy and society.

No one can say what the necessary replacement rate for new high-school graduates is with any degree of certainty. Yet the downward trend in new graduates that has occurred in the region and in the nation since the late 1970s, and which will accelerate again between 1988 and 1998, is severe enough to be of concern. Fortunately, the demographic trends and enrollment projections indicate a recovery from these downward trends in graduates—a recovery that should be reasonably steady in New England and very substantial in other areas of the country, particularly the West and Southwest.

New England's education and business sectors may need to look increasingly to other areas of the nation to fill college classes and meet skilled workforce demand. As importers of college students from across the country, the region's institutions may need to recruit more intensively from the West and the South, where the short-term declines in graduates will not be as severe, and longer-term prospects for growth are more

TABLE 3
Changes in Projections for New England High-School Class of 1998

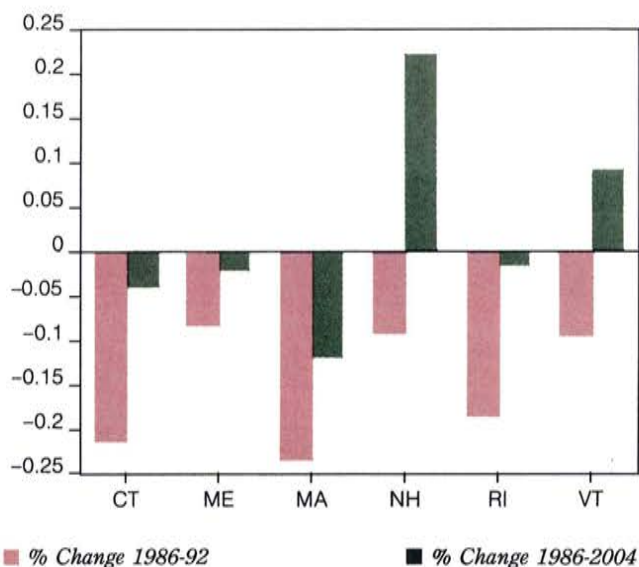
State	1984 Projections*		1988 Projections	
	Public	Non-public	Public	Non-public
Connecticut	29,501	26,607	6,105	32,712
Maine	11,951	12,889	1,125	14,014
Massachusetts	48,525	47,215	10,555	57,770
New Hampshire	9,835	12,280	1,434	13,714
Rhode Island	7,247	9,018	1,106	10,124
Vermont	6,003	5,664	1,418	7,082
New England	113,062	113,673	21,743	135,416

*Projected graduates for Connecticut include both public and non-public graduates. The projections for all other states are for public graduates only.

Note: The 1988 projection which is most comparable to the 1984 projection for each state is highlighted.

FIGURE 5

Short-Term and Long-Term Projections by State Total High School Graduates



Source: Western Interstate Commission for Higher Education.

positive. This involves not just a shift in the regional distribution of new students, but also changes in the characteristics of incoming students. Growth in the West and Southwest, for example, will be fueled by growth in minority populations, and, one would hope, in the number of minority students pursuing higher education. These populations are decidedly a more important target for recruitment, for solid demographic reasons as well as for reasons of equity.

Success or failure will depend upon the actions of New England's colleges and universities.

To sum up, the outlook for future college enrollments in New England is mixed: mixed over the foreseeable time horizon because of cycles in the size of high-school graduating classes; mixed across the New England states in terms of short- and long-term trends; mixed when comparing New England with the higher-growth regions of the nation; and mixed across colleges and universities, since enrollments will depend on recruitment areas and efforts. Projections of high-school graduates and other planning tools can be helpful to states and institutions in meeting these contingencies, but success or failure will depend upon the actions of New England's colleges and universities in what may become an increasingly bear market for enrollments. □

Charles S. Lenth is senior program director at the Western Interstate Commission for Higher Education in Boulder, Colo.; Robin Etter Zúñiga was primary author and researcher for this report.



Enrollment Decrease of 4 Percent Anticipated for Fall

WENDY A. LINDSAY



CAMPUS
1990

Colleges throughout New England will continue to experience difficulty in predicting higher-education enrollments as an apprehensively awaited five-year decline in high-school graduates hits the region.

According to the New England Board of Higher Education's 30th annual Vacancy Survey, conducted in May, more than 6,800 freshman openings existed at New England two- and four-year independent and four-year public colleges and universities. This represents an increase of 4 percent over last year. As of May, qualified freshman and transfer applicants for the fall term were still being accepted by 76 percent of New England colleges and universities; a total of 177 New England institutions were still taking freshman and transfer applications for the fall; and 57 public and independent institutions indicated they were not taking additional fall-term applications. NEBHE's survey received a 100-percent response from undergraduate campuses in the six states.

According to national projections by the Western Interstate Commission for Higher Education, a 4-percent decrease in the number of high-school graduates was predicted for 1988-89. John C. Hoy, president of the

New England Board of Higher Education, commented: "It is more than coincidence that the increase in freshman openings of 4 percent matches the predicted decrease in numbers of high-school graduates this year."

This spring, college admissions directors found themselves considering unprecedented numbers of "wait-listed" students: those who didn't make the first round of acceptances. Even some of the most selective private colleges and universities have made use of their waiting lists in order to ensure an adequate freshman class.

The NEBHE survey revealed a significant increase—39 percent—in the number of freshman openings reported by the region's four-year state colleges and universities. On the other hand, transfer vacancies reported by this same group *decreased* by 33 percent, which may indicate that students are choosing to remain enrolled at the institution where they originally matriculated. Transfer vacancies reported by two- and

PHOTO ABOVE:

New England's fall enrollment picture will include more "wait-listed" students. In the future, colleges and universities may have to do more recruiting outside the region.

four-year independent institutions declined by 4 percent. The survey revealed a total of 5,900 transfer openings at two- and four-year independent and four-year public institutions.

An apprehensively awaited

five-year decline in high-school graduates

has hit the region.

Two-year technical and community colleges

In keeping with their mission to provide access to all state residents, the majority of New England's community colleges reported unlimited space for the fall term. Because of their "open" admissions policy, many community colleges indicated they typically receive a large number of fall-term applications over the summer. NEBHE estimates about 20,000 openings among the 30 community colleges and 20 two-year vocational/technical institutes that reported openings. Cost, access and improved transfer articulation between two- and four-year campuses makes the community college transfer program increasingly attractive to cost-conscious students and parents.

The complete NEBHE analysis of institutions with openings has been sent to every public and private high-school guidance director in New England. Survey results are also available for \$2 (to cover postage and handling) from NEBHE, 45 Temple Place, Boston, MA 02111. □

Wendy A. Lindsay is assistant editor of *Connection*.

University of Hartford engineering program for young scholars

The National Science Foundation, projecting a deepening shortage of graduates in science and engineering, has agreed to support a University of Hartford program designed to encourage young scholars with an interest in those fields.

Funded by an NSF grant of \$82,515, the Connecticut Young Scholars Program, held this summer at the University of Hartford, is designed for highly motivated or gifted ninth and 10th graders. The six-week, on-campus summer program includes field trips, led by professionals, to project sites including the Connecticut Yankee Nuclear Power Station, the Coast Guard Academy and the Army Corps of Engineers Dam in Torrington.

STATE-BY-STATE VACANCY INFORMATION

CONNECTICUT

In Connecticut, 37 institutions (20 two-year and 17 four-year) reported 4,202 freshman and 2,660 transfer vacancies.

Breakdown of Openings:

	Freshman	Transfer
Two-year public	76%	61%
Four-year public	7%	12%
Two-year independent	1%	1%
Four-year independent	16%	24%

MAINE

In Maine, 28 institutions (11 two-year and 17 four-year) reported 2,236 freshman and 1,775 transfer vacancies.

	Freshman	Transfer
Two-year public	17%	6%
Four-year public	50%	65%
Two-year independent	15%	17%
Four-year independent	18%	10%

MASSACHUSETTS

In Massachusetts, 70 institutions (29 two-year and 41 four-year) reported 6,357 freshman and 4,958 transfer vacancies.

	Freshman	Transfer
Two-year public	67%	59%
Four-year public	6%	8%
Two-year independent	10%	8%
Four-year independent	17%	23%

NEW HAMPSHIRE

In New Hampshire, 20 institutions (12 two-year and 8 four-year) reported 632 freshman and 546 transfer vacancies.

	Freshman	Transfer
Two-year public	46%	45%
Four-year public	0%	2%
Two-year independent	26%	28%
Four-year independent	28%	22%

RHODE ISLAND

In Rhode Island, 5 institutions (1 two-year and 4 four-year) reported 1,200 freshman and 650 transfer vacancies.

	Freshman	Transfer
Two-year public	33%	23%
Four-year public	0%	46%
Four-year independent	67%	30%

VERMONT

In Vermont, 17 institutions (6 two-year and 11 four-year) reported 537 freshman and 422 transfer vacancies.

	Freshman	Transfer
Two-year public	9%	4%
Four-year public	9%	11%
Two-year independent	29%	30%
Four-year independent	52%	52%



New England Campus Architecture: Being New in Old Ways

DAN PINCK



CAMPUS
1990

In the evolution of campus architecture and planning, perhaps the greatest strides of the past 15 to 20 years have been made in New England's institutions. These advances have involved imaginatively combining the traditional with the contextually suitable contemporary.

During the campus building boom of the 1960s, older facilities were neglected because it was easier to obtain money for constructing new ones. But in the 1970s, many institutions began to recognize that they were losing a great deal by tearing down old buildings: a sense of history and continuity was being lost. The absence of cohesive growth and comprehensive guidelines for that growth was all too apparent.

Then came the preservation movement, a national phenomenon focused on preserving architecturally and historically valuable buildings. A renewed appreciation of old buildings and an enthusiasm for their potential reuse and adaptation characterized its proponents; and "being new in old ways" became the key phrase in reshaping our campuses.

The initial motivation behind preservation was largely aesthetic and sentimental, but it soon became financial. The preservation movement brought with it government tax incentives, making the recycling of existing buildings far less costly than the construction of new facilities. Adroit architects discovered that many old campus buildings could be adapted to accommodate a wide variety of uses, and that underutilized spaces and volumes could be regained as an increase of footage.

A Boston-based architectural firm, CBT/Childs Bertman Tseckares & Casendino Inc., did pioneering work in preserving campus buildings; it was the first ar-

chitectural firm to receive an award from the National Trust for Historic Preservation. Through planning and design studies, CBT/Childs was able to reveal to university administrators how the useable space within a building could be increased from 15 to 25 percent. Using an initial study, the architects were often asked to develop inventories of underutilized campus space and to determine ways to reorganize and reallocate it. Sasaki Associates, Inc., Ellensweig Associates, Inc., and Perry Dean Rogers & Partners are other firms that have achieved distinguished results in adapting valuable older buildings to contemporary uses in the region's institutions.

Concomittant with the interest in restoring buildings was a major advance in the development of sophisticated tools for planning, which could be applied to help institutions better define long-range goals. Planning is by no means a new activity; but what characterized much planning in the past was the lack of hard data to account for a comprehensive picture of an institution's educational, social and physical goals, bounded by budgetary constraints. Planning without such data could produce a spotty physical plant. Today, there are few reputable architectural firms that do not have a professional planning orientation, and many institutions have discovered the value of commissioning master plans for their campuses.

Even when decisions regarding the physical plant are not wholly financially driven, there can be valid reasons for avoiding the high cost of new construction by redesigning existing facilities to accommodate more than one use. And what architects and administrators have learned is that good design can actually save money; this has been an important finding in supporting the architectural and planning concepts that dignify so many campuses.



Changes in campus life

Campus life, like that of the real world, has changed in recent years at a fast and furious pace. Advancements in technology, a renewed emphasis on instructional strategies and changes in social mores have had an almost staggering influence on the campuses of the 1980s. Today's students demand the freedom to choose, and many institutions have responded to their demands, providing maximum flexibility in curricula, housing, recreation, dining and many other areas. The physical plants of previous decades were generally not designed to provide this flexibility, and many problems have arisen in rearranging physical resources to better serve diverse campus populations and educational programs.

Managing to design a new building in a distinctly new style that does not contradict adjacent buildings demands consummate skill and restraint. An equally

CLOCKWISE FROM LEFT TO RIGHT:

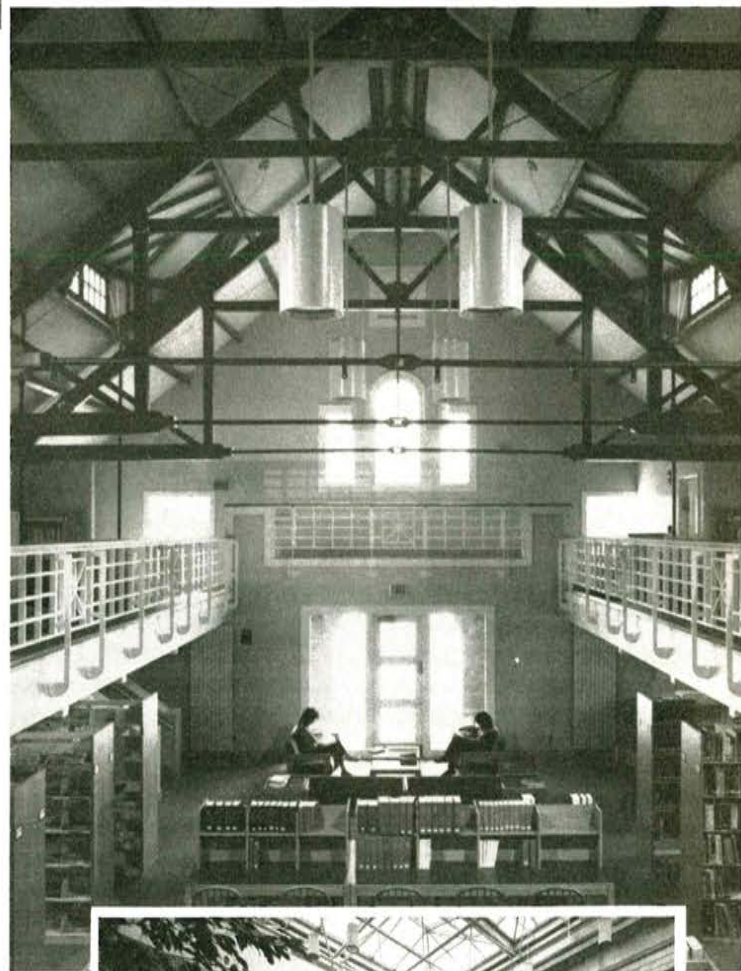
MOUNT HOLYOKE'S VILLAGE COMMONS: In developing the Village Commons to enhance commercial activity in South Hadley, Mass., Mount Holyoke created a diversity of buildings that avoids becoming literal restoration. Graham Gund Architects of Cambridge tied the individual structures to the context of the surrounding New England architecture.

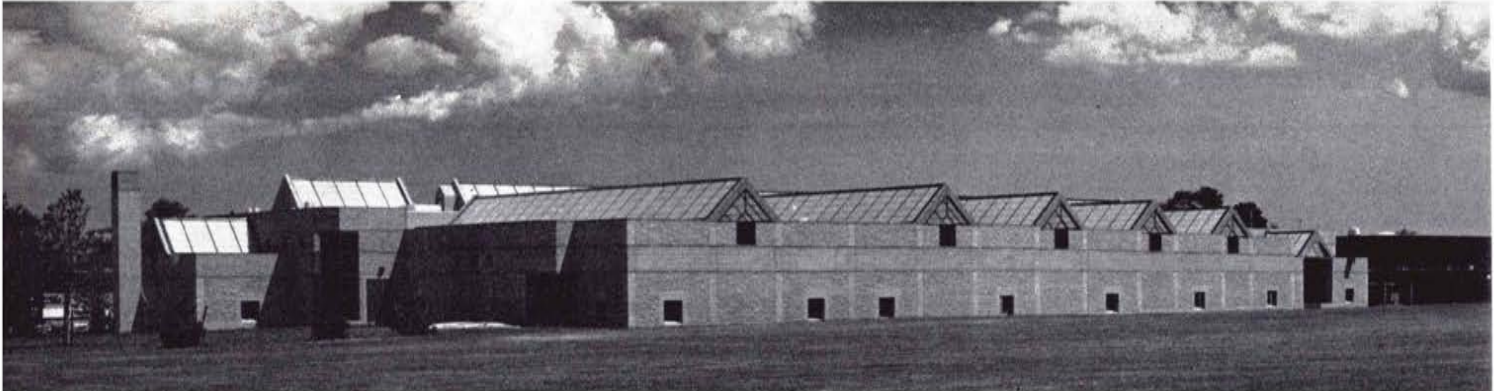
David Hewitt photo.

EDITH STEIN HALL AT THE COLLEGE OF THE HOLY CROSS: Designed to rest comfortably amidst a mixture of rich architectural styles, this new 75,000-square-foot office by Sasaki Associates, Inc. of Watertown, Mass. is divided into two distinct, programmatic structural zones. The lower three floors contain classrooms; the upper two consist of faculty offices. Steve Rosenthal photo.

ABPLANALP LIBRARY AT WESTBROOK COLLEGE: Shown here is the main reading room, formerly a gymnasium, artfully adapted for this Portland, Maine college by Amsler Hagenah MacLean, Architects Inc. of Boston. Nick Wheeler/Wheeler Photographics.

HARVARD MEDICAL SCHOOL: This Medical Education Center is the first teaching addition to the school since 1906. Ellensweig Associates, Inc. of Cambridge closed the open end of an existing U-shaped building, creating a three-story skylit courtyard or commons at the center of the complex. Steve Rosenthal photo.





ARCHITECTURE DIVISION BUILDING AT ROGER WILLIAMS COLLEGE: Unpretentiously modern and compatible with other campus buildings, the new division of architecture at this Rhode Island college provides a stimulating atmosphere in which to study the design arts. William Kite Architect, Inc. of Providence organized the building along a central skylit gallery.

Steve Rosenthal photo.

high degree of perceptiveness is required to design a building complementing the style of existing buildings. The quality of construction and the materials used have a corresponding weight in making judgements. Not only have improved building technologies been utilized, but many major construction firms, among them George B. H. Macomber, Gilbane Construction Co. and The Perini Corp. have buttressed the architects' design skills with their own competencies. Their work in New England is as notable as the many fine new buildings.

One person's system is another's component; and my opinion of the quality of new buildings is, ultimately, a subjective one. But supporting evidence of my opinion can be gleaned from the regional and national awards many of the buildings have gained in the architectural profession's publications, including *Architecture*, *Architectural Record* and *Progressive Architecture*. A decade ago, New England educational facilities rarely appeared in these magazines. Now, the region's campuses predominate in the magazines' coverage of good buildings.

Inevitably, there are still poorly designed structures, but these are in the minority. With more emphasis on comprehensive campus-planning studies, it is less likely that rude buildings will appear on our campuses. □

Dan Pinck is a consultant who writes on architecture and planning.

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Boston Neighborhoods, Universities Lock Horns Over Student Housing

ALAN DALY



Some major New England cities have maintained love-hate relationships with higher education. Nowhere, perhaps, are the feelings as strong as in Boston. On the one hand, the city depends on the yearly influx of students and faculty to pump millions of dollars into the local economy. Owners of multi-family homes and apartment buildings are among the chief beneficiaries. Students and faculty, who often cannot find on-campus housing, have certainly been a factor in the widely chronicled surging rental costs in the greater Boston area.

Already the victims of a nationwide trend toward lower enrollments, Boston-based colleges and universities must compete against skyrocketing housing costs as well.

On the other hand, many long-time residents of Boston neighborhoods have grown resentful—and at times openly hostile—towards the universities and their students. According to Theresa Gallagher, a member of the Fenway Joint Neighborhood Committee, the influx of students to Boston neighborhoods in late August makes it hard for members of the "ordinary working population" to find a reasonably priced apartment—assuming such a thing still exists in Boston. Furthermore, year-round residents of neighborhoods that are near campuses say they must contend with

various types of misbehavior and general rowdiness on the part of the students.

"When you go to open your windows for the first time in the spring, the noise level is incredible," says Gallagher. "I've been woken up in the middle of the night several times and have had to go out into the street to try to stop the noise."

Northeastern vs. Fenway residents

When Northeastern University announced plans to build a 700-bed dormitory at Huntington Avenue and Forsyth Street, a coalition of six Fenway community groups threw down the proverbial gauntlet. For weeks, Fenway residents grappled with Northeastern in a debate that pitted the school's need for more student housing against the residents' desire to maintain control of their neighborhoods. The two sides finally hammered out a tentative agreement whereby the university would gradually increase its supply of on-campus housing in order to ease student demand for space in the surrounding neighborhoods. In addition, Northeastern agreed to take stricter measures in controlling off-campus student behavior.

"We've been meeting with the community and trying to work on ways to institute stricter accountability and judicial sanctions against rowdy behavior," notes Ron Martel, Northeastern's director of housing. "But the reality of the situation is that according to statistics provided by the Boston Police, only 20 percent of the individuals involved in rowdy behavior in this area have been Northeastern students."

In June, negotiations between Northeastern and Fenway residents broke down over the number of student beds to be eliminated from the Hemenway Street dormitories, a move geared to reduce student disturbances in the area. On June 21, Fenway residents filed a lawsuit against Northeastern and Boston's Zoning Board of Appeals to halt construction of the Huntington Avenue dormitory pending a hearing, which at *Connection* press time has not yet been scheduled.

Northeastern's director of community affairs, Joseph Warren, does not see this latest development as a stalemate. "It's just another tactic in the ongoing negotiations," he says. "Remember, the Fenway is just one of nine communities surrounding the university, and the



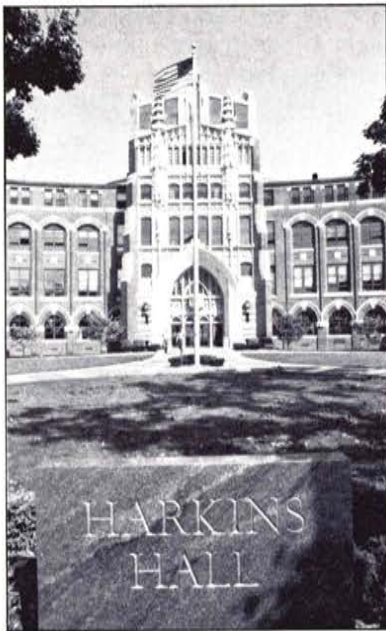
Both Northeastern and Boston University provide an array of services to their respective communities. Here, a B.U. clean-up brigade at work in Kenmore Square. Boston University Photo Services.

other eight are doing just fine. Right now, the Fenway is the squeaky wheel. We're looking forward to resolving this thing, and I think we will."

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Boston University has also faced its share of neighborhood complaints about rowdy behavior. However, Joe Amoroso, the school's director of community relations, is working to keep those complaints to a minimum.

"I consider this job a time-sensitive position," says Amoroso. "If I receive a complaint about one or several of our students, I try to investigate the situation and get back to the person [who complained] within 24 hours."

Both Northeastern and Boston University provide an array of services to their respective communities, which include annual planting of trees and shrubs, health-care for the elderly, scholarships for neighborhood youths and clean-up efforts.

Students and faculty are victims, too

The greater Boston area is burdened by both excessive home prices and one of the most expensive rental markets in the nation. Rents in the Boston area increased by 6.1 percent in 1988—more than those in any major metropolitan area in the United States except Washington, D.C., according to a recent study. Rents have jumped 64 percent since 1982. Moreover, Boston-area residents pay a larger portion of household income in rent than residents of any other major city in the United States.

Many longtime residents of Boston neighborhoods have grown resentful—and at times openly hostile—towards the universities and their students.

Such figures do not augur well for Boston-based institutions of higher education. Already the victims of a nationwide trend toward lower enrollments, they now must compete not only against other schools, but against skyrocketing housing costs as well.

"Boston University students have suffered from a housing shortage in the past, but now the real problem is affordability," says Maureen



To bolster community relations, each year Northeastern donates thousands of flowers to the university's neighbors in several areas of Boston.

J.D. Levine/Northeastern University photo.

Hurley, who as B.U.'s director of orientation and off-campus services spends much of her time trying to help undergraduates, graduate students and faculty locate suitable housing. "There are plenty of luxury units available in the B.U. area, particularly in Back Bay."

A quick glance through B.U.'s book of exclusive listings tells the story: On Marlborough Street, a studio apartment rents for \$1,000 per month; a two-bedroom apartment in a middle-class Brighton neighborhood for \$1,400; a three-bedroom in the Back Bay for \$1,580—the list goes on. If students are willing to live in the more downscale neighborhood of Allston, they might be able to find a studio for around \$500, a one-bedroom for \$650, a two-bedroom for \$800 or a three-bedroom for \$1,000.

Boston University is taking immediate steps to address the housing shortage and affordability problem for its students. University officials recently proposed to build 2,100 student dormitory units in five buildings on a 10.3-acre site bordering Commonwealth Avenue. However, before the proposed dorm can be built, B.U. must win the support of the city and a citizen task force made up of local residents. That may not be easy: Like Northeastern, B.U. has had plenty of run-ins with neighbors in the Audubon Circle area. □

Alan Daly is a freelance writer from Cambridge, Mass. He was formerly senior editor at *Mass High Tech*.

Creating Pluralism On Campus

JOANN MOODY



CAMPUS
1990

June brought hope for minority students in the two states where most of New England's Black and Hispanic citizens live. At its final meeting of academic year 1988-89, the Massachusetts Board of Regents approved the nation's first systemwide anti-racism policy. Later that month, the Connecticut Board of Governors for Higher Education adopted a new policy prohibiting racism and other acts of intolerance on the state's campuses.

Several months before these steps toward pluralism were taken, the New England Board of Higher Education hosted a Summit Conference on Educational and Employment Opportunity in New England, a first step towards enacting the recommendations presented in NEBHE's Task Force Report, *Equity and Pluralism: Full Participation of Blacks and Hispanics in New England Higher Education*.

"Pluralism," as defined by the visiting committee on Minority Life and Education at Brown University, and in NEBHE's report, is the acceptance and celebration of cultural differences. It improves on "diversity" in that the unique identity of each minority group is affirmed and respected, not squashed to fit a mold created by the majority. Three decades after American campuses were first integrated, pluralism is still far from being a reality.

The purpose of NEBHE's summit conference was to create a leadership network of individuals and organizations representing higher education, business, government and the media who are committed to working for Black and Hispanic educational and professional achievement. Brainstorming sessions focused on what steps must be taken to make this happen. To conclude the summit, state delegates met to formulate plans of action for implementing the report's recommendations. Throughout the two-day event, participants discussed their experiences with the issue of minority access and opportunity, expressing frustration and anger as well as tentative optimism.

Sara Melendez, vice provost and executive assistant to the president at the University of Bridgeport, and formerly associate director of the Office of Minority Concerns at the American Council on Education, emphasized the importance of strong leadership from college and university presidents. Leadership, she said, is essential to creating a hospitable climate for Black and Hispanic students and faculty. Melendez emphasized that leadership must then "trickle down" through the ranks, reaching each person on the campus. College presidents and boards of trustees should formulate long-term plans of action for their institutions; ask for periodic reports from faculty and staff on progress towards pluralism, and establish rewards and sanctions to underscore the seriousness of the goal, according to Melendez.



Wesleyan University has been cited repeatedly for its success in enrolling and graduating a significant and growing number of Black and Hispanic students. Nancy Walz/Wesleyan University photo.

CREATING PLURALISM

IN THE WORKPLACE

"Value differences" is a personnel policy at Digital Equipment Corp., which has plants throughout the world and employs 124,000. Reynaldo Cruz, a DEC manufacturing project manager, maintains that ongoing sensitivity workshops help managers and employees eradicate narrow and stereotypical conclusions they hold about people different from themselves.

As Cruz, a workshop instructor, explains in the late 1970s DEC senior managers saw that their workforce would have to become pluralistic, and initiated the corporate personnel policy. A "Cultural Board" at DEC, established in 1987 and made up of middle managers with diverse racial, sexual, ethnic and cultural identities, is now considering what other follow-up personnel policies may be needed. Although DEC is widely admired for its commitment to a pluralistic workforce, corporate officials continue to take steps that will help managers and workers value the differences among themselves and evolve into a more productive team.

"Discuss the topic of pluralism at every board of trustees meeting, every faculty meeting, every department meeting and every staff meeting," she said. "The president must show his or her determination to have the goal met. Lip service will not suffice.... Everyone in the campus community should think about their institution's practices, climate, structure and customs

that need to be changed to make the campus more hospitable to minorities." Melendez noted that faculty members should take a leadership position on the issue because their influence with students is so great. In fact, "each one of us can be a leader and become part of the eventual solution," Melendez said.

Melendez also advised that campuses seek non-traditional Black and Hispanic students, and cease the "cutthroat academic competition" for minority super-achievers. "Use a variety of measures to gauge talent and promise," she urged.

Panelists agreed with *Equity and Pluralism's* finding that SAT (Scholastic Aptitude Test) scores are insufficient in predicting the future collegiate success of minority and women students. Several experts have claimed that minority students with SAT scores lower than an institution's so-called median SAT score will predictably draw back and not apply. While campuses may be wise to relax their academic standards slightly when considering the enrollment of non-traditional students, they should *raise* their standards for graduation, and ensure that all students have mastered the requisite skills, Melendez said. She added that any tutoring and mentoring that are needed should be provided.

Wesleyan's journey to pluralism

Wesleyan University has been cited repeatedly for its success in enrolling and graduating a significant and growing number of Black and Hispanic students. In the mid-1960s, at a "moment of ethical correction," said Edgar Beckham, dean of the college, Wesleyan officials



The Summit Conference on Educational and Employment Opportunity in New England sought to create a leadership network committed to working for Black and Hispanic educational and professional achievement. Amor Photography.

MEDIA RESPONSIBILITY

The news media are "too often guilty of portraying African-Americans and Latinos as solely causing or being beset with problems," says Jeff Rivers, associate editor of the *Hartford Courant*. These narrowly drawn and often negative images can lead to minority youth thinking of themselves as "deficient people." Rather than portraying minorities in a monolithic manner, Rivers says, print and broadcast journalists should be more sensitive to the "wide diversity among people of color and include far more stories that reflect the full spectrum of the minority experience in the United States." Donna Latson Gittens, vice president of community affairs at WCVB-TV (Needham, Mass.) comments: "It is important and critical to alert the media to everyday lifestyle stories as well as the sensational—to ensure a consistent and balanced view of Black and Hispanic communities in the society as a whole." Gittens urges community and education leaders to make dialogue with media officials a more routine occurrence.



DEMYSTIFYING THE MINORITY CONDITION

Gayle Pemberton, director of minority affairs and lecturer in English at Bowdoin College, urges leaders throughout New England to help "demystify the minority condition." Black and Hispanic citizens are not "aliens," she says, even though "cultural imagery suggests they live on the margins of the culture and are not really partners in a collective enterprise." New imagery is needed, she says, and the problems of minority populations should not be dwelt on to the exclusion of their achievements. In addition, other dispossessed groups, such as poor whites, should be befriended and supported. Pemberton asserts that the commonality of those least served would be a healthy theme to stress.

"concluded that the campus had succumbed to the prejudices and discriminatory practices characteristic of American culture, and thereby denied regularly, if not systematically, members of minority groups access to the University."

Thanks to aggressive recruiting, Beckham related, in the fall of 1965 Wesleyan enrolled 12 Black and two Hispanic students. NEBHE President John C. Hoy was dean of admissions and freshmen at the time.

From 1965 until the late 1970s, Wesleyan continued its minority recruitment, successfully learning, "at times with pain and bitterness," Beckham said, how to accommodate the new students. For their part, "the new minority students learned first how to survive and then go beyond survival to 'ownership' of the Wesleyan environment."

Now, Beckham said, the university's goal is to leave diversity behind and achieve a more desirable goal, pluralism. While Wesleyan "celebrates and markets the diverse natures and backgrounds of its students," Beckham said, it has had to learn how to promote not only differences in the student body—differences of race, ethnicity, religious beliefs, political ideology, gender, sexual preference, age and social affiliation—but also the commonality of values and the spirit of community.

Pluralism improves on "diversity" in that the unique identity of each minority group is affirmed and respected.

For nine years, the Wesleyan Committee on Human Rights and Relations has helped provide a foundation for pluralism by monitoring interpersonal and intergroup relations on campus. The committee has brought incidents of racism, sexism and homophobia to the attention of the community, and sponsored workshops for minority and white students. Their work is credited with promoting more sensitive dealings among all those who participate in campus life.

Other efforts at eradicating racism at Wesleyan include:

- A Wesleyan chapter of Students Organized Against Racism holds sensitivity workshops, a Racial Awareness Week and other forums for the entire community.
- Asian-American, Black and Hispanic student organizations at Wesleyan have formed a council to actively support the academic pursuits of minority students.
- Mentoring of minority students is provided by attentive alumni "coaches" of all races.
- Through longitudinal tracking of the academic performance of minority students, Dean Beckham's office has gained practical insights into how to increase retention.
- With funding from the Hughes Foundation, special attention is given to minority success in the life sciences.



NURTURING BLACK AND HISPANIC FACULTY

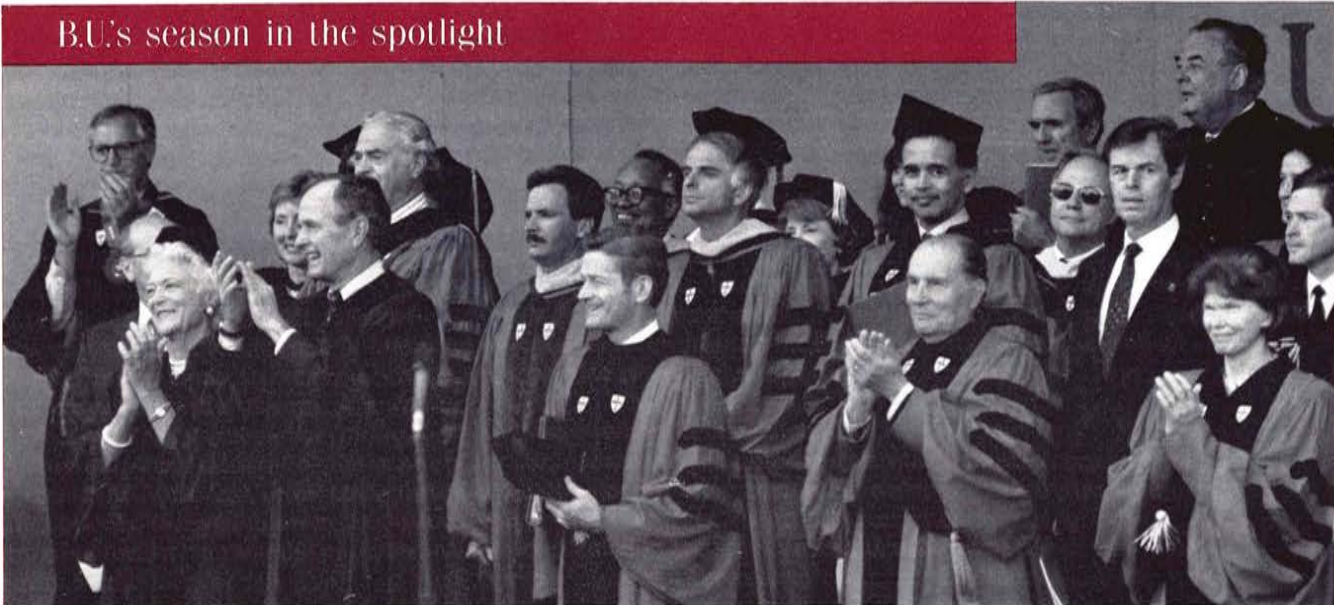
The NEBHE report *Equity and Pluralism* urges doctorate-granting campuses in New England to identify promising minority graduate students, provide them with mentors and special encouragement, and then either hire them as junior faculty after they graduate or help place them at other campuses within New England. Massachusetts Chancellor of Higher Education Franklyn G. Jenifer strongly advocates such a strategy. Jenifer began a successful "grow-your-own-minority-faculty" program in New Jersey. He is currently working on a statewide higher-education loan forgiveness program through which minority educators in the Commonwealth may reduce their debts in exchange for teaching in a Massachusetts public college or university.

- A Wesleyan program funded by the Mellon Foundation will identify and support promising Black, Hispanic and Native American undergraduate students as they move towards attainment of doctoral degrees and preparation for positions on college faculties.
- An ad-hoc group of trustees, faculty, administrators and alumni is working to secure more minority faculty.

Perhaps most importantly, over the years presidents of Wesleyan have demonstrated strong personal commitment to eradicating racism and moving the campus towards pluralism. "The problem has been one of recreating and sustaining community while continuing to exploit the richness of diversity," Beckham said. He added that Wesleyan is approaching but has not yet reached the stage where "our differences will become part of our shared self-esteem," and where "different groups will inquire into and celebrate their own cultural heritage, and Wesleyan will celebrate the celebrations."

A summary of the proceedings of NEBHE's Summit Conference on Educational and Employment Opportunity in New England can be obtained from the NEBHE offices at 45 Temple Place, Boston. Phone: (617) 357-9620. □

JoAnn Moody is associate vice president and legal counsel for NEBHE. She also directs the NEBHE program on Black and Hispanic Students Enrollment and Retention.



President George Bush joined President Francois Mitterrand of France for B.U.'s 150th commencement. Boston University Photo Services.

Newspapers in New England and across the country may have wished they had rented space this spring at the Kenmore Square Howard Johnson's... just within walking distance of Boston University.

In mid-March, their reporters were speculating on B.U. President John Silber's future as U.S. Senator Silber or Massachusetts Governor Silber. On March 24, Silber told the press he would seek neither position in 1990.

A few days later, the Chelsea, Mass. School Committee approved an ambitious plan that will make B.U. the first private institution to manage a public school system. B.U.'s 10-year project to improve the troubled school system in this inner suburb of Boston then sluggishly made its way through a series of other approvals, rich enough with controversy for fairly prominent placement in Boston-area newspapers. In June, the state legislature's approval of the B.U. initiative rated coverage on local TV news. The cameras are likely to return as B.U. officials defend the plan against a lawsuit filed by teachers' groups.

As the Chelsea plan moved forward, the media riveted its attention on the university's reported \$50-million stake in the success of Seragen Inc., a Hopkinton, Mass. biotechnology company that does not expect to turn a profit until at least 1993. The firm is trying to develop new treatments for cancer and other diseases. B.U.'s investment, which university officials say comes from current funds, equals almost one third of its \$161.9 million endowment. The coverage was generally unflattering.

But in mid-April, B.U. moved to the front pages and became the odds-on favorite in the very unofficial Commencement Speakers Bowl, upon Silber's announcement that President Bush would join President Francois Mitterrand of France for the university's 150th commence-

ment. Add to that separate B.U. events featuring Jordan's King Hussein and West German Chancellor Helmut Kohl, and the university, at times, seemed to corner even the international pages in this, the "spring of publicity."

Silber closed out April by opening a new chapter in college fundraising with his proposal to take out life-insurance policies on students and alumni, and collect the benefits when they die. The media reaction was chock-full of words like "morbid," but B.U. officials say the plan is alive and well. Silber's announcement "wasn't the testing-the-waters kind of thing. That program is fundamentally sound," says B.U. Vice President for Public Affairs Tom Cashman.

Cashman says the heavy news period allowed B.U. officials, including the university's 20 or so harried P.R. pros, to make positive new contacts with the media and the university's other constituencies, most notably, high-school juniors and philanthropists far and wide. Commencement day was the real coup, good enough for all the major television networks and page one of newspapers here and abroad, according to Cashman, who says B.U. has contracted with news-tracking companies to see just how far the coverage spread.

Regrets? Not suprisingly, Cashman thinks B.U. got "less than fair treatment" on the biotech and life-insurance stories. As B.U. officials see it, the biotech investment puts the university squarely behind scientific progress, and the life-insurance proposal shows it's watching out for its financial future. Says Cashman, "These stories were both somewhat misinterpreted. We were being criticized for doing things a university is supposed to do."

“Cautious Optimism” About Future of Chinese Programs

JOHN O. HARNEY

The violent suppression of pro-democracy demonstrations in Beijing prompted most U.S. study-abroad administrators to nix summer programs in China, and re-route students to Taiwan or Hong Kong. But a month after Chinese soldiers opened fire on unarmed student protesters in Tiananmen Square, several program sponsors in this hemisphere expressed cautious optimism about the future of the exchange programs.

Although many fall programs scheduled for Beijing also will be diverted to Taiwan and Hong Kong, some study-abroad sponsors said they will go ahead with plans to send students to the Chinese capital, and several others will hold programs in the mainland Chinese city of Harbin.

Harbin was the scene of some unrest in the spring, but the city in the country's extreme northeast is considered less politicized than other major student destinations on the mainland, and the Harbin Institute of Technology is regarded as the country's foremost center for language studies.

More than 1,000 American students were enrolled in Chinese universities during the 1988-89 academic year, and about 400 were there in June when soldiers launched their armed assault on demonstrators in Beijing.

Study-abroad administrators noted that most U.S. college students who studied in China over the past year were not at the center of the turmoil. Most attended Beijing Normal University or Beijing Foreign Languages Normal University, while the pro-democracy movement was centered at Beijing University. Many U.S. students completed their studies in late May, and witnessed peaceful student protests in Beijing, but not the violence that brought those demonstrations

to an end, program administrators said.

In the weeks following the massacre, the prospects for renewed student exchange with China at times appeared bleak. Chinese authorities extended their crackdown to student leaders from institutions other than Beijing University, and some hard-liners in China reportedly condemned student exchange with the West as a nagging source of pro-democracy ideas.

In June, the University of Massachusetts at Amherst announced a one-year suspension of its programs at Beijing Normal University, the Beijing University of Foreign Studies and the Shaanxi Normal University in the city of Xi'an. Students accepted to the Chinese programs were offered places in the UMass program at Tunghai University in Taiwan.

Some hard-liners in China reportedly condemned student exchange with the West as a nagging source of pro-democracy ideas.

A program sponsored by Wesleyan University in partnership with Duke and Washington universities normally sends students to Beijing for the summer, and then on to Nanjing for the fall semester. This year's 23 participants are spending the summer in Hong Kong, but may go on to Nanjing in the fall if program sponsors determine the city is safe.

At least one midsummer program slated for Beijing took place as scheduled. In late June, a Cape Cod Community College program sent about 18 continuing-education students to the University of Beijing's College of Economics for a month-long study of Chinese culture, economics and politics.

Boston-based China Educational Tours, which manages the Cape Cod Community College summer program, diverted or cancelled most early-summer trips to Beijing. But because the Cape Cod program didn't begin until June 28, program officials said they had time to assess

Business is replacing pleasure at Berlitz

Berlitz International, whose venerable pocket guides have helped many an American traveler order *gambas al ajillo* in Madrid and *saumon fumé* in Paris, may also provide a gauge of America's adjustment to the increasingly global economy.

While the United States is running enormous trade deficits with Japan and West Germany, those Berlitz students who cite work among reasons for learning a language are running toward classes in Japanese and German, according to a company marketing study. French and Italian classes are more likely to attract students gearing up for vacations, and Spanish can go both ways, the study says.

Berlitz marketing director Patricia Sze says the number of live language lessons offered in Japanese increased 16 percent from 1987 to 1988. Arabic has been declining since the end of the oil crisis, while Russian is edging up in response to perestroika.

More than 60 percent of individuals who take Berlitz courses do so partly because learning a foreign language "is either mandated by their employers, or something the employees feel will help them get ahead," says Sze. "Americans have been humbled a little bit. People are realizing it might make sense to learn a little Japanese, maybe not enough to negotiate business, but at least to show goodwill."

the situation in Beijing and, after consulting with the U.S. State Department and legal counsel, decided to go ahead with their plans.

CET executive director Jim May noted that besides concerns about safety, program sponsors worried that the atmosphere of suppression in China would make Chinese citizens reluctant to interact with the students, dashing a key benefit of study-abroad programs. But May said the program participants wear badges to distinguish themselves from foreign reporters and diplomats, with whom many Chinese dare not talk, and interaction is taking place. "The students are reporting back to us that their reception in Beijing has been very positive," he said.

Fall programs to continue

CET plans to offer fall programs in Taiwan, Beijing and Harbin. In past years, CET courses at Harbin have been reserved for the program's top students. But next year, the Harbin courses will be open to less advanced students who want to avoid Beijing, May said.

CET staff who remained at the Beijing Foreign Languages Normal College after the massacre in Tiananmen Square reported no trouble on the campus, according to May. As for the more northerly site: "There were news reports of 'something' going on in Harbin. But our staff there could not confirm those reports," said May. "In any case, what was reported was relatively mild compared to things reported in other parts of the country, so there is a sense that [Harbin] is far from the center of activity."

May noted that a larger-than-expected number of students still want to go to Beijing in the fall. One consortium managed by CET has officially diverted students to Taiwan for the fall semester, but several participants have opted out of the program and chosen to study in Beijing through CET's joint program with Wellesley College.

Students who signed up for the CET-Wellesley summer program scheduled for Beijing were given the choice of studying in Taiwan or Harbin, or postponing their study-abroad until another semester.

Most U.S. college students who study in China do so through consortia, such as the New York City-based Council on International Educational Exchange or the Princeton, N.J.-based College Consortium for International Studies, which involves mostly community colleges.

At least one midsummer program slated for Beijing took place: a Cape Cod Community College program involving about 18 students.

The CIEE's summer programs, normally held in Beijing and Shanghai, have been diverted to Taiwan. But the CIEE expects to hold academic-year programs in Beijing and Nanjing as scheduled, a spokesperson said. About 30 students are expected to take part in the fall programs.

A fall program sponsored by the CCIS and Cape Cod Community College will take place in Harbin as planned, but the number of participants is dwindling, according to

Low pay, no tenure is driving British professors overseas

Low salaries and the abolition of tenure in Great Britain are making U.S. colleges and universities more attractive than ever to British scholars. The British brain-drain phenomenon recently benefited Dartmouth College, enabling the Hanover, N.H. institution to lure two of the United Kingdom's top labor economists, along with a doctoral candidate in the field, to its economics department.

Due to arrive at Dartmouth in September are: Andrew J. Oswald, senior research fellow at the London School of Economics Centre for Labour Economics, who holds a D.Phil. in economics

from Oxford University; his student, Andrew Clark; and David Blanchflower, lecturer at the University of Surrey. All three will teach labor economics.

Until recently, Britain's 50 universities paid professors a flat rate. In 1987, a minimum salary equal to just under \$50,000 was established. As *The Economist* noted: "A top professor in a prestigious American establishment can expect to be paid at least three times the British minimum." To no one's surprise, the result for Britain has been a shortage of professors: Last academic year, 63 out of 175 vacant professorial posts remained unfilled.

Prestigious Cambridge University did not adopt the 1987 agreement, and continues to pay each of its professors an equal rate of \$48,630, according to *The Economist*, "on the grounds that financial competition does not make for a happy

CCIS executive director Dick Greenfield. "We've warned each student that we cannot control events, but we still have seven or eight who are determined to go," he said.

Most program administrators have taken pains to warn students of the potential danger of study in China, but they conceded that these steps may not be sufficient to shield the programs from liability.

Greenfield noted that Americans who are not of Chinese origin may be as safe in China as in countries such as Columbia, where the consortium also has offered study-abroad programs.

Cape Cod Community College also plans to go ahead with a 10-day winter program focusing on change in China, and open to faculty and staff from the 150 colleges that are CCIS members. Two years ago, a similar program attracted 30 participants.

"My first reaction after watching the news on TV was to just close the gates, and have nothing more to do with these people," said David Scanlon, director of international studies at Cape Cod Community

College. "On the other hand, I'm a great believer in keeping the doors open as long as you possibly can."

The total number of U.S. students studying in China has grown slowly over the past 10 years. But the student exchange between the two countries is imbalanced: About 300 Chinese students study at UMass/Amherst; a handful of UMass students study in China. An estimated 170,000 students from all Asian countries study in the United States in any given year; about 2,500 U.S. students study in Asia.

U.S. study-abroad administrators expressed differing views on how the Beijing violence will affect future educational exchange between the two countries.

"There certainly has been damage, but I don't think it's irreparable," said May of CET. Noting that many American students are nervous about studying in China this fall, May said: "As time goes by, that nervousness will dissipate. I also think the aspects of the current government that make people nervous can't last long."

Greenfield of CCIS predicted the events in Beijing will have a long-

term negative effect on study in China. "The only saving grace is the short memory that young people have and the illusion that 'nothing can happen to me,'" he said.

Meanwhile, the estimated 40,000 Chinese students in the United States face a different set of issues. Besides immediate concerns about their ability to go home and the safety of their families, about one in five of the students may have to grapple with how to pay for school in the United States if the Chinese government cuts off their financial aid.

The U.S. government has extended visas until June 5, 1990, for most Chinese nationals who were in the United States as of June 6, 1989, and whose visas would have expired before the 1990 date. Educational groups have asked President Bush to explore the possibility of emergency student-aid funds if the Chinese government cuts off financial aid, but by mid-July, no special funds had been authorized. □

John O. Harney is a contributing writer and editorial consultant for *Connection*.

academic community and that the distinction of becoming a Cambridge professor is itself an adequate reward." Several Cambridge professors did not agree, and have gone elsewhere.

According to Dick Eckus, economics department chair at the Massachusetts Institute of Technology, MIT has also profited from the exodus of British academics. "My department hired one about four years ago, one of the leading economic theorists, Oliver Hart," he says. "The English academics are under a lot of pressure and, depending upon their family situation and attachments, they are a pool into which one can dip." Besides low pay, Eckus says, lack of adequate facilities, particularly in the sciences, is to blame.

According to Dartmouth professor of English Peter Saccio, who spent last academic year's winter session in England, British Prime Minister

Margaret Thatcher has cut back on the massive support given to British higher education. "And tenure has been largely if not altogether abolished," Saccio says. "That is, they have said, 'No new appointments shall be with tenure,' and they include in the definition of 'new appointments' any promotion. In addition to all this, salaries are poor. So, there are many causes for discontent."

Thatcher has also caused bitter feelings among British academics by attempting to single out certain "productive" disciplines for funding—those tied to economic benefits, such as the sciences—while skimping on such "unproductive" areas as the humanities.

"It is called by those who dislike it a 'capitalist standard' of judging academic institutions," Saccio says. "Such a standard is not applicable."

Supreme Court to Congress: Minority Access is *Your* Problem Now

MICHAEL J. BENNETT

The recent Supreme Court decision giving white Americans the opportunity to overturn affirmative action plans as "reverse discrimination" has further complicated an already confused and muddled situation on Capitol Hill.

And it is leading towards, or at least contributing to, a situation described by Robert Atwell, president of the American Council on Education, as "educational apartheid." But the current court can't be blamed for that, any more than the past court can for the *Brown vs. Board of Education* ruling that made equal educational opportunity a national priority.

The court has said, in effect, that while it can describe injustice, it cannot prescribe remedies. That has to be the business of our democratic society, enacted through Congress. A five-member majority of the Supreme Court that is unlikely to be replaced before the end of the century has decided that being a minority should not be a guarantee of success. That same court has dumped the problem of equality right where it belongs—in the lap of Congress, which has thus far come up with only a piecemeal series of laws, programs and processes.

One notable achievement on Capitol Hill: Sen. Claiborne Pell, whose Pell Grant program has helped hundreds of thousands of young men and women with otherwise impossible educational opportunities, saw the problem long before the court told Congress to do something about it—a responsibility which, of course, Congress has successfully evaded ever since *Brown vs. Board of Education*.

Pell's more recent National Education Savings Trust Act, which would enable parents to save up to \$2,000 per year, tax-free, for their children's education, at least addresses the fundamental problem: Is inequity inher-

ent in a higher-education system based on both public and independent institutions with entirely different financial bases?

The measure, which the Senate Finance Committee has failed to address more than a year after its introduction, would provide portability to every postsecondary institution in the country. "Whether a child were to choose an Ivy League college, a state university or a trade or technical school," Pell said, "the same educational benefits would apply. Tax advantages would be applied equitably to all citizens." Those advantages, of course, do not exist now, never have and probably never will.

What the court has now said to Congress is that it must decide—despite the conflicting but overlapping arguments over minority access, funding and student-loan defaults—just what the country wants to do and should do to provide equal opportunity for all.

College admissions officers are being encouraged to look at community colleges as a source of academic talent.

But in the current political climate of Washington, that leads inevitably to the comment of Winston Churchill on confronting a blancmange: "This pudding has no theme." Those arguments amount to a series of squabbles with no real focus.

The ingredients can, at least, be identified, although no real recipe other than Pell's bill has been introduced on the Hill.

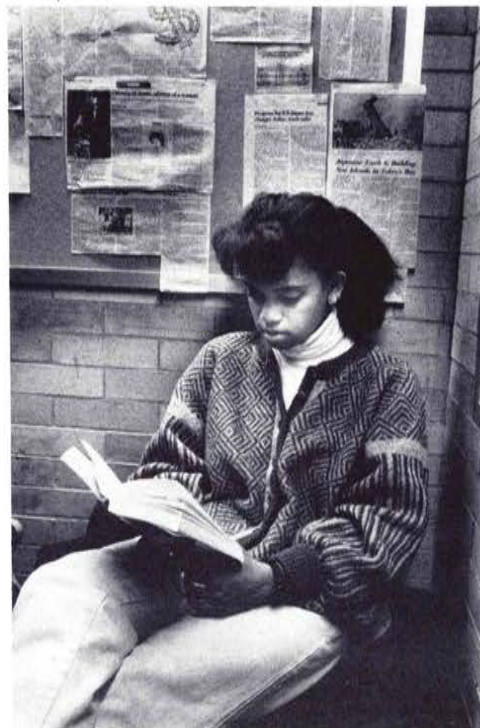
Separate and unequal

A generation has passed—and many of its members have gone to college—since 1967, when the Kerner Commission warned that the United States was moving toward "two societies, separate and unequal." Back then, higher education, which remained largely barred to Blacks and other minorities, was seen as the level playing field that would give minorities upward mobility. But that field is now seen to be strewn with obstacles.

Access is no longer believed to be tantamount to success.

ACE estimates that 43 percent of all Black students in higher education were on two-year campuses compared to 36 percent of whites in 1986. Without the traditionally Black colleges, an even greater percentage would attend two-year institutions. Only 11 percent of students at community colleges can be expected to earn a bachelor's degree.

"Minority and low-income students go into community colleges from which they are never seen," observes ACE President Atwell. "We have es-



Higher education has long been seen as the level playing field that can give minorities upward mobility.

Nancy Walz/Wesleyan University photo.

established different institutions for different races and different kinds of people," says Ron Wright, associate dean of the Community College of Baltimore.

"The fact is there are fewer minorities on campus, especially among Blacks," says Thomas Wolanin, staff director of the House Subcommittee on Investigations chaired by Rep. William Ford, D-Mich. "Black males, in particular, are extremely rare. And yet commitments are being made to hire Black faculty, although the students

who would be the logical candidates aren't in the pipeline." One of the reasons, Wolanin says, is declining federal aid.

That concern is shared by almost all educational institutions. For once, concern is apparently being translated into effective action—rather than public posturing. But the incremental changes that are being sought are far from any grand solutions. The usual assumption has been made: that money cures all ills.

ACE, in recent testimony before House and Senate appropriations committees, has requested the following:

- An increase in the Pell Grant maximum award from \$2,300 to \$2,500. Setting a new maximum is the only way to increase benefits for the eligible, including those whose families cannot be expected to provide any financial assistance under federal law. The number of low-income students with no Expected Family Contribution has increased 65 percent since 1979, from 972,000 to 1.6 million.
- An additional \$200 million for Supplemental Educational Opportunity Grants, which would aid 200,000 more students and increase benefits for the 600,000 current grant recipients.
- \$100 million more for the College Work-Study Program, allowing an additional 100,000 students and the current 700,000 undergraduate and graduate students to work off part of their college costs.
- An increase of \$28 million in State Student Incentive Grants, which, if increased by \$28 million—with 50-percent matching grants from the states—would serve 300,000 students.
- An increase in the aggregate funding of Title X Graduate Programs, from \$43.3 million in the current fiscal year to \$60.3 million the next. Future Ph.D.s are in growing demand, and this is one way to add to the supply.
- A \$50-million increase for Title III Development Programs for historically Black colleges and universities.

These and other program increases, which would chiefly account for inflation, are easy enough to propose. But it is up to Congress to pressure Presi-

New Englanders stake out the White House

George Bush may be an adopted son of the Southwest, but his roots are in New England—and his appointments show it.

Without exception, the president's key aides in science, education, economics, the environment and the art of governing are either from New England or have been associated with the region's institutions of higher education.

Former governor of New Hampshire John Sununu, Bush's chief of staff, is a one-time professor of engineering at Tufts University. Bonnie Newman, past president of the New England Council, is the president's assistant for management and administration. Andrew Card, once a member of the Massachusetts Legislature, is a chief political advisor. Texas native Lauro F. Cavazos, secretary of education, is a former dean of the Tufts University School of Medicine.

Richard Schmalensee, economics professor at MIT—and a registered Democrat, in Brookline of all places—has been named to the president's three-member Council of Economic Advisors.

D. Allan Bromley, who for many years has been Henry Ford II Professor of Nuclear Physics at Yale, is now the president's scientific advisor. The Bush administration has pledged itself to upgrade the post substantially, to the equivalent of a Cabinet position.

Michael R. Deland, New England administrator of the Environmental Protection Agency, has been named director of the White House Council on Environmental Quality. He is a graduate of Harvard University and Boston College Law School.

Bush may like fried pork rinds and chili, but these days the White House mess is getting more calls for clam chowder and baked beans.

dent Bush, who is still pledged not to increase taxes.

ED's default strategy

Some practical action has been taken by the Bush administration to do something about the fiscal hemorrhage caused by student-loan defaults. Defaults have multiplied eight times over since 1981. If the \$1.8 billion lost each year could be recovered and lent out again, it would represent the Department of Education's biggest aid program.

Education Secretary Lauro F. Cavazos has announced a default-

reduction plan that would save \$5.4 billion over the next 10 years. The new regulations modify a plan originally drafted by former Education Secretary William Bennett almost two years ago, which was fiercely criticized by almost all higher-education institutions. Bennett's original regulations would have barred all institutions with default rates of more than 50 percent from participating in federal loan and grant programs if they did not reduce their default rate to 20 percent within three years. In contrast, Cavazos' regulations focus first on schools with 60-percent default rates, of which there

are currently 188, including 123 for-profit vocational schools. All will have until 1991 to develop "default-management plans," and then five years to reduce the rate to 40 percent. Institutions with default rates between 60 and 40 percent will have to reduce them by five percent a year.

In addition, schools with rates of more than 30 percent must refund loans on a pro-rata basis to students who drop out before the halfway point, or in the first six months of a session, whichever is first. Institutions with rates over 20 percent must write and submit default plans to state agencies and the Department of Education.

This strategy could address the fear that minorities are being disproportionately steered toward community colleges and proprietary trade schools. The number of private vocational schools has increased from 2,133 in 1980 to 3,042 in 1987—a 47-percent jump in seven years. During the same period, there was only a 2-percent increase in the number of non-profit educational institutions.

The growth in proprietary trade schools was fueled in part by the

\$2,300 lid on Pell Grants. More needy students took advantage of the grants, but applied them to tuition at these schools. While the total amount expended by the program rose \$340 million in just one year, 1986-87, half the increase went to students in proprietary schools. And such schools have much higher default rates—40 percent as contrasted to 9 percent for non-profit institutions. They also have considerably higher dropout rates.

All these institutions must give first-time borrowers counseling to ensure they understand their repayment obligations. The schools must disclose their graduation and job-placement rates, and can also be required to upgrade faculty and curricula and to improve job-placement rates.

The regulations were greeted with relief in some Washington quarters, and surprised satisfaction in others.

"We're very encouraged by what we think is a very reasoned and thoughtful recasting of the regulations," says Stephen Blair, president of the National Association of Trade and Technical Schools.

"This tiered approach is very differ-

ent from what the federal government usually wants," observes Charles Saunders, vice president for government affairs at ACE. "Usually, they make everyone jump through hoops in order to correct the faults of a few. No one can deny that the default issue is a serious one, but, for once, a sensible approach seems to have been developed to deal with it."

*Is inequity inherent
in a higher-education system
based on institutions
with entirely different
financial bases?*

ACE has encouraged the Ford Foundation to help develop another sensible program. College admissions officers, faced with declining minority enrollments, are being encouraged to look at community colleges as a source of academic talent. ACE and the foundation have announced a \$1.2-million grant to pair 25 urban community colleges with four-year colleges and guide minority students through the transfer process so that they may obtain bachelor's degrees.

These efforts, however, should be placed in a realistic context.

"Young people and their parents now are very anxious about their economic and social position," says Michael McPherson, chairman of the economics department at Williams College. "There's a strong perception that going to a top-rated college is the way to get top-rated careers."

But that perception may not be accurate. Before World War II and for almost a generation thereafter, almost any college degree distinguished an entrant into the labor force. Today, the world is much more competitive. Being well-educated is no longer a guarantee of success. And since Congress has failed to legislate equal opportunity for all, giving a conservative Supreme Court the chance to set civil rights back 20 years, soon no American will be able to claim that being a minority is a guarantee of success, either. □

Michael J. Bennett is Washington correspondent for *Connection*.

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Let's Win Back Our "Heritage of Prosperity"

SEN. JOHN F. KERRY

The United States must counter several trends in order to guarantee its long-term competitive viability.

One of the problems we face is that the electorate has grown too used to expecting very little, or even expecting grotesque failure, from our political leadership. We have all been burned by lofty rhetoric that has promised too much, delivered too late, and cried wolf too often about crises which seem not to have materialized. It is safe to say that leadership has its own crisis of credibility, saved only by low expectations. We cannot prosper as the America we have always known and loved if expectations remain low.

A new bipartisanship is needed to build the compromise coalition that could release the entrepreneurial energy of this country into long-term, job-creating, productive enterprise.

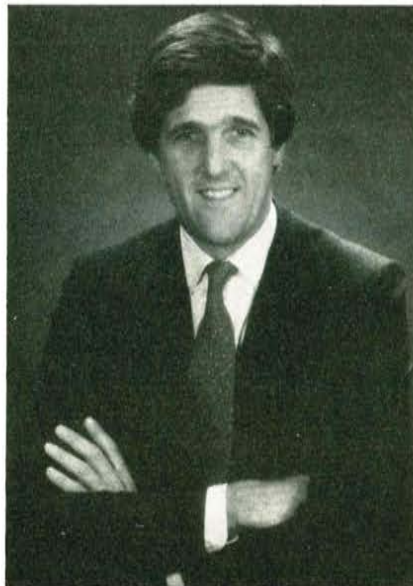
Given our current set of choices, I believe honestly that it will take all the resources, policy support and political courage we can summon to remain No. 1 and keep the American standard of living rising. We are quite literally in a new economic era—an entirely new marketplace. And people in positions of public leadership must translate into public policy the realities of this transition.

While some of my observations may sound an alarm, they are not warnings of gloom or doom. They are alarms, meant to set out a series of choices we confront and a group of issues we must think about. If we do think about these issues and make the choices, our future is unlimited.

Rules changing

It seems to me that ever since the industrial revolution, American businesses have been able to play by a set of rules that are significantly outdated in the modern mar-

ketplace. We grew used to winning, and winning easily, because we had all the advantages on our side, and those advantages sometimes become masked as "skill" or even "genius."



We had better resources, better technology, better financial services, better transportation, better research and development and better education. Those "betters" produced a nation that could lead the world through World War I and World War II and through the Cold War.

But in the aftermath of World War II, some funny things happened on the way to the marketplace. The Marshall Plan, the occupation of Japan, and the rebuilding of whole nations created a new competitive force, which even today we are having difficulty coming to terms with. No longer can we coast and win. No longer can we make bad business decisions and bad public policy decisions, yet still win because of our vast array of advantages.

Instead, today we find ourselves facing rapacious business practices

and aggressive public economic policy from nations that appear to be hungrier than we. Our students lag behind theirs. Our savings are a fraction of theirs. Our resources are depleted in some sectors. Public officials have failed to face up to these changes and respond to them with public policy.

Clearly, it is essential that America come to terms with the rapid pace of change in the world. We are all well aware of the aggressive competition from Japan and the Pacific Rim. But as much as we might choke on the words, the fact is, Mikhail Gorbachev's overtures to Korea, to Eastern Europe, indeed to the whole world, indicate an understanding of this economic transformation which we have been too willing to avoid. (That is not to say the Soviet Union will transition easily, or at all. Frankly, if the people of this country were experiencing the kinds of problems that Soviet workers and consumers face every day, we too would see movement and political leadership of an extraordinary nature.)

With the emergence of the European Common Market as a single force in 1992 comes the potential for yet another huge dislocation in markets, with threats but, more importantly, with opportunities.

It is also important to understand that the labor costs we face are not to blame for this crisis. Manufacturing workers in Japan earn as much as their American counterparts. In West Germany, they earn substantially more.

The simple truth is we're not as competitive as we once were because we're not as productive as we once were. And we're not as productive as our rivals are right now. We are not producing many of the products the world wants, at the price and quality our competitors are.

While American productivity has increased, as it always does during

a recovery, it has recently been increasing more slowly than in the past and more slowly than it has in the nations we compete with.

According to the Department of Labor, in the 14 years since the first oil crisis, the productivity of U.S. manufacturers rose an average of only 1.4 percent a year. This compares to average annual productivity increases of 3.8 percent for West Germany; 4.5 percent for France; 5.6 percent for Japan; and 5.7 percent for Belgium. Even Great Britain, notorious for its industrial sluggishness, beat the United States, with gains averaging 2.8 percent.

Low investment

Our personal-savings rate is the lowest of any industrial nation by a factor of three, and it continues to drop. Despite a host of tax incentives and the necessity of retooling to keep pace with technological changes, our manufacturers are investing less in new equipment than ever before.

Real productive investment in the United States has declined from an average annual growth rate of 8.4 percent in the 1960s to barely 4 percent in the 1970s, and only 2.2 percent in the 1980s. And not surprisingly, the level of investment in plant, equipment and inventories as a percentage of gross national product is significantly lower in the United States than in West Germany, Japan, Italy and other industrial countries.

The shortcomings of U.S. manufacturers were highlighted in a recent *Harvard Business Review* study which found that:

- In the past five years, Japan has outspent the United States by 2 to 1 in automation.
- Systems development in Japan is accomplished in 1.25 years to 1.75 years, compared with 2.5 years to 3 years in the United States.
- Fifty-five percent of the machine tools introduced in Japan during the past five years were computer-numerically controlled, compared to only 18 percent of those installed in the United States.

In reviewing these trends in GNP growth, employment, productivity, savings and investment, you can't help but see disturbing signs. Ominous signs are also evident in trends in basic research—an area in

which the United States has long considered itself without peer.

- U.S. companies today are getting fewer patents than they did 15 years ago, while patents issued to foreigners are steadily increasing. Foreign corporations posted a 45-percent increase in patents filed. Japan's increased by 15 percent. Ours increased by 3 percent.

- As a percentage of GNP, civilian R&D expenditures in the United States lag far behind Japan's and West Germany's.

- In 1980, U.S. funds for military and non-military R&D were split 50/50. Today, the military consumes 72 percent of the total federal research dollar in the United States, leaving just 28 percent for all other research.

These powerful forces endanger American prosperity, and it is the business of all of us to face up to them. The fact is, America grew more slowly in the 1980s than in any other decade since World War II, and there was less investment than at any time since that war. Translation: There are fewer new businesses, fewer inventions, fewer factories and fewer skilled workers.

Meanwhile, our government spends \$150 billion more a year than we collect in revenues. As a people, we consume \$150 billion more a year than we produce.

There's nothing mysterious about how we do that. We borrow the difference (more than \$400 billion in the past four years) from those who still follow the old American ethic of producing more than they consume and saving the rest—from the Japanese, the Germans, the British, the Canadians, oil-producing nations, from almost every developed nation.

What do they do with the \$400 billion? Our gracious lenders are using those dollars to take possession of our assets.

Foreign investors today own 10 percent of our manufacturing base; 13 million acres of American farmland, and from one-third to one-half of the prime commercial real estate in Los Angeles, Houston, Washington, D.C., and parts of Boston. We are busy selling off assets that took us 200 years to accrue—and we are doing so at a discount.

In just the last 12 months, we sent \$150 billion abroad through the

trade deficit. At current stock prices, that would be enough for foreign investors to come back and buy all the common shares of General Motors, Ford and Chrysler, plus Texaco, McDonald's and Coca-Cola, with enough left over to buy all the farmland in California and Ohio.

By many measures, Japan is already richer than we are. And Western Europe is just three years away from an economic consolidation that will make it the largest economic power in the world. Even the Soviet Union is facing the economic future straight on for the first time since the October Revolution.

The simple truth
is we're not as competitive
as we once were because
we're not as productive
as we once were.

America's heritage of prosperity

This is indeed a most critical moment in our history. We *have to compete*, not just against ourselves, but against others who are as resourceful and determined, if not more so, than we are. I am absolutely confident of our capacity to do this once we decide to. Americans have a unique capacity to join hands in common enterprise when asked to. It's time we asked.

For as long as modern capitalism has been around, economic growth has depended on investing in the factors that drive economic productivity. Cutting the budget deficit will not be enough. We also have to invest in elements of growth—in upgrading the skills of our workers; developing new technologies for production; building new plants and equipment for growing businesses; and constructing the roads, bridges and other infrastructure that bind markets together.

For nearly two centuries, this kind of investment was our natural, national habit. Our parents invested their labor and savings to educate us; inventors invested their efforts and ingenuity to create new materials and machines; entrepreneurs invested the capital of their communities to build new enterprises. It worked. Our GNP doubled roughly every 30 years. And parents deeded to their children a country and economy richer and

stronger than the one they had inherited.

Somehow, we lost track of the habits of prosperity. Our new habits—consuming more than we produce, spending more than we earn and saving and investing less than we need to—gave us in the 1980s the slowest growth of any decade since World War II, the highest average unemployment rate and the slowest growth rate in personal income of any postwar decade. In the 1980s, the incomes of average American families inched ahead at barely 1 percent a year, and the real wages of average workers stagnated. That is a path toward decline in our world leadership, our standard of living and our self-respect as a people.

Our task is really very clear. We must recover our heritage of prosperity by investing again in the factors of economic growth.

How do we do this? First, centuries of progress have taught us that technology plays a crucial role in economic growth. This common sense is confirmed by experts who trace as much as 70 percent of all productivity gains since World War II to technological advances. Nowhere has that lesson been clearer than in Massachusetts.

Massachusetts taught the world what "high technology" means. But over the last two years, the United States actually ran a worldwide high-tech trade deficit.

I do not believe this loss can be blamed on a decline in American genius. The fault lies in our weakening commitment to support the development of the products of genius. Defense technologies with little commercial application absorb most of our federal investment in R&D. And the private sector, driven by the compulsion to avoid disappointing quarterly returns, has allowed its real investment in R&D to stagnate.

We must recommit ourselves to investing in R&D that will produce the technologies of the future. And that may mean breaking out of outmoded ideological shackles. For example, if we want American companies to play an important role in high-definition television, we may have to loosen and reform the antitrust laws that prevent our technology companies from collaborating. We may need government-

sanctioned consortia to compete with those of our foreign competitors and we may need government R&D funds to share some of the risk. And it may already be too late.

I believe we in Congress can assist in forming a federal R&D strategy. Today, we support some 700 national labs, as well as thousands of projects by the National Science Foundation and military and civilian agencies. The truth is no one has even taken a serious inventory of all federally financed R&D. It's time we take that inventory, eliminate duplication, focus our energies and set priorities that will promote our long-term economic growth.

Americans have a unique
capacity to join hands
in common enterprise
when asked to.
It's time we asked.

Framework for growth

Moving ideas into the world marketplace is the business of business—not government. But government can help create a framework that encourages that move. Some of this has already begun.

I have submitted legislation to make the R&D tax credit stronger and permanent. Commerce Committee Chairman Fritz Hollings and I also wrote into the trade law a provision creating new centers for manufacturing technology, modeled on Massachusetts' Centers of Excellence. These federal centers will sponsor joint ventures among universities and businesses in order to develop promising new manufacturing processes. Already, three such centers have been funded throughout the United States, focusing on the competitiveness problems of small manufacturers. We need more commitment to this effort.

Another major drag on America's technology lead during the 1980s has been an overly restrictive and inefficiently administered export-control regime. A 1986 National Academy of Sciences report found that this system unnecessarily cost \$8 billion a year in U.S. exports and contributed to a narrowing of our lead in critical technologies. With Sen. Alan Cranston, I introduced

legislation to streamline the system. This legislation became a part of the trade bill, and is now being implemented, but far too slowly.

A program I helped develop with my colleague on the Democratic Task Force on Competitiveness, Sen. Jay Rockefeller, provides for the establishment of an office in Japan to seek out the best technical literature published in Japanese, translate it and make it available to American companies, researchers and students.

We can do more—much more—to stoke the technological engine for growth. We should encourage more collaborative efforts to develop new products, such as the Semetech venture for semiconductors.

We should rethink the absolute ban on the right of regional telephone companies to manufacture or even joint-venture with companies like Digital Equipment Corp. to develop state-of-the-art network telecommunications products. Before the break-up of AT&T, the United States was a net exporter of telecommunications products. Now we have a large and growing deficit in telecom, and a diminishing capacity to innovate and remain competitive in this critical field.

Most imperative, we must create incentives for middle-income Americans to increase their savings. In 1986, I fought hard to keep in the tax code the full \$2,000 deduction for Individual Retirement Accounts. We lost on a close vote, and I think this is one factor responsible for the continued decline in household saving. I believe we must return to full IRAs, but I would go further.

Many young people in the country have given up hope of securing the one item for which people have always been willing to save—a home of their own. It is my hope we can increase savings, and help people realize this dream at the same time. I am working on a program that will "guarantee" the downpayment on a home of a given type and value, to be purchased a specific number of years in the future. This guarantee will be supported by future buyers who will have tax incentives to participate in a monthly savings program.

If we can give people more hope of owning a home, we can increase the savings we desperately need and, at the same time, help deal

with the problem of attracting skilled workers to businesses in Massachusetts.

I also believe we must reinstitute a tax preference for income earned from investing in business, especially for gains from investing in the new, growth-oriented enterprises that create jobs.

While our deficit cannot now justify the broad-based capital-gains incentive we once had, we should encourage long-term investments that directly generate economic activity. It is vital that we attract capital away from debt-oriented investment and put it into risk-taking start-up efforts that create new jobs and new wealth.

These investment strategies and capital-formation tools are vital to our survival in the marketplace of the future. But they will mean nothing unless we have a workforce that can take advantage of them.

There is one industry that is central to improving America's competitiveness without lowering our standard of living. We spend over 6 percent of GNP, more than the entire Pentagon budget, in this indus-

try. But this industry is failing and failing badly. It is not meeting, let alone beating, the competition. This industry is American education. And, unless we fix it, the rest of our efforts won't make much difference.

As David Kearns, Chairman and CEO of Xerox said recently: "Education is a bigger factor in productivity growth than increased capital, economies of scale or better allocation of resources."

To be the best

There is no single proposal, no set of actions by the private sector or any unit of government that will accomplish what must be our mission: to generate the best-prepared labor force in the world by the year 2000. What will really matter are decisions on contracts, curricula, budgets and organization, particularly at the community level. If these decisions reflect our resolve to be the best, we shall, in our uniquely American way, reach our goal.

There are specific actions that we all can take—each in our own

sphere. In Washington, we can fight to have increased funding for education items from Chapter I to the WIC program. (Title I provides federal funding for remedial education in schools; WIC provides federal nutritional assistance to low-income mothers, infants and children.)

There are new initiatives we can undertake, as well.

One, we must be certain that every child that enters our school system has a chance to succeed. Undoubtedly the most important investment in educational success is in early childhood. "Head Start" and other programs that provide nutrition, health screening, child development and the like have been extraordinarily successful. However, fewer than 20 percent of the children who need these programs can now be served.

President Bush talked in the campaign about expanding "Head Start" to all four-year-olds. I've co-sponsored legislation with Sen. Edward Kennedy to do that. It is in all our interests to see that the words and money carry the same message.

Research shows that among the majority of kids attending public school in the next decade, if they have "preschool," they are:

- about half as likely to have a teenage pregnancy,
- about half as likely to be on welfare,
- less than half as likely to suffer mental retardation,
- over a third less likely to be arrested,
- and nearly twice as likely to go on to higher education.

Our shortsightedness in funding "preschool," unless corrected, will contribute enormously to a decline in U.S. competitiveness and to our standard of living.

Two, we must re-value teaching as a profession. You simply cannot expect to teach an increasingly more difficult-to-teach student body an increasingly sophisticated curriculum, unless you can attract many more of the highest-quality and best trained graduates of higher education to public elementary- and secondary-school teaching.

Go into any college and ask students: "Who plans to go into teaching?" Rarely does a hand get raised. No wonder we face a severe shortage of teachers. How in today's world can you ask people to see

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Intellectual Freedom and the Firing of Alex Novikoff

DAVID R. HOLMES

With a foreword by Ellen W. Schrecker

A promising research scientist and Jewish intellectual, Alex Novikoff was fired from the University of Vermont in 1953 after taking the 5th Amendment in connection with investigations of his earlier membership in communist groups at Brooklyn College. This important case serves as a useful framework for assessing American academic institutions under political stress today and provides a much-needed local perspective on issues that still haunt the national consciousness.

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value in impoverishment? How can you say to a math or a science teacher, "Come to work for \$18,000 and maybe one day you'll earn \$30,000," when within months, they can earn twice that in the private sector?

It is no wonder that the Carnegie Task Force on Teaching found that only about 6 percent of college freshmen have an interest in a teaching career (an 80 percent drop in the last 14 years), and that the SAT scores of those interested in teaching lagged substantially behind the SAT scores of classmates with other career interests.

We have our work cut out for us. We must attract quality teachers with quality pay and then demand that they perform. But money is a small part of the solution. In exchange for increased salaries, teachers must look to new strategies. We must enhance the professionalism of teachers, reduce the prescriptive interference and let teachers do what they are professionally trained to do—teach. We must decentralize responsibility and accountability if we are to attract and retain good teachers and help them give us the good schools and improved student achievement we all want.

Teachers and administrators around the country are demonstrating that school-based management works. This requires dedication, hard bargaining, lots of imagination and plenty of patience, but in the end, the children benefit. We must get politics out of our schools and get education back in.

We must demand standards for curricula, attendance and testing, which will guarantee that people are learning what they need to learn. In Japan, students go to school for 240 days a year and longer hours than our students. In Europe, students cannot graduate unless they pass a standard test.

In America, our students go to school for 180 days a year and take no test. The federal government should extend a large carrot to local school districts and state boards of education by offering grants and scholarships to those who demonstrate objective educational success and meet higher standards.

The private sector must be motivated to lend its expertise and personnel—not on a haphazard ba-

sis, but on a large scale, which recognizes its stake in this investment for the future.

It is also time to challenge America's young people with a teacher corps, designed to recruit bright young people for the mission of making America's education the best in the world by the year 2000. The teacher corps would forgive student loans for its members and provide scholarships for "teacher training" for those who wish to join.

We need legislation that will provide loan forgiveness for undergraduate and graduate students who major in science, math and engineering, and commit to at least a partial career in teaching.

Three, I believe we must pay much more attention to those with limited skills who are now in the labor force and will be for decades. We must make the concept of "lifelong education" more than just a cliché. Yet most businesses don't have the resources or the expertise to do anything but the most specific functional training.

As chairman of the Urban and Minority Small Business Subcom-

mittee, I am working on a plan that would assist and encourage small businesses to upgrade the basic and technical skills of their workers. It is critical that we equip non-college-educated workers with the skills needed to contribute to productivity and produce a much higher standard of living than what is in store for us based on current skills. There is no free lunch in tomorrow's workplace.

The challenges are many and they are difficult. But we have always been a resourceful people, capable of overcoming the greatest challenge. America can remain No. 1. As the freest people on the face of this planet, it's up to us to use our brains and summon the will to make the necessary choices to do so. We have yet to put the full energy of this nation into this effort. As President Kennedy reminded us: "A journey of a thousand miles begins with a single step." It's time for us to take that step. □

John F. Kerry is U.S. Senator from Massachusetts.

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Plastics, Social Work Attract RSP Grad Students

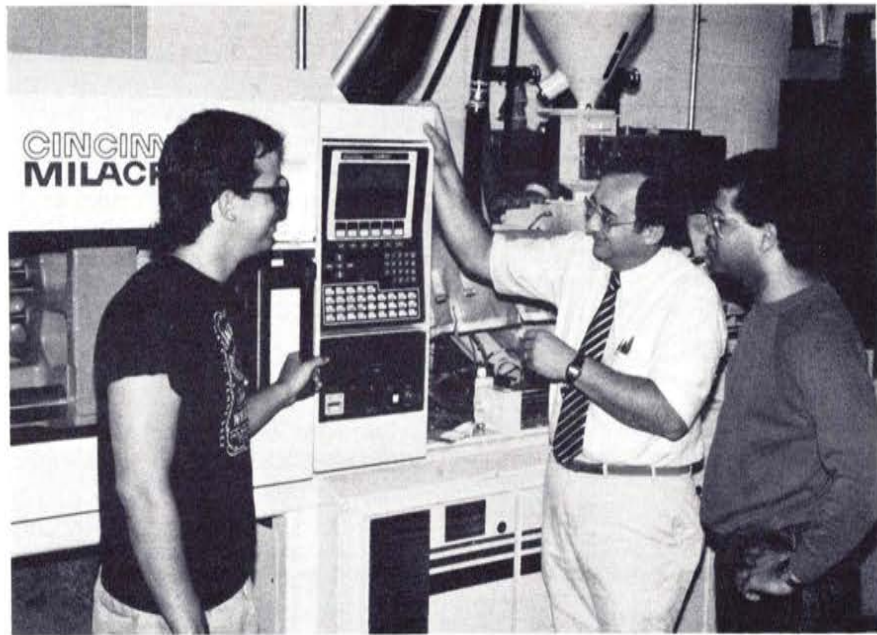
KEN CONNOLLY

As Benjamin learned in "The Graduate," plastics are the wave of the future—and the University of Lowell's M.S. program in plastics engineering is highly popular among RSP graduate students.

Nine of the 42 degree candidates in plastics engineering at ULowell during academic year 1988-89 were enrolled through the New England Board of Higher Education's Regional Student Program. With over 10 percent of the workforce in Massachusetts directly involved with or supporting the plastics industry, these graduates are in high demand.

Aldo Crugnola, dean of engineering at ULowell comments: "As the plastics industry becomes more sophisticated, there is more of a need for a plastics-engineering program that can provide knowledgeable graduates to work within this expanding industry. At the University of Lowell we are focusing on such timely issues as plastics recycling, biodegradable plastics and other research projects which benefit the plastics industry nationwide"—and the environment as well.

For over 30 years, the RSP has enabled residents of New England to attend out-of-state public colleges and universities within the region at a reduced tuition rate when certain degree programs are unavailable in their own states' public institutions. While students and their parents are saving thousands of dollars in tuition costs, the individual New England campuses, and therefore the states themselves, benefit by avoiding the capital expenditure for establishing the degree programs at their own state universities. As in the past, foresighted public institutions have developed programs in



Nick Schott, chairman of the Plastics Engineering Department at ULowell, is overseeing the setup of a recently donated Milacron injection molding machine, which features a 110 ton clamp capacity and a five-ounce shot size. Valued at \$120,000, the fully-loaded, computer-controlled unit has a closed-loop process control and operates at 28,000 PSI injection pressure. University of Lowell photo.

response to the needs of growing regional industries that require highly skilled professionals.

The most heavily subscribed graduate-level program under the RSP during academic year 1988-89 was the master's degree in social work at the University of Connecticut School of Social Work. Of the roughly 450 students attending the school, 92 enrolled through RSP.

The most heavily subscribed graduate program under the RSP last year 1988-89 was the MSW program at the University of Connecticut.

"There are critical labor shortages in social services throughout the country, and New England is no exception to that," says Nancy Humphreys, dean of the School of Social Work. "The fact that there are very few masters'-in-social-work programs in New England has probably meant that there is even a greater labor shortage in the northeast region."

MSW graduates are in especially high demand in areas such as services to the elderly, child welfare and substance abuse. State agencies in

the region have been forced to hire employees with perhaps irrelevant or inappropriate civil service qualifications to substitute in positions usually filled by MSW graduates.

Since its inception in 1958, nearly 80,000 students have taken advantage of tuition savings available under RSP. A total of 5,036 students participated in the program during the 1988-89 academic year, an increase of 4 percent over 1987-88. RSP students and their families saved an average of \$2,156 in tuition in 1988-89, with total estimated tuition savings reaching almost \$11 million for residents of the region.

Of the 750 degree programs offered under RSP, 277 are graduate programs, and 13 percent of the total number of RSP participants were involved in graduate programs during academic year 1988-89. Each graduate student saved close to \$3,000 in tuition costs, for total regional savings of \$1,893,986.

Copies of all Regional Student Program publications are available throughout the year from NEBHE's Regional Student Program Office, 45 Temple Place, Boston MA 02111. Phone: (617) 357-9620. □

Ken Connolly is associate director of NEBHE's Regional Student Program.

Graduates of the Massachusetts Institute of Technology are characterized by the "itch to start a business," according to a recent Bank of Boston analysis of companies created in Massachusetts by MIT alumni.

At MIT's request, the bank's economics department analyzed 636 businesses established in Massachusetts by MIT alumni from 1867 to 1988. The analysis indicates that about half of MIT graduates who start a business do so while they are students or within five years of leaving school.

Software, consulting and instruments account for the largest number of Massachusetts companies founded by MIT alumni, but computer hardware and defense companies founded by MIT alumni account for the most Massachusetts jobs, according to the bank's analysis.

Businesses created by MIT alumni are found in 104 of the Bay State's 351 cities and towns. The combined effects of these companies when suppliers and other spillover effects are taken into account: more than 300,000 Massachusetts jobs and at least \$10 billion in annual income for state residents, the analysis found.

The June release of the analysis was fortunately timed. Earlier in the month, a House subcommittee lambasted universities for selling the results of federally financed research to foreign companies, and MIT bore the brunt of the attack. Rep. Ted Weiss, D-N.Y., chairman of the House Human Resources and Intergovernmental Relations Subcommittee, targeted most of his attack at MIT's Industrial Liaison Program, a pioneering technology-transfer initiative allowing companies, American and foreign, to pay a fee and obtain special access to faculty members and research.

MIT President Paul E. Gray defended the program, saying that foreign companies may appear to use the program more than Americans because Americans have more informal access to MIT faculty.

An MIT spokesperson noted that the Bank of Boston analysis was in the works in late April, and its release around the time of the congressional hearing was pure coincidence. As for the subcommittee's ire, the MIT spokesperson said: "We assume things are concluded."

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UVM President Coor returns to Arizona

WENDY A. LINDSAY



After 13 years as president of the University of Vermont, Lattie F. Coor, will return to his home state of Arizona in January to become chief executive of Arizona State University.

Coor came to the university in 1976 from Washington University in St. Louis, Mo., where he held a number of administrative and faculty positions. These included vice chancellor, director of international studies, dean of the graduate school and professor of political science. He received his master's and doctoral degrees in political science from Washington University and his bachelor's degree from North Arizona State University.

While president of UVM, Coor has held posts with associations, boards and commissions at the state, regional and national levels. He has been a member of the Vermont Higher Education Planning Commission and Vermont Higher Education Council, as well as Vermont representative to the New England Board of Higher Education. Coor has been chairman of the joint committee on health policy for the National Association of State Universities and Land-Grant Colleges and the Association of American Universities. The university board of trustees plans to name an interim president at the board's October meeting.

Other presidential departures

Sylvio L. Dupuis has resigned as president of the New England College of Optometry in Boston. Larry Clausen, academic dean of the college, is serving as interim president. Dupuis, president since 1985, has been named president and CEO of Catholic Medical Center, Manchester, N.H., which he helped found in 1975.

Barbara Leondar, president of the University of Maine at Fort Kent since 1986, resigned at the end of June. Richard G. Dumont, the university's vice president for academic affairs, is interim president.

James Vorenberg resigned June 30 after serving eight years as dean of Harvard Law School, to resume teaching and research in criminal law, ethics and other legal issues. He will spend the 1989-90 academic year lecturing and conducting research overseas and will rejoin the law school faculty in September 1990.

New presidents

John A. Curry became president of Northeastern University, Mass., on July 1 after serving as the university's executive vice president for the past five years. A Northeastern graduate and administrator there since 1963, Curry was chosen from among 200 candidates to replace Kenneth Ryder, Northeastern president for 14 years. Curry received his bachelor's degree and two master's degrees in education from Northeastern, as well as a doctorate in 1980 from Boston University. Originally an admissions counselor for Northeastern beginning in 1963, he has held several posts at the university, including director of admissions and senior vice president for administration.

Donald W. Harward has been named president of Bates College in Lewiston, Maine. He will assume the post in October, succeeding Thomas Hedley Reynolds who is retiring after 22 years as president. Currently vice president for academic affairs and professor of philosophy at the College of Wooster in Ohio, Harward holds a doctorate from the University of Maryland, a master's degree from American University and a bachelor's degree from Maryville College, all in philosophy.

Harward began his teaching career at the State University of New York at Geneseo, subsequently teaching at Millikin University in Decatur, Ill. From 1968 to 1982, he taught at the University of Delaware, and was chairman of the philosophy department.

Roger Gilmore, a nationally recognized art education leader, is the new president of the Portland School of Art in Maine. Gilmore was formerly provost of the School of the Art Institute of Chicago, and president of the National Association of Schools of Art and Design, the national art-college accrediting organization. Gilmore is a graduate of Dartmouth College and has pursued doctoral work in philosophy at the University of Chicago. He succeeds Peter Hero, school president since 1986.



Natale A. Sicuro has replaced William H. Rizzini as president of Roger Williams College in Bristol, R.I. Nationally known as an educator and administrator, Sicuro was most recently a senior fellow and chairman-elect of the American Association of State Colleges and Universities in Washington, D.C.

He was president and professor of education at Portland State University in Portland, Ore., from 1986 to 1988, and at Southern Oregon State College in Ashland from 1979 to 1986.

Sicuro is a graduate of Kent State University in Ohio, where he earned a bachelor of science degree as well as the university's first doctorate in educational administration. He holds a master's degree in public health from the University of North Carolina at Chapel Hill. An educational consultant to numerous organizations, Sicuro was an administrator at Kent State in the 1960s and 1970s.



Linda S. Wilson, formerly the University of Michigan's vice president for research, became the seventh president of Radcliffe College on July 1. Wilson succeeds Matina S. Horner, president for 17 years. Before coming to the University of Michigan in 1985, where she was the first woman to be appointed a vice president, Wilson was associ-

ate vice chancellor for research and associate dean of the Graduate College of the University of Illinois.

A 1957 graduate of Sophie Newcomb College at Tulane University, Wilson earned her Ph.D. in inorganic chemistry at the University of Wisconsin. She taught chemistry at the University of Maryland and the University of Missouri before moving into academic administration.

A candidate for president-elect of the American Association for the Advancement of Science, Wilson is a member of the National Council of University Research Administrators, and was the first woman to win the Distinguished Contribution to Research Administration Award of the Society of Research Administrators. She was a charter member of the Government-University-Industry Research Roundtable of the National Academy of Sciences.

Roxbury Community College in Boston welcomes **Walter Curtis Howard** as its new president. Previously associate vice president at Daytona Beach Community College in Florida, Howard is a graduate of Paine College in Augusta, Ga., and holds a Ph.D. in higher education and administration from the University of Alabama at Tuscaloosa. He also holds a post-doctoral degree in higher education from Harvard University's management development program.

Leila Gonzalez Sullivan becomes president of Middlesex Community College in Middletown, Conn., in September, replacing acting president and academic dean John H. Coggins. Sullivan comes to Middlesex from Hudson County Community College in Jersey City, N.J., where she was vice president for academic affairs. Sullivan was previously a dean at Rockland Community College in Suffern, N.Y., and a program officer of bilingual and international education for the New Jersey Department of Higher Education. She holds a bachelor's degree from Trinity College, Washington, D.C., a master's in Spanish from New York University and doctoral degrees from the University of Arkansas.

Kenneth J. McIlraith is filling in as president of Salem State College in Salem, Mass., until the college names a permanent replacement for Rolando E. Bonachea, who resigned in May. McIlraith has been a member of Salem State's board of trustees since 1981, including two terms as chairman. From 1969 until his retirement in 1988, McIlraith was vice chairman of the Bank of New England and previously president of Essex Bank and the Conifer Group.

Gregory Smith Prince Jr., formerly associate dean for curriculum planning and resource development at Dartmouth College, has replaced Adele Simmons as president of Hampshire College in Amherst, Mass. A professor of history, Prince received his doctorate in American Studies from Yale University in 1973. He came to Dartmouth in 1970, and was involved in establishing a variety of programs including a Native American Studies program, Social Science Center and a Canadian-U.S. Institute. Prince joins Hampshire as it embarks on a \$20-million-dollar capital campaign.

William F. Glavin, a former vice chairman of Xerox Corp., became the ninth president of Babson College in July. A 1953 graduate of the College of the Holy Cross in Worcester, Mass. and the Wharton School of the University of Pennsylvania, Glavin has replaced William R. Dill, Babson president for eight years. After joining Xerox in 1970, Glavin served as chief operating officer of the firm's London subsidiary for six years and was also director of Fuji Xerox. In an interview following his appointment, Glavin stressed the importance of living in a global society.



Joseph Short is the new president of Bradford College in Bradford, Mass. A former executive director of Oxfam America, Short has held many positions in senior management for numerous development, service and educational organizations.

Short earned a doctorate and master of arts degree in international relations from Columbia University and a bachelor's degree from Texas Christian University.

George R. Spann is now president of Thomas College in Waterville, Maine. Spann was most recently secretary of the corporation and officer of the Philadelphia College of Textiles and Science. Earlier, he was director of development at Delaware County Community College in Media, Pa., and a history lecturer and assistant undergraduate chairman at the University of Pennsylvania. Spann holds a bachelor's degree from Swarthmore College and master's and doctoral degrees from the University of Pennsylvania. He is also a graduate of Harvard University's Institute for Educational Management.

New association appointments

Reverend John Deegan, Merrimack College president, was elected chairman of the Association of Independent Colleges and Universities in Massachusetts, succeeding Richard P. Traina, Clark University president. Founded in 1967, AICUM has 58 member colleges and universities.

Conrad L. Mallett, president of Greater Hartford Community College, Hartford, Conn. will be president of the Connecticut Council on Higher Education through spring 1990. Council members are presidents of Connecticut independent and public higher education institutions.

Govs. McKernan and Dukakis chair governors coalition

The Coalition of Northeastern Governors elected Maine Governor John R. McKernan Jr. chairman and Massachusetts Governor Michael S. Dukakis vice chairman at the 1989 Governors' Seminar held in Philadelphia earlier this year. A key CONEG initiative identified by Governor McKernan is expansion of the coalition's work in source reduction, including an examination of secondary markets for recycled materials. □

Wendy A. Lindsay is assistant editor of *Connection*.

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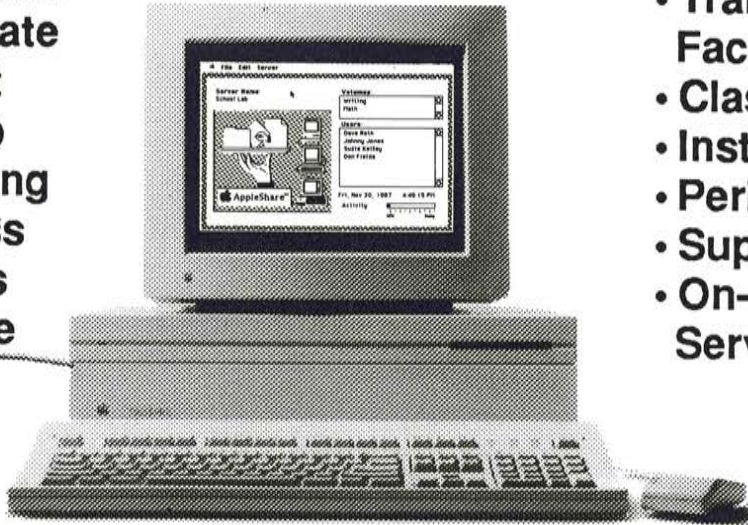


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